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ENCYCLOPÆDIA.

HYDROSTATICS;

A SCIENCE which treats of the weight, motion, and equilibria of liquid bodies. Under this head, not only accounts of the nature and properties of fluids in general are introduced, and the laws by which they act; but alſo the art of weighing ſolid bodies in fluids, in order to diſcover their ſpecific gravities.

Sect. I. *Of* Fluids *in general.*

1 Fluid defined, &c.

Sir Iſaac Newton's definition of a fluid is, That it is a body yielding to any force impreſſed, and which hath its parts very eaſily moved one among another. See Fluidity.

This definition ſuppoſes the motion ſpoken of produced by a partial preſſure; for in the caſe of an incompreſſible fluid, it is demonſtrated by Dr Keil, that under a total or an equal preſſure, it would be impoſſible that the yielding body ſhould move.

The original and conſtituent parts of fluids are by the moderns conceived to be particles ſmall, ſmooth, hard, and ſpherical: according to which opinion, every particle is of itſelf a ſolid or a fixed body; and, when conſidered ſingly, is no fluid, but becomes ſo only by being joined with other particles of the ſame kind. From this definition, it hath been concluded by ſome philoſophers, that ſome ſubſtances, ſuch as mercury, are eſſentially fluid, on account of the particular configuration of their particles; but later diſcoveries have evinced the fallacy of this opinion, and that fluidity is truly to be reckoned an effect of heat. See Fluidity.

That fluids have vacuities, will appear upon mixing ſalt with water, a certain quantity whereof will be diſſolved, and thereby imbibed, without enlarging the dimenſions. A fluid's becoming more buoyant, is a certain proof that its ſpecific gravity is increaſed, and of conſequence that many of its vacuities are thereby filled: after which it may ſtill receive a certain quantity of other diſſoluble bodies, the particles whereof are adapted to the vacancies remaining, without adding any thing to its bulk, though the abſolute weight of the whole fluid be thereby increaſed.

This might be demonſtrated, by weighing a phial of rain-water critically, with a nice balance: pour this water into a cup, and add ſalt to it; refund of the clear liquor what will again fill the phial; an increaſe of weight will be found under the ſame dimenſions, from a repletion, as has been ſaid, of the vacuities of the freſh water with ſaline particles.

And as fluids have vacuities, or are not perfectly denſe; it is alſo probable, that they are compounded of ſmall ſpheres of different diameters, whoſe interſtices may be ſucceſſively filled with apt materials for that purpoſe: and the ſmaller theſe interſtices are, the greater will the gravity of the fluid always be.

For inſtance, ſuppoſe a barrel be filled with bullets in the moſt compact manner, a great many ſmall ſhot may afterwards be placed in the interſtices of thoſe balls, the vacuities of the ſhot may then be repleniſhed with a certain quantity of ſea-ſand; the interſtices of the grains of the ſand may again be filled with water; and thus may the weight of the barrel be greatly augmented, without increaſing the general bulk.— Now this, being true with regard to ſolids, is applicable alſo to fluids. For inſtance, river-water will diſſolve a certain quantity of ſalt; after which it will receive a certain quantity of ſugar; and after that a certain quantity of alum, and perhaps other diſſoluble bodies, and not increaſe its firſt dimenſions.

2 Its nature and properties.

The more perfect a fluid is, the more eaſily will it yield to all impreſſions, and the more eaſily will the parts unite and coaleſce when ſeparated. A perfect fluid is that whoſe parts are put into motion by the *leaſt* force imaginable: an imperfect one is that whoſe parts yield to a *ſmall* force, not the *leaſt*. It is probable, that in nature there is no perfect fluid, the element of fire perhaps excepted; ſince we ſee that the mutual attraction of the parts of all the fluids, ſubject to our experiments, renders them coheſive in ſome degree; and the more they cling together, the leſs perfect their fluidity is. If, for inſtance, a glaſs be filled with water above the brim, it will viſibly riſe to a convex ſurface, which, was it a perfect fluid free from either tenacity or coheſion, would be impoſſible.

Mercury, the moſt perfect fluid we know, is not exempt from this attraction; for ſhould the bottom of a flat glaſs, having a gentle riſing toward the middle, be covered thin with quickſilver, a little motion of the machine will cauſe the fluid ſoon to ſeparate from the middle, and lie round it like a ring, having edges of a conſiderable thickneſs.

But if a like quantity thereof be poured into a golden cup, it will, on the contrary, appear higher conſiderably on the ſides than in the middle. Which may proceed in part, perhaps, from the gold's being of great denſity, and therefore capable of exerting thereon a greater degree of attraction than other metals. Probably too it may happen from its having pores of an apter diſpoſition and magnitude to receive the minute mercurial particles, than thoſe of iron and ſome other metals; and therefore the attraction of coheſion in this experiment may obtain alſo: and every one knows how eaſily theſe two bodies incorporate, and make a perfect *amalgama*. But the reaſon commonly given for the two phenomena is, that mercury, in the firſt caſe, attracts itſelf more than it does glaſs; and, in the laſt caſe, mercury attracts gold more than it does itſelf.

Sir Iſaac Newton held all matter to be originally homogeneous; and that from the different modifications and texture of it alone, all bodies receive their various ſtructure, compoſition, and form. In his definition of a fluid, he ſeems to imply, that he thought fluids to be compoſed of primary ſolids; and, in the beginning of his *Principia*, he ſpeaks of ſand and powders as of imperfect fluids.

3 Florentine experiment.

Borelli has demonſtrated, that the conſtituent parts of fluids are not fluid, but conſiſtent bodies; and that the elements of all bodies are perfectly firm and hard. The incompreſſibility of water, proved by the Florentine experiment, is a ſufficient evidence alſo, that each primary particle or ſpherule thereof is a perfect and impenetrable ſolid. Mr Locke too, in his *Eſſay on Human Underſtanding*, admits this to be ſo.

This famous experiment was firſt attempted by the great lord Verulam, who incloſed a quantity of water in lead, and found that it inclined rather to make its way through the pores of the metal, than be reduced into leſs compaſs by any force that could be applied. The academics of Florence made this experiment afterwards more accurately with a globe of ſilver, as being a metal leſs yielding and ductile than gold. This being filled with water, and well cloſed, they found, by hammering gently thereon, that the ſphericity of the globe was altered to a leſs capacious figure (as might geometrically be proved); but a part of the water always like dew came through its ſides before this could be obtained. This has been attempted by Sir Iſaac Newton, and ſo many competent judges, on gold and ſeveral other metals ſince, with equal ſucceſs, that we do not hold any fluid in its natural ſtate, except the air, to be either compreſſible or elaſtic.—In ſome experiments by Mr Canton, it hath been obſerved, that water is more or leſs compreſſed according to the different conſtitution of the atmoſphere; whence it hath been concluded that the Florentine experiment was erroneous: but it will not follow, that water can be compreſſed by any artificial force, becauſe nature hath a method of compreſſing it; any more than that ſolid metal can be compreſſed artificially, though we know that very ſlight degrees of heat and cold will expand or contract its dimenſions. See WATER.

SECT. II. *Of the Gravity and Preſſure of Fluids.*

4 Fluids preſs as much upward as downward.

ALL bodies, both fluid and ſolid, preſs downwards by the force of gravity: but fluids have this wonderful property, that their preſſure upwards and ſidewiſe is equal to their preſſure downwards; and this is always in proportion to their perpendicular height, without any regard to their quantity: for, as each particle is quite free to move, it will move towards that part or ſide in which the preſſure is leaſt. And hence, no particle or quantity of a fluid can be at reſt till it is every way equally preſſed.

Plate ccxxxix. fig. 2.

To ſhow by experiment that fluids preſs upward as well as downward, let A B be a long upright tube filled with water near to its top; and C D a ſmall tube open at both ends, and immerſed into the water in the large one: if the immerſion be quick, you will ſee the water riſe in the ſmall tube to the ſame height that it ſtands in the great one, or until the ſurfaces of the water in both are on the ſame level: which ſhows that the water is preſſed upward into the ſmall tube by the weight of what is in the great one; otherwiſe it could never riſe therein, contrary to its natural gravity, unleſs the diameter of the bore were ſo ſmall, that the attraction of the tube would raiſe the water; which will never happen, if the tube be as wide as that in a common barometer. And, as the water riſes no higher in the ſmall tube than till its ſurface be on a level with the ſurface of the water in the great one, this ſhows that the preſſure is not in proportion to the quantity of water in the great tube, but in proportion to its perpendicular height therein: for there is much more water in the great tube all around the ſmall one, than what is raiſed to the ſame height in the ſmall one as it ſtands in the great.

Take out the ſmall tube, and let the water run out of it; then it will be filled with air. Stop its upper end with the cork C, and it will be full of air all below the cork: this done, plunge it again to the bottom of the water in the great tube, and you will ſee the water riſe up in it to the height E. Which ſhows that the air is a body, otherwiſe it could not hinder the water from riſing up to the ſame height as it did before, namely, to A; and in ſo doing, it drove the air out at the top; but now the air is confined by the cork C: And it alſo ſhows that the air is a compreſſible body; for if it were not ſo, a drop of water could not enter into the tube.

Fig. 3.

The preſſure of fluids being equal in all directions, it follows, that the ſides of a veſſel are as much preſſed by a fluid in it, all around in any given ring of points, as the fluid below that ring is preſſed by the weight of all that ſtands above it. Hence the preſſure upon every point in the ſides, immediately above the bottom, is equal to the preſſure upon every point of the bottom.—To ſhow this by experiment, let a hole be made at *e* in the ſide of the tube A B cloſe by the bottom, and another hole of the ſame ſize in the bottom at C; then pour your water into the tube, keeping it full as long as you chooſe the holes ſhould run, and have two baſons ready to receive the water that runs through the two holes, until you think there is enough in each baſon; and you will find by meaſuring the quantities, that they are equal. Which ſhows that the water runs with equal ſpeed through both holes; which it could not have done, if it had not been equally preſſed through them both. For, if a hole of the ſame ſize be made in the ſide of the tube, as about *f*, and if all three are permitted to run together, you will find that the quantity run through the hole at *f* is much leſs than what has run in the ſame time through either of the holes C or *e*.

In the ſame figure, let the tube be recurved from the bottom at C into the ſhape DE, and the hole at

C

Preſſure of Fluids.

C be ſtopt with a cork. Then pour water into the tube to any height, as *Ag*, and will ſpout up in a jet EFG, nearly as high as it is kept in the tube AB, by continuing to pour in as much there as runs through the hole E; which will be the caſe whilſt the ſurface *Ag* keeps at the ſame height. And if a little ball of cork G be laid upon the top of the jet, it will be ſupported thereby, and dance upon it. The reaſon why the jet riſes not quite ſo high as the ſurface of the water *Ag*, is owing to the reſiſtance it meets with in the open air: for if a tube, either great or ſmall, was ſcrewed upon the pipe at E, the water would riſe in it until the ſurfaces of the water in both tubes were on the ſame level; as will be ſhown by the next experiment.

5 The hydroſtatic paradox.

Any quantity of a fluid, how ſmall ſoever, may be made to balance and ſupport any quantity, how great ſoever. This is deſervedly termed *the hydroſtatical paradox*; which we ſhall firſt ſhow by an experiment, and then account for it upon the principle abovementioned, namely, that *the preſſure of fluids is directly as their perpendicular height, without any regard to their quantity.*

Plate ccxxxix. fig. 4.

Let a ſmall glaſs tube DCG, open at both ends, and bended at B, be joined to the end of a great one AI at *cd*, where the great one is alſo open; ſo that theſe tubes in their openings may freely communicate with each other. Then pour water through a ſmall necked funnel into the ſmall tube at H; this water will run through the joining of the tubes at *cd*, and riſe up into the great tube; and if you continue pouring until the ſurface of the water comes to any part, as A, in the great tube, and then leave off, you will ſee that the ſurface of the water in the ſmall tube will be juſt as high at D; ſo that the perpendicular altitude of the water will be the ſame in both tubes, however ſmall the one be in proportion to the other. This ſhows, that the ſmall column DCG balances and ſupports the great column *Acd*; which it could not do if their preſſures were not equal againſt one another in the recurved bottom at B.—If the ſmall tube be made longer, and inclined in the ſituation GEF, the ſurface of the water in it will ſtand at F, on the ſame level with the ſurface A in the great tube: that is, the water will have the ſame perpendicular height in both tubes, although the column in the ſmall tube is longer than that in the great one; the former being oblique, and the latter perpendicular.

Fig. 5, 6.

Since then the preſſure of fluids is directly as their perpendicular heights, without any regard to their quantities, it appears, that whatever the figure or ſize of veſſels be, if they are of equal heights, and if the areas of their bottoms are equal, the preſſures of equal heights of water are equal upon the bottoms of theſe veſſels; even though the one ſhould hold a thouſand or ten thouſand times as much water as would fill the other. To confirm this part of the hydroſtatical paradox by an experiment, let two veſſels be prepared of equal heights, but very unequal contents, ſuch as A B fig. 5. and A B in fig. 6. Let each veſſel be open at both ends, and their bottoms D *d*, D *d* be of equal widths. Let a braſs bottom CC, be exactly fitted to each veſſel, not to go into it, but for it to ſtand upon; and let a piece of wet leather be put between each veſſel and its braſs bottom, for the ſake of cloſeneſs. Join each bottom to its veſſel by a hinge D, ſo that it may lie open like the lid of a box; and let each bottom be kept up to its veſſel by equal weights E and E, hung to lines which go over the pulleys F and F (whoſe blocks are fixed to the ſides of the veſſels at *f*), and the lines tied to hooks at *d* and *d*, fixed in braſs bottoms oppoſite to the hinges D and D. Things being thus prepared and fitted, hold the veſſel A B (fig. 6.) upright in your hands over a baſon on a table, and cauſe water to be poured into the veſſel ſlowly, till the preſſure of the water bears down its bottom at the ſide *d*, and raiſes the weight E; and then part of the water will run out at *d*. Mark the height at which the ſurface H of the water ſtood in the veſſel, when the bottom began to give way at *d*; and then, holding up the other veſſel AB (fig. 5.) in the ſame manner, cauſe water to be poured into it at H: and you will ſee, that when the water riſes to A in this veſſel, juſt as high as it did in the former, its bottom will alſo give way at *d*, and it will loſe part of the water.

Preſſure of Fluids.

The natural reaſon of this ſurpriſing phenomenon is, that ſince all parts of a fluid at equal depths below the ſurface are equally preſſed in all manner of directions, the water immediately below the fixed part B*f* (fig. 5.) will be preſſed as much upward againſt its lower ſurface within the veſſel, by the action of the column *Ag*, as it would be by a column of the ſame height, and of any diameter whatever; (as was evident by the experiment with the tube, fig. 4.) and therefore, ſince action and reaction are equal and contrary to each other, the water immediately below the ſurface B*f* will be preſſed as much downward by it, as if it was immediately touched and preſſed by a column of the height *g*A, and of the diameter B*f*: and therefore the water in the cavity BD *df* will be preſſed as much downward upon its bottom CC, as the bottom of the other veſſel (fig. 6.) is preſſed by all the water above it.

Fig. 5.

To illuſtrate this a little farther, let a hole be made at *f* in the fixed top B*f*, and let a tube G be put into it; then, if water be poured into the tube A, it will (after filling the cavity B *d*) riſe up into the tube G, until it comes to a level with that in the tube A; which is manifeſtly owing to the preſſure of the water in the tube A, upon that in the cavity of the veſſel below it. Conſequently, that part of the top B*f*, in which the hole is now made, would, if corked up, be preſſed upward with a force equal to the whole weight of all the water which is ſupported in the tube G: and the ſame thing would hold at *g*, if a hole were made there. And ſo, if the whole cover or top B*f* were full of holes, and had tubes as high as the middle one A *g* put into them, the water in each tube would riſe to the ſame height as it is kept in the tube A, by pouring more into it, to make up the deficiency that it ſuſtains by ſupplying the others, until they are all full; and then the water in the tube A would ſupport equal heights of water in all the reſt of the tubes. Or, if all the tubes except A, or any other one, were taken away, and a large tube equal in diameter to the whole top B*f* were placed upon it and cemented to it, and then if water were poured into the tube that was left in either of the holes, it would aſcend through all the reſt of the holes, until it filled the large tube to the ſame height that it ſtands in the ſmall one, after a ſufficient quantity had been poured into it: which ſhows, that the top B *f* was preſſed upward by the water under it, and before any hole was made in it, with a force equal to that wherewith it is now preſſed downward by the weight of all the water above it in the great tube. And therefore, the reaction of the fixed top B *f* muſt be as great, in preſſing the water downward upon the bottom CC, as the whole preſſure of the water in the great tube would have been, if the top had been taken away, and the water in that tube left to preſs directly upon the water in the cavity BD *d f*.

6 The hydroſtatic bellows, fig. 7.

Perhaps the beſt machine in the world for demonſtrating the upward preſſure of fluids, is the hydroſtatic bellows, which conſiſts of two thick oval boards AB, EF, each about 16 inches broad, and 18 inches long: the ſides are of leather, joined very cloſe to the top and bottom by ſtrong nails. CD is a pipe ſcrewed into a piece of braſs on the top-board at C. Let ſome water be poured into the pipe at D, which will run into the bellows, and ſeparate the boards a little. Then lay three weights, each weighing 100 pounds, upon the upper board; and pour more water into the pipe, which will run into the bellows, and raiſe up the board with all the weights upon it; and if the pipe be kept full until the weights are raiſed as high as the leather which covers the bellows will allow them, the water will remain in the pipe, and ſupport all the weights, even though it ſhould weigh no more than a quarter of a pound, and they 300 pounds: nor will all their force be able to cauſe them to deſcend and force the water out at the top of the pipe.

The reaſon of this will be made evident, by conſidering what has been already ſaid of the reſult of the preſſure of fluids of equal heights without any regard to their quantity. For if a hole be made in the upper board, and a tube be put into it, the water will riſe in the tube to the ſame height that it does in the pipe; and would riſe as high (by ſupplying the pipe) in as many tubes as the board could contain holes. Now, ſuppoſe only one hole to be made in any part of the board, of an equal diameter with the bore of the pipe, and that the pipe holds juſt a quarter of a pound of water; if a perſon claps his finger upon the hole, and the pipe be filled with water, he will find his finger to be preſſed upwards with a force equal to a quarter of a pound. And as the ſame preſſure is equal upon all equal parts of the board, each part, whoſe area is equal to the area of the hole, will be preſſed upward with a force equal to that of a quarter of a pound: the ſum of all which preſſures againſt the under ſide of an oval board 16 inches broad, and 18 inches long, will amount to 300lb.; and therefore ſo much weight will be raiſed up and ſupported by a quarter of a pound of water in the pipe.

7 How a man may raiſe himſelf upward by his breath.

Hence, if a man ſtands upon the upper board, and blows into the bellows through the pipe, he will raiſe himſelf upward upon the board: and the ſmaller the bore of the pipe is, the eaſier he will be able to raiſe himſelf. And then, by clapping his finger upon the top of the pipe, he can ſupport himſelf as long as he pleaſes; provided the bellows be air-tight, ſo as not to loſe what is blown into it.

8 How lead may be made to ſwim in water. Fig. 8.

Upon this principle of the upward preſſure of fluids, a piece of lead may be made to ſwim in water, by immerſing it to a proper depth, and keeping the water from getting above it. Let CD be a glaſs tube, open at both ends; and EFG a flat piece of lead, exactly fitted to the lower end of the tube, not to go within it, but for it to ſtand upon; with a wet leather between the lead and the tube, to make cloſe work. Let this leaden bottom be half an inch thick, and held cloſe to the tube by pulling the packthread IHL upward at L with one hand, whilſt the tube is held in the other by the upper end C. In this ſituation, let the tube be immerſed in water in the glaſs veſſel AB, to the depth of ſix inches below the ſurface of the water at K; and then, the leaden bottom EFG will be plunged to the depth of ſomewhat more than eleven times its own thickneſs: holding the tube at that depth, you may let go the thread at L; and the lead will not fall from the tube, but will be kept to it by the upward preſſure of the water below it occaſioned by the height of the water at K above the level of the lead. For as lead is 11.33 times as heavy as its bulk of water, and is in this experiment immerſed to a depth ſomewhat more than 11.33 times its thickneſs, and no water getting into the tube between it and the lead, the column of water E*abc*G below the lead is preſſed upward againſt it by the water KDEGL all around the tube; which water being a little more than 11.33 times as high as the lead is thick, is ſufficient to balance and ſupport the lead at the depth KE. If a little water be poured into the tube upon the lead, it will increaſe the weight upon the column of water under the lead, and cauſe the lead to fall from the tube to the bottom of the glaſs veſſel, where it will lie in the ſituation *b d*. Or, if the tube be raiſed a little in the water, the lead will fall by its own weight, which will then be too great for the preſſure of the water around the tube upon the column of water below it. But the following method of making an extremely heavy body float upon water is more elegant. Take a long glaſs tube, open at both ends; ſtopping the lower end with a finger, pour in ſome quickſilver at the other end, ſo as to take up about half an inch in the tube below. Immerſe this tube, with the finger ſtill at the bottom, in a deep glaſs veſſel filled with water; and when the lower end of the tube is about ſeven inches below the ſurface, take away the finger from it, and then you will ſee the quickſilver not ſink into the veſſel, but remain ſuſpended upon the tube, and floating, if we may ſo expreſs it, upon the water in the glaſs-veſſel.

9 How light wood may be made to lie at the bottom of water.

In the ſame manner as an heavy body was made to ſwim on water, by taking away the upward preſſure; ſo may a light body, like wood, be made to remain ſunk at the bottom, by depriving it of all preſſure from below: for if two equal pieces of wood be planed, ſurface to ſurface, ſo that no water can get between them, and then one of them (*c d*) be cemented to the inſide of the veſſel's bottom; then the other being placed upon this, and, while the veſſel is filling, being kept down by a ſtick; when the ſtick is removed and the veſſel full, the upper piece of wood will not riſe from the lower one, but continue ſunk under water, though it is actually much lighter than water; for as there is no reſiſtance to its under ſurface to drive it upward, while its upper ſurface is ſtrongly preſſed down, it muſt neceſſarily remain at the bottom.

Fig 13

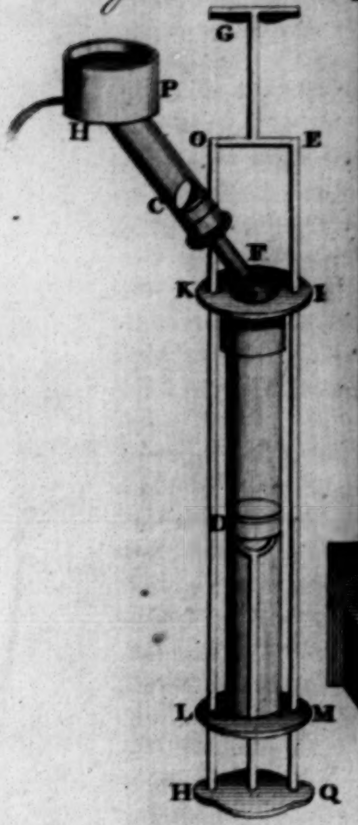
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Fig. 1

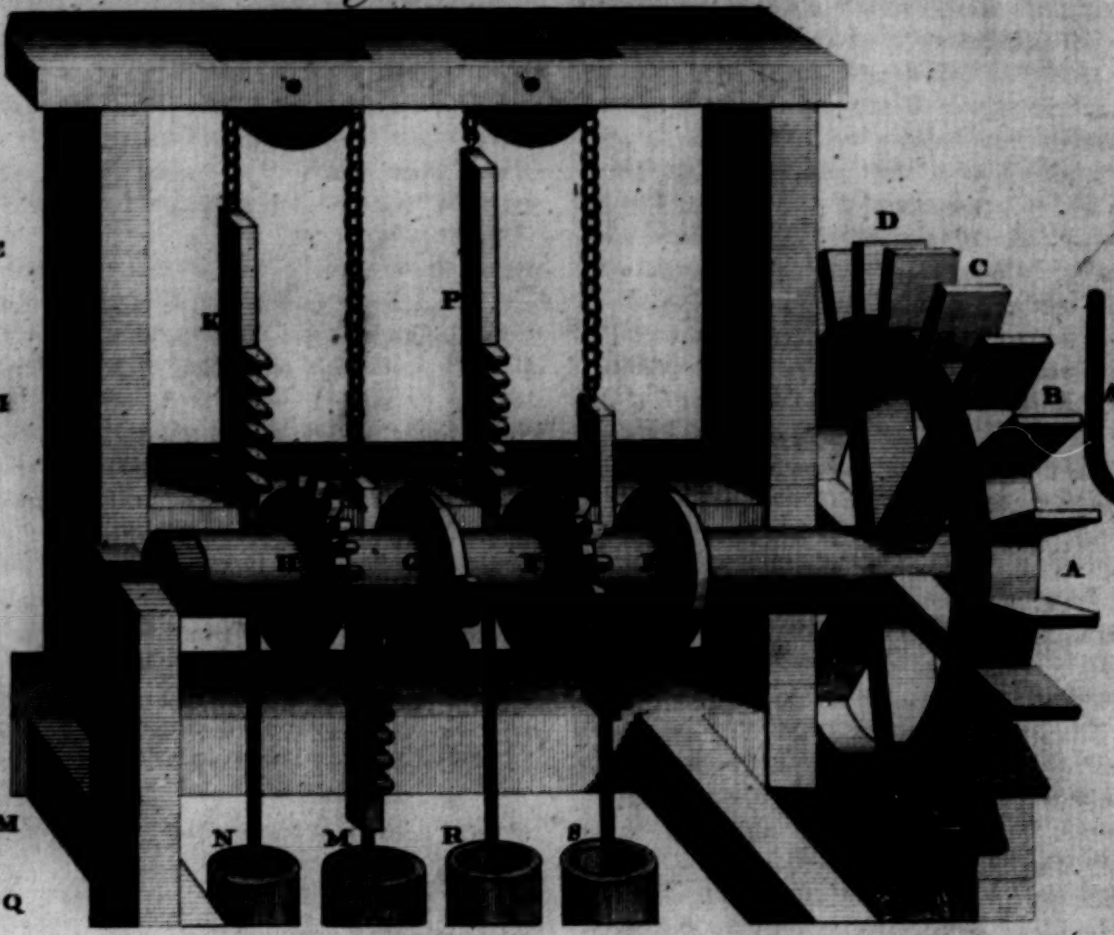
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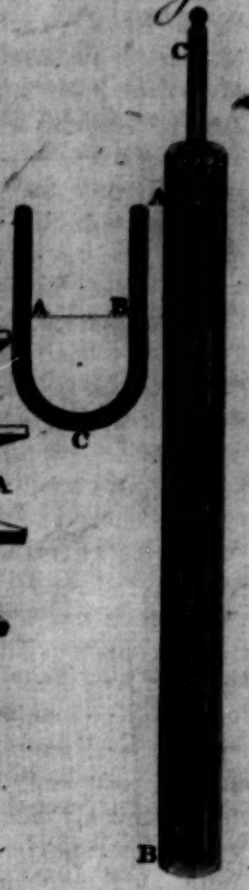
Fig 2



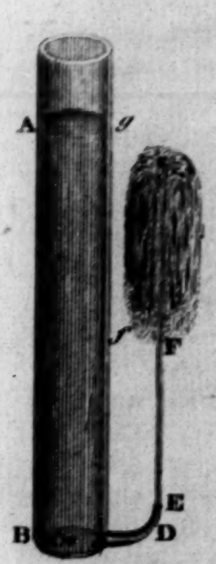


Fig 4

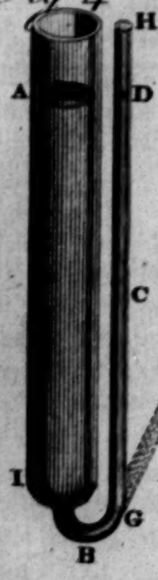


Fig 5

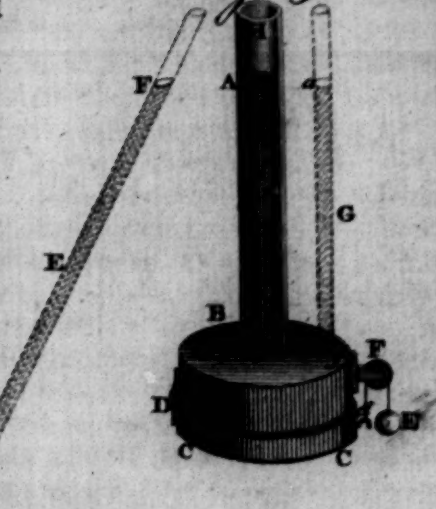

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Fig 6

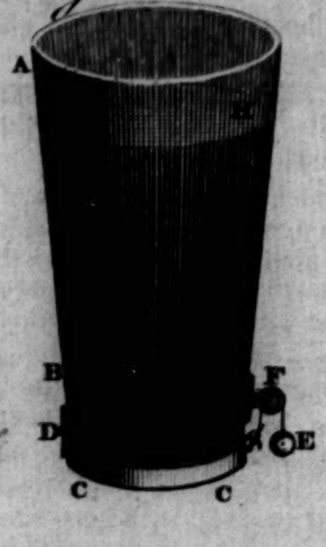


Fig 8

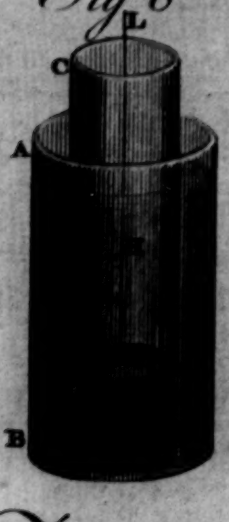


Fig 7

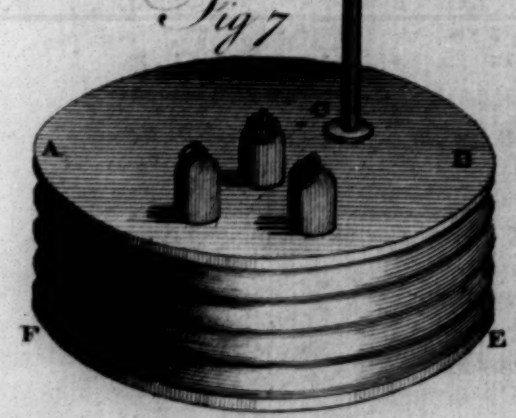


Fig. 10

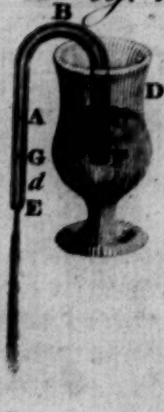


Fig. 11

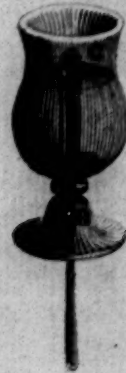


Fig. 12

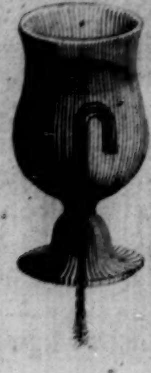
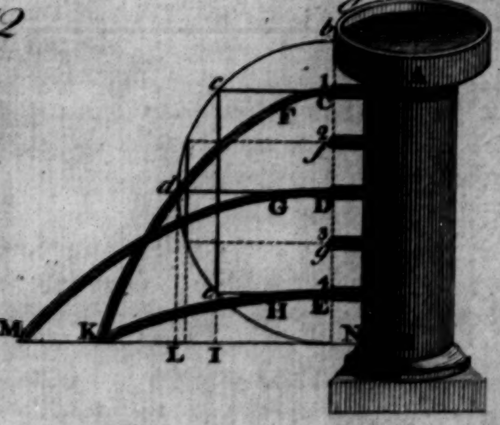


Fig 9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BRITISH MUSEUM

Sec. III. *Of the Specific Gravity of Bodies.*

10 Of ſpecific gravity.

When an unſpongy or ſolid body ſinks in a veſſel of water, it removes a body of water equal to its own bulk, out of the place to which it deſcends. If, for inſtance, a copper ball is let drop into a glaſs of water, we well know, that if it ſinks, it will take up as much room as a globe of water equal to itſelf in ſize took up before.

Let us ſuppoſe, that this watery globe removed by the ball were frozen into a ſolid ſubſtance, and weighed in a ſcale againſt the copper ball: now the copper ball being more in weight than the globe, it is evident that it will ſink its own ſcale, and drive up the oppoſite, as all heavier bodies do when weighed againſt lighter; if, on the contrary, the copper ball be lighter than the water globe, the ball will riſe. Again, then let us ſuppoſe the copper ball going to be immerſed in water; and that, in order to deſcend, it muſt diſplace a globe of water equal to itſelf in bulk. If the copper ball be heavier than the globe, its preſſure will overcome the other's reſiſtance, and it will ſink to the bottom; but if the watery globe be heavier, its preſſure upwards will be greater than that of the ball downward, and the ball will riſe or ſwim. In a word, in proportion as the ball is heavier than the ſimilar bulk of water, it will deſcend with greater force; in proportion as it is lighter, it will be raiſed more to the ſurface.

From all this we may deduce one general rule, which will meaſure the force with which any ſolid body tends to ſwim or ſink in water; namely, *Every body immerſed in water, loſes juſt as much of its weight as equals the weight of an equal bulk of water.* Thus, for inſtance, if the body be two ounces, and an equal bulk of water be one ounce, the body when plunged, will ſink towards the bottom of the water with a weight of one ounce. If, on the contrary, the ſolid body be but one ounce, and the weight of an equal bulk of water be two ounces; the ſolid, when plunged, will remove but one ounce, that is half as much water as is equal to its own bulk: ſo that, conſequently, it cannot deſcend; for to do that, it muſt remove a quantity of water equal to its own bulk. Again, if the ſolid be two ounces, and the equal bulk of water two ounces, the ſolid, wherever it is plunged, will neither riſe nor ſink, but remain ſuſpended at any depth.

Thus we ſee the reaſon why ſome bodies ſwim in water, and others ſink. Bodies of large bulk and little weight, like cork or feathers, muſt neceſſarily ſwim, becauſe an equal bulk of water is heavier than they; bodies of little bulk but great weight, like lead or gold, muſt ſink, becauſe they are heavier than an equal bulk of water. The bulk and the weight of any body conſidered together, is called its *ſpecific gravity;* and the proportion of both in any body is eaſily found by water. A body of little bulk and great weight, readily ſinks in water, and it is ſaid to have ſpecific gravity; a body of great bulk and little weight, loſes almoſt all its weight in water, and therefore is ſaid to have but little ſpecific gravity. A woolpack has actually greater real gravity, or weighs more in air, than a cannon ball; but for all that, a cannon ball may have more ſpecific gravity, and weigh more than the woolpack, in water. *Denſity* is a general term that means the ſame thing; *ſpecific gravity* is only a relative term, uſed when ſolids are weighed in fluids, or fluids in fluids.

As every ſolid ſinks more readily in water, in proportion as its ſpecific gravity is great, or as it contains greater weight under a greater bulk, it will follow, that the ſame body may very often have different ſpecific gravities, and that it will ſink at one time and ſwim at another. Thus a man, when he happens to fall alive into the water, ſinks to the bottom; for the ſpecific gravity of his body is then greater than that of water: but if, by being drowned, he lies at the bottom for ſome days, his body ſwells by putrefaction, which diſunites its parts; thus its ſpecific gravity becomes leſs than that of water, and he floats upon the ſurface.

11 How to diſcover adulterations in metals.

Several more important uſes are the reſult of our being able exactly to determine the ſpecific gravities of bodies. We can, by weighing metals in water, diſcover their adulterations or mixtures with greater exactneſs than by any other means whatſoever. By this means, the counterfeit coin, which may be offered us as gold, will be very eaſily diſtinguiſhed, and known to be a baſer metal. For inſtance, if we are offered a braſs counter for a guinea, and we ſuſpect it; ſuppoſe, to clear our ſuſpicions, we weigh it in the uſual manner againſt a real guinea in the oppoſite ſcale, and it is of the exact weight, yet ſtill we ſuſpect it; What is to be done? To melt or deſtroy the figure of the coin would be inconvenient and improper: a much better and more accurate method remains. We have only to weigh a real guinea in water, and we ſhall thus find that it loſes but a nineteenth part of its weight in the balance: We then weigh the braſs counter in water, and we actually find it loſes an eighth part of its weight by being weighed in this manner. This at once demonſtrates, that the coin is made of a baſe metal, and not gold; for as gold is the heavieſt of all metals, it will loſe leſs of its weight by being weighed in water than any other.

This method Archimedes firſt made uſe of to detect a fraud with regard to the crown of Hiero king of Syracuſe. Hiero had employed a goldſmith to make him a crown, and furniſhed him with a certain weight of gold for that purpoſe; the crown was made, the weight was the ſame as before, but ſtill the king ſuſpected that there was an adulteration in the metal. Archimedes was applied to; who, as the ſtory goes, was for ſome time unable to detect the impoſition. It happened, however, one day as the philoſopher was ſtepping into a bath, that he took notice the water roſe in the bath in proportion to the part of his body immerſed. From this accident he received a hint; wherewith he was ſo tranſported, that he jumped out of the bath, and ran naked about the ſtreets of Syracuſe, crying in a wild manner, *I have found it! I have found it!*—In conſequence of this ſpeculation, he procured a ball of gold and another of ſilver, exactly of the weight of the crown, conſidering, that if the crown were altogether of gold, the ball of gold would be of the ſame bulk as the crown, and when immerſed in water, would raiſe the water juſt as high as the crown immerſed; but if it were wholly of ſilver, the ball of ſilver being immerſed, would raiſe the water no higher than the crown immerſed; and if the crown was of gold and ſilver mixed in a certain proportion, this proportion would be diſcovered by the height to which the crown would raiſe the water higher than the gold and lower than the ſilver. Accordingly, let AMLB be a veſſel filled with water to the height DC, and let the maſs of gold, equal in weight to the crown, on being immerſed into the water, raiſe the ſurface of it to E, and the maſs of ſilver raiſe it to G; then if the height of the veſſel above DC be divided into equal parts, and DF=11, and DG=19, it is plain the bulks of gold and ſilver will be as DF to DG, and the ſpecific gravities in the inverſe proportion of theſe quantities, or as DG to DF. If the crown be immerſed, it will raiſe the ſurface of water to E; whence the proportion of the bulks of the gold and ſilver in the crown may be determined. For ſince the difference of the ſpecific gravities of the gold and ſilver is DG—DF=FG=8, if the bulk of the crown is divided into eight equal parts, it is evident, that ſince the ſpecific gravities of the debaſed and pure gold crowns will be as the bulks inverſely, that is, as DF to DE, we can eaſily find the point H, which will expreſs the ſpecific gravity of the former; for DE : DF :: DG : DH. This point H always divides the difference FG into two parts GH, HE, which have the ſame proportion as the parts of ſilver in the crown to the parts of gold; for as the point E aſcends, the point H deſcends, and when E coincides with G, H falls upon E, and the crown becomes wholly ſilver; on the contrary, when E deſcends to F, and H aſcends to G, the crown becomes wholly gold; therefore FH will be every where to HG as the parts of gold to the parts of ſilver in the crown. Conſequently, in the preſent caſe, becauſe the crown, when immerſed, raiſes the water to the height DE, and H is three diviſions below G, it ſhows that three of the eight parts of the crown are ſilver, and the other five parts gold, as H is five of the diviſions above F. Hence the bulk of the gold in the crown is to that of the ſilver as 5 to 3. In ſome ſuch method as this Archimedes deduced his propoſition, viz. that the difference of the ſpecific gravities of the compound and lighter ingredient, i. e. 5 (ſuppoſing the ſpecific gravity of gold to ſilver as 19 to 11, and the ſpecific gravity of the king's crown to be 16), is to the difference of the ſpecific gravities of the heavier ingredient and the compound, i. e. 3, as the bulk of gold to that of ſilver made up of: ſo that if the whole crown were divided into eight parts, the gold would conſiſt of five, and the ſilver of three; and the magnitudes 5 and 3, multiplied by the ſpecific gravities 19 and 11 reſpectively, will give the numbers 95 and 33, expreſſing the proportion of the weight of the gold to that of the ſilver.

This propoſition of Archimedes may be demonſtrated analytically in the following manner: let the magnitudes of the gold and ſilver in the crown be A and B, and their ſpecific gravities as *a* and *b*; then, ſince the abſolute gravity of any body is compounded of its magnitude and ſpecific gravity, the weight of the gold is aA, of the ſilver bB, and of the crown $aA+bB=\overline{c+A\times B}$, ſuppoſing c to be the ſpecific gravity of the mixture. Hence $aA—cA=cB—bB$; and conſequently $c—b : a—c :: A : B$, as before.

12 **The hydroſtatic balance.** Upon this difference in the weight of bodies in open air and water, the hydroſtatic balance has been formed; which differs very little from a common balance, but that it hath an hook at the bottom of one ſcale, on which the weight we want to try may be hung by an horſe-hair, and thus ſuſpended in water, without wetting the ſcale from whence it hangs. Firſt, the weight of the body we want to try is balanced againſt the parcel or weight in open air; then the body is ſuſpended by the hook and horſe-hair at the bottom of the ſcale in water, which we well know will make it lighter, and deſtroy the balance. We then can know how much lighter it will be, by the quantity of the weights we take from the ſcale to make it equipoiſe; and of conſequence we thus preciſely can find out its ſpecific gravity compared to water (A). This is the moſt exact and infallible method of knowing the genuineneſs of metals, and the different mixtures with which they may be adulterated, and it will anſwer for all ſuch bodies as can be weighed in water. As for thoſe things that cannot be thus weighed, ſuch as quickſilver, ſmall ſparks of diamond, and ſuch like, as they cannot be ſuſpended by an horſe-hair, they muſt be put into a glaſs bucket, the weight of which is already known: this, with the quickſilver, muſt be balanced by weights in the oppoſite ſcale, as before, then immerſed, and the quantity of weights to be taken from the oppoſite ſcale will ſhow the ſpecific gravity of the bucket and the quickſilver together; the ſpecific gravity of the bucket is already known, and of conſequence the ſpecific gravity of the quickſilver, or any other ſimilar ſubſtance, will be what remains.

As we can thus diſcover the ſpecific gravity of different ſolids by plunging them in the ſame fluid, ſo we can diſcover the ſpecific gravity of different fluids, by plunging the ſame ſolid body into them; for in proportion as the fluid is light, ſo much will it diminiſh the weight of the body weighed in it. Thus we may know that ſpirit of wine has leſs ſpecific gravity than water, becauſe a ſolid that will ſwim in water will ſink in ſpirit; on the contrary, we may know, that ſpirit of nitre has greater ſpecific gravity than water, becauſe a ſolid that will ſink in water will ſwim upon the ſpirit of nitre.

13 **The hydrometer.** Upon this principle is made that ſimple inſtrument called an *hydrometer*, which ſerves to meaſure the lightneſs or weight of different fluids. For that liquors weigh very differently from each other is found by experience. Suppoſe we take a glaſs-veſſel which is divided into two parts, communicating with each other by a ſmall opening of a line and an half diameter. Let the lower part be filled up to the diviſion with red-wine, then let the upper part be filled with water. As the red-wine is lighter than water, we ſhall ſee it in a ſhort time riſing like a ſmall thread up through the water, and diffuſing itſelf upon the ſurface, till at length we ſhall find the wine and water have changed their places; the water will be ſeen in the lower half, and the wine in the upper half, of the veſſel. Or take a ſmall bottle AB, the neck of which muſt be very narrow, the mouth not more than $\frac{1}{2}$ of an inch wide; and have a glaſs-veſſel CD, whoſe height exceeds that of the bottle about two inches. With

Plate CCXL. fig. 2.

(A) This is the common hydroſtatic balance. The reader will ſee an improved apparatus at *Hydroſtatic* BALANCE, in the order of the alphabet.

with a ſmall funnel fill the bottle quite full of red-wine, and place it in the veſſel CD, which is to be full of water. The wine will preſently come out of the bottle, and riſe in form of a ſmall column to the ſurface of the water; and at the ſame time the water, entering the bottle, will ſupply the place of the wine; for water being ſpecifically heavier than wine, muſt hold the loweſt place, while the other naturally riſes to the top. A ſimilar effect will be produced if the bottle be filled with water, and the veſſel with wine: for the bottle being placed in the veſſel in an inverted poſition, the water will deſcend to the bottom of the veſſel, and the wine will mount into the bottle.

In the ſame manner we may pour four different liquors of different weights, into any glaſs-veſſel, and they ſhall all ſtand ſeparate and unmixed with each other. Thus, if we take mercury, oil of tartar, ſpirit of wine, and ſpirit of turpentine, ſhake them together in a glaſs, and then let them ſettle a few minutes, each ſhall ſtand in its proper place, mercury at the bottom, oil of tartar next, ſpirit of wine, and then ſpirit of turpentine above all. Thus we ſee liquors are of very different denſities; and this difference it is that the hydrometer is adapted to compare. In general, all vinous ſpirits are lighter than water; and the leſs they contain of water, the lighter they are. The hydrometer, therefore, will inform us how far they are genuine, by ſhowing us their lightneſs; for in pure ſpirit of wine it ſinks leſs than in that which is mixed with a ſmall quantity of water.

Fig. 3. The hydrometer ſhould be made of copper: for ivory imbibes ſpirituous liquors, and thereby alters their gravity; and glaſs requires an attention that is incompatible with expedition. The moſt ſimple hydrometer conſiſts of a copper ball B *b*, to which is ſoldered a braſs wire A B, one quarter of an inch thick. The upper part of this wire being filed flat, is marked *proof*, at *m*, fig. 4. becauſe it ſinks exactly to that mark in proof ſpirits. There are two other marks at A and B, fig. 3. to ſhow whether the liquor be one-tenth above or below proof, according as the hydrometer ſinks to A, or emerges to B, when a braſs weight, as C or K, is ſcrewed to its bottom *c*. There are other weights to ſcrew on, which ſhow the ſpecific gravity of different fluids, quite down to common water.

The round part of the wire above the ball may be marked ſo as to repreſent river-water when it ſinks to RW, fig. 4. the weight which anſwers to that water being then ſcrewed on; and when put into ſpring-water, mineral-water, ſea-water, and water of ſalt-ſprings, it will gradually riſe to the marks SP, MI, SE, SA. On the contrary, when it is put into Briſtol water, rain-water, port-wine, and mountain-wine, it will ſucceſſively ſink to the marks *br*, *ra*, *po*, *mo*. Inſtruments of this kind are ſometimes called *areometers*.

There is another ſort of hydrometer that is calculated to aſcertain the ſpecific gravity of fluids to the greateſt preciſion poſſible, and which conſiſts of a large hollow ball B, fig. 5. with a ſmaller ball *b* ſcrewed on to its bottom, partly filled with mercury or ſmall ſhot, in order to render it but little ſpecifically lighter than water. The larger ball has alſo a ſhort neck at C, into which is ſcrewed the graduated braſs-wire AC, which, by a ſmall weight at A, cauſes the body of the inſtrument to deſcend in the fluid with part of the ſtem.

When this inſtrument is ſwimming in the liquor contained in the jar ILMK, the part of the fluid diſplaced by it will be equal in bulk to the part of the inſtrument under water, and equal in weight to the whole inſtrument. Now, ſuppoſe the weight of the whole to be four thouſand grains, it is then evident we can by this means compare the different dimenſions of four thouſand grains of ſeveral ſorts of fluids. For if the weight at A be ſuch as will cauſe the ball to ſink in rain-water till its ſurface come to the middle point of the ſtem 20; and after that, if it be immerſed in common ſpring-water, and the ſurface be obſerved to ſtand at one-tenth of an inch below the middle point 20; it is apparent, that the ſame weight of each water differs only in bulk by the magnitude of one-tenth of an inch in the ſtem.

Now, ſuppoſe the ſtem to be ten inches long, and to weigh a hundred grains, then every tenth of an inch will weigh one grain: and as the ſtem is of braſs, which is about eight times heavier than water, the ſame bulk of water will be equal to one-eighth of a grain, and conſequently to the one-eighth of one four-thouſandth part, that is, one thirty-two thouſandth part of the whole bulk. This inſtrument is capable of ſtill greater preciſion, by making the ſtem or neck conſiſt of a flat thin ſlip of braſs, inſtead of one that is cylindrical: for by this means we increaſe the ſurface, which is the moſt requiſite circumſtance, and diminiſh the ſolidity, which neceſſarily renders the inſtrument ſtill more accurate.

To adapt this inſtrument to all purpoſes, there ſhould be two ſtems, to ſcrew on and off, in a ſmall hole at *a*. One ſtem ſhould be a ſmooth thin ſlip of braſs, or rather ſteel, like a watch-ſpring ſet ſtraight, ſimilar to what we have juſt now mentioned; on one ſide of which is to be the ſeveral marks or diviſions to which it will ſink in different ſorts of water, as rain, river, ſpring, ſea, and ſalt-ſpring waters, &c.; and on the other ſide you may mark the diviſions to which it ſinks in various lighter fluids, as hot Bath water, Briſtol water, Lincomb water, Cheltenham water, port-wine, mountain, madeira, and other ſorts of wines. But here the weight at A on the top muſt be a little leſs than before when it was uſed for heavier waters.

But in trying the ſtrength of the ſpirituous liquors, a common cylindric ſtem will do beſt, becauſe of its ſtrength and ſteadineſs: and this ought to be ſo contrived, that when immerſed in what is called proof-ſpirit, the ſurface of the ſpirit may be upon the middle point 20; which is eaſily done by duly adjuſting the ſmall weight A on the top, and making the ſtem of ſuch a length, that, when immerſed in water, it may juſt cover the ball and riſe to *a*; but, when immerſed in pure ſpirit, it may riſe to the top A. Then, by dividing the upper and lower parts *a* 20 and A 20, into ten equal parts each, when the inſtrument is immerſed into any ſort of ſpirituous liquor, it will immediately ſhow how much it is above or below proof.

Proof-ſpirit conſiſts of half water and half pure ſpirit, that is, ſuch as, when poured on gun powder, and ſet on fire, will burn all away; and permits the powder to take fire and flaſh, as in open air. But if the ſpirit be not ſo highly rectified, there will remain ſome water, which will make the powder wet, and unfit to take fire. Proof-ſpirit of any kind weighs ſeven pounds twelve ounces per gallon.

The common method of ſhaking the ſpirits in a phial, and raiſing a head of bubbles, to judge by their manner of riſing or breaking whether the ſpirit be proof, or near it, is very fallacious. There is no way ſo certain, and at the ſame time ſo eaſy and expeditious, as this by the hydrometer.

14 New improved hydrometer.

A variety of different conſtructions of the hydrometer have recently been made with a particular view of improving the inſtrument, ſo as to aſcertain the ſtrengths of ſpirits, and worts in brewing, in the moſt eaſy and accurate manner. As it would be unneceſſary to deſcribe all of them here, we ſhall conclude this ſection with deſcriptions of thoſe only which have been moſt approved and are now in general uſe.

15 Objection to Clarke's.

The Cuſtoms have for a long time adopted an hydrometer of an old conſtruction, by the late Mr Clarke. It differs very little from the one above deſcribed (fig. 3. 4.); and has belonging to it a great variety of weights, which are occaſionally ſecured on to the bottom of the ſtem: This renders the inſtrument troubleſome and complicated in its uſe, and where diſpatch in buſineſs and accuracy are wanted, not ſo commodious as ſuch an inſtrument ſhould be.

16 Hydrometer made by Jones.

An hydrometer upon a very ſimple conſtruction, eaſy in its application, and ſufficiently accurate for the common purpoſes it is wanted to anſwer, by diſtillers and others concerned in the ſale and ſtate of ſpirits, is made by Mr Wm. Jones mathematical inſtrument maker in Holborn. It requires only *three weights*; to diſcover the ſtrengths of ſpirits from alcohol down to water. This hydrometer, like others, is adjuſted to a temperate ſtate of the air, or 60° of the thermometer with Fahrenheit's ſcale; but as an alteration of this temperature very materially affects the gravity of ſpirits, cauſing them by the inſtrument to appear ſtronger when the weather is hotter, and the contrary, it has been found indiſpenſably neceſſary to place a thermometer in the ſpirits previous to the immerſing of the inſtrument, and make a juſt allowance for the ſeveral degrees that the mercury may be above or below the temperature abovementioned. This has been uſually, though inaccurately, eſtimated at the rate of one gallon allowance for every three degrees of the thermometer above or below 60°; viz. for every three degrees warmer, reckoning the ſpirit one gallon in the 100 weaker than what is ſhown by the hydrometer; and for every three degrees colder than 60°, allowing one gallon in the 100 ſtronger. In this hydrometer, the thermometer is united with the inſtrument; and from experiment its diviſions are adjuſted to the different degrees above or below the temperate ſtate. The concentration is alſo conſidered in this inſtrument, which is the mutual penetration of ſpirit and water when mixed together; which in ſtrong ſpirits is ſo conſiderable as to cauſe a diminution of 4 gallons in the 100: for example, if to 100 gallons of ſpirit of wine, found by the inſtrument to be 66 gallons in the 100 over proof, you add 66 gallons of water in order to reduce it to a proof ſtate; the mixture, inſtead of producing 166 gallons, will produce 162 gallons only of proof ſpirits, and therefore 4 gallons will be loſt in the mutual penetration of the particles of the water and ſpirit.

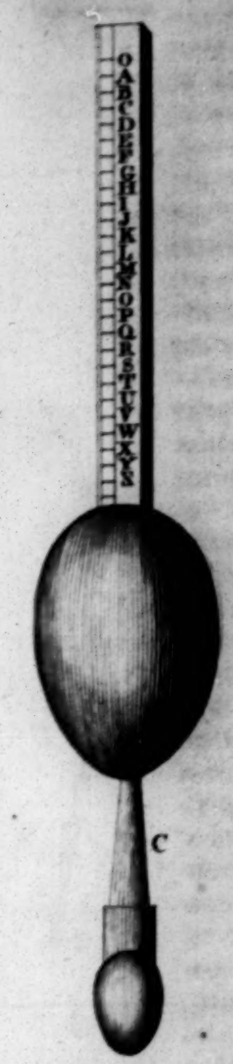
Fig. 6. is a repreſentation of the whole inſtrument, with the thermometer united. Its length A B is about 9½ inches; its ball C, is of the ſhape nearly of an egg, and made of hard braſs, and about 1½ inch in its horizontal diameter. It has a ſquare ſtem A D, on the four ſides of which are graduated the different ſtrength of the ſpirit. The other three ſides not ſhown in this figure are repreſented in fig. 7. with the three weights belonging to them, marked nº 1. 2. and 3. correſponding to the ſides ſimilarly marked at the top. When the inſtrument is placed in the ſpirit to be tried, if it ſinks to the diviſions on the ſtem without a weight, the ſtrength will be ſhown on the ſide marked 0 on the top; and it will indicate any ſtrength from 74 gallons in the 100, to 74 to the 100 above proof. The ſmall figures, as 4 at 66, 3½ at 61, 2½ at 48, &c. ſhow the concentration by mixture abovementioned, *viz.* the rate of diminutions that will take place, by making a mixture with water, to reduce the ſpirit at thoſe ſtrengths to proof. If the hydrometer does not ſink to the ſtem without a weight, it muſt be made to do ſo by applying either of the three weights requiſite. The ſide nº 1. with the weight nº 1. ſhows the ſtrength of ſpirits from 46 to 13 gallons to the 100 above proof, as before. The concentration figures are 2, 1½, &c. the uſe as before. The ſide nº 2. with the weight nº 2. ſhows the remainder of the over-proof to *proof*, the diviſion of which is marked P on the inſtrument, and every gallon in 100 under proof down to 29. The ſide nº 3. with its weight, ſhows the remainder from 30 gallons in the 100 under proof down to water, marked W, which may be conſidered 100 in 160. The application of the thermometer (F) now appears eaſy and expeditious; for as it is immerſed in the ſpirits with the hydrometer, they both may be obſerved at one experiment or trial. The ſcale of the thermometer is divided into four columns; two on one ſide, as ſhown in the figure, and two on the other. At the top of the columns are marks 0. 1. 2. 3. agreeing with the weights, or no weight, in uſe; and that column of diviſions of the thermometer is to be obſerved which correſponds with the weights in uſe; if no weight is uſed, then the column marked 0 is obſerved. The diviſions of the thermometer commence from the middle of each column at the temperate point, which is marked 0: then for as many diviſions as the quickſilver in the tube appears above 0, ſo many gallons in the 100 muſt the ſpirit be reckoned weaker; and for ſo many diviſions as the quickſilver may appear below 0, as many gallons in the 100 muſt it be reckoned ſtronger.

Hydrometers of a ſimilar conſtruction, and with no more weights, Mr Jones makes for diſcovering to great exactneſs the different ſtrengths or ſpecific gravity of worts in brewing, of different minerals, ſea-waters, &c. For theſe purpoſes the thermometer is not united with the inſtrument; but is found to be more uſeful ſeparately, and of a larger dimenſion.

17 One by Mr Dicas with a ſliding rule.

Notwithſtanding the above hydrometer anſwering the general purpoſes in an accurate and eaſy manner, yet the induſtry of ſeveral ingenious perſons intereſted in the ſale of ſpirits has been exerted to conſtruct an inſtrument of the *greateſt* poſſible exactneſs. The effects of heat and cold upon different ſtrengths of ſpirits not being ſo uniform as generally underſtood, and every different degree of ſtrength of ſpirit between water and alcohol having its peculiar degree of contraction and dilatation, errors of ſome importance muſt be found in the hydrometer conſtructed upon the uſual principle of temperature. With a view to obviate this defect, Mr Dicas of Liverpool conſtructed ſome years back an hydrometer of the form ge-

Fig. 8



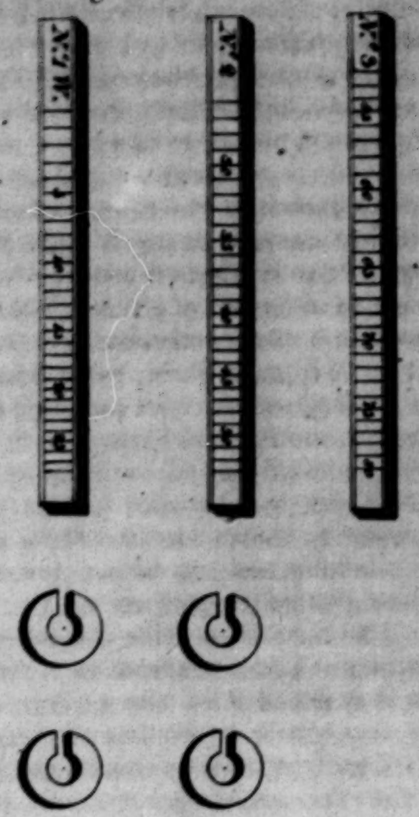


Fig. 5

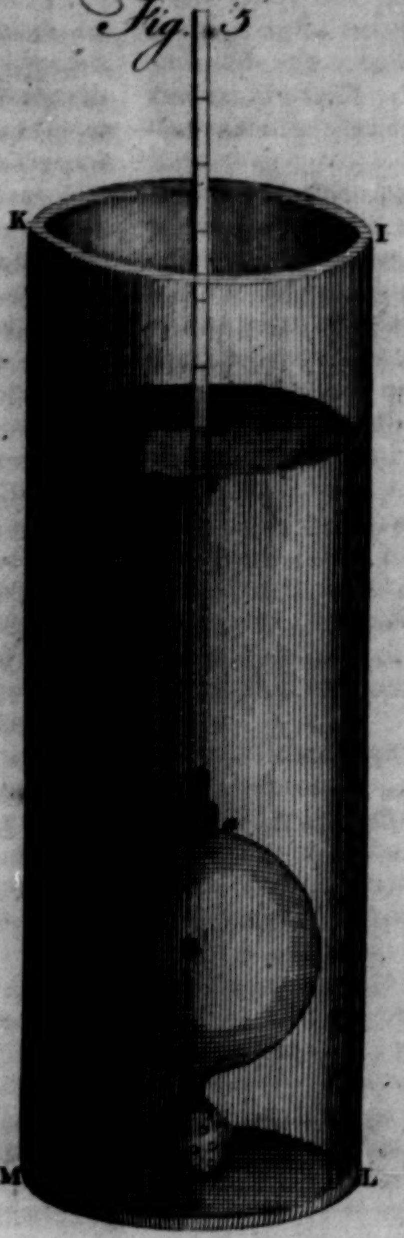


Fig. 4

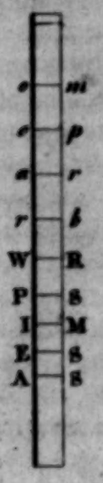

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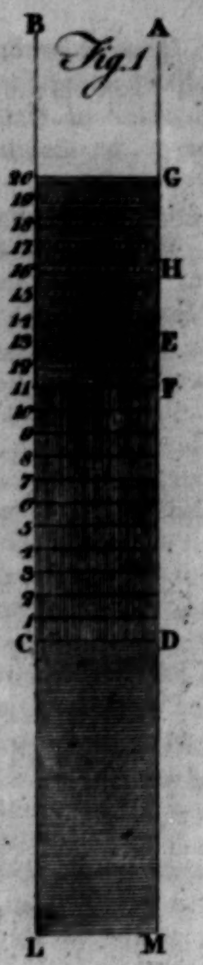
Fig. 1


B
A
G
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C
D
L
M

Fig. 2

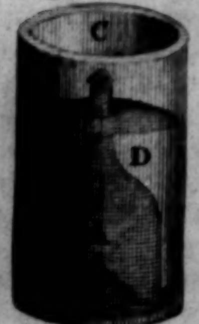


Fig. 6

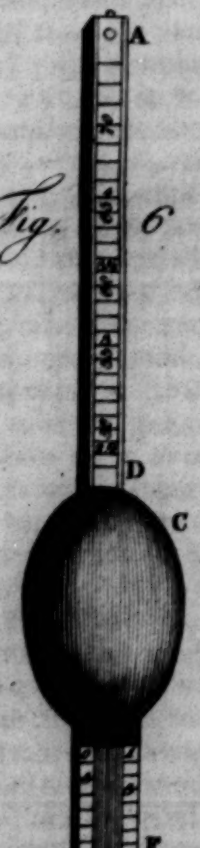


Fig. 7

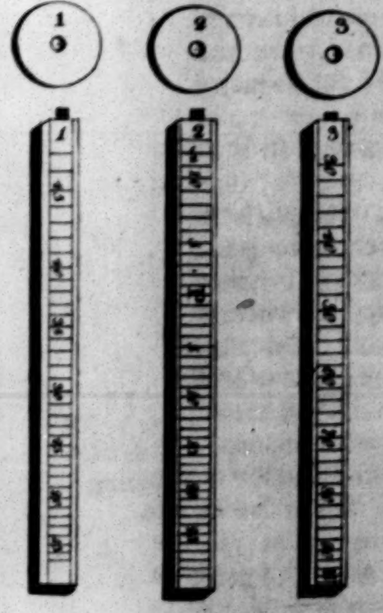
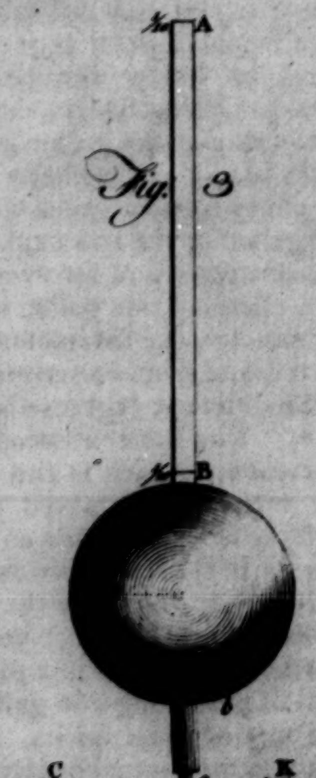


Fig. 9

Fig. 3



Scot Philad.a

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generally uſed, with 36 weights, which were valued from 0 to 370, including the diviſions on the ſtem; but the improvement conſiſts ſolely in an ivory ſliding rule which accompanies the inſtrument. In the gradation of this rule, is conſidered the different effects of heat and cold abovementioned on the ſpirits. Every degree of ſtrength included by the hydrometer between 0 and 370, has the ſame ſeries of numbers placed on the ſliding part of the rule; oppoſite to which, on the fixed rule, are marked the different ſtrengths, and which are thus determined by immediate inſpection. They proceed on one ſide from water to proof, and on the other from proof to alcohol, and divided in ſuch a manner, as to ſhow how many gallons in the 100 the ſpirits are above or below proof. There is alſo a line, containing the concentration for every degree of ſtrength; and, what is the chief advantage of the rule, at one end of the ſide is placed a ſcale, containing the degree of heat from 30 to 80 of Fahrenheit's ſcale, with a flower de luce oppoſite, as an index, to fix it to the temperature of the ſpirits. By the aſſiſtance of this ſliding rule, the exact ſtate of the ſpirits is correctly obtained. A perfect comprehenſion of this rule can only be had by inſpection of it, and it always accompanies the hydrometer on ſale. Mr Dicas has obtained a patent for his improvement.

18
Mr Quin's univerſal hydrometer.

An hydrometer of a more univerſal conſtruction has been made by Mr Quin, who for many years has been accuſtomed to conſtruct hydrometers of various kinds. This hydrometer is made of hard braſs; and therefore not ſo liable to be injured as fine copper, of which hydrometers are uſually made: it is conſtructed ſo as to aſcertain, in a plain and expeditious manner, the ſtrength of any ſpirit from alcohol to water, with the concentration and ſpecific gravity of each different ſtrength; and diſcovers alſo the weight of worts, &c. with *four* weights only; which, according to the old conſtruction of hydrometers, would require a far greater number of weights. Fig. 8, is a repreſentation of the inſtrument, with its four ſides of the ſtem graduated and figured at top, to correſpond with the weights below. The ſide of the ſquare ſtem engraved A, B, C, D, &c. to Z, ſhows the ſtrength of any ſpirit from alcohol to water; and the three other ſides, numbered 1, 2, 3, are adapted for worts, &c. The heat and cold altering the denſity of ſpirits, and giving to every degree of ſtrength a peculiar degree of contraction and dilatation; this circumſtance is conſidered in dividing the ſliding rule belonging to and ſold with the hydrometer. This ſliding rule is nearly ſimilar to that of Mr Dicas's abovementioned, and differs but very little from it. Some directions for the uſe of this hydrometer may further exemplify its ſimplicity and accuracy.

Find the heat of the ſpirit by a thermometer, and bring the ſtar on the ſliding rule to the degree of heat on the thermometer ſcale, and againſt the number of the weight and letter on the ſtem you have the ſtrength of the ſpirit pointed out on the ſliding rule, which is lettered and numbered as the inſtrument and weights are.

The weights apply on the under ſtem at C.

Example. Suppoſe the heat of the ſpirit 65° by the thermometer, and of ſuch ſtrength as to ſink the hydrometer to D on the ſtem, without any weight; then put the ſtar (on the rule) to 65° of the thermometer, and againſt D you have 75 gallons to the 100 over proof; at this ſtrength the concentration is 5 gallons (marked above 75); and the ſpecific gravity is nearly 811; as marked below D: ſo that if 75 gallons of water are added to 100 gallons of this ſpirit, the mixture will be hydrometer proof; but will only produce in meaſure 170 gallons. Again, let the heat be 50°, and the ſpirit require the weight n° 1. to ſink the inſtrument to *I* on the ſtem; then put the ſtar to 50° of heat, and againſt *I* on the ſliding rule you have $52\frac{1}{4}$ gallons to 100 over proof, concentration $2\frac{1}{4}$ gallons, and the ſpecific gravity 854.

If the inſtrument with the weight n° 2. ſhould ſink to Q on the ſtem, and the heat 41°, it ſhows the ſtrength 19 gallons to the 100 over proof, concentration $\frac{1}{4}$, ſpecific gravity 905.

If the ſpirit be at 32° of heat, and the weight n° 3. ſinks the inſtrument to letter S on the ſtem on the ſliding rule, it ſhows the liquor to be 13 gallons in the 100 under proof, concentration $\frac{1}{2}$, ſpecific gravity 945. So of the reſt. In aſcertaining the ſtrength or gravity of worts, the weight n° 4. is always to continue on the hydrometer; and the weights n° 1, 2, 3, are adapted to the ſides n° 1, 2, 3, of the ſquare ſtem; which diſcovers the exact gravity of the worts.

The inſtrument is adjuſted ſo as to ſink in rain water at 60° of the thermometer with the weight n° 1. to W, on the ſide of the ſtem n° 1. and ſhows to 26° heavier than water. The ſide n° 2. with its correſponding weight n° 2. ſhows from 26° to 53°, and the ſide n° 3. aſcertains from 53° to 81°, or $40\frac{1}{2}$ pounds *per* barrel heavier than water; two degrees on the ſtem being a pound *per* barrel.

To uſe the hydrometer in aſcertaining the gravity of two or more worts.

Rule. Multiply the gravity of each wort by its reſpective number of barrels or gallons; divide the ſum of the products by the number of gallons or barrels; the quotient will be the mean gravity required.

Suppoſe firſt wort 30 barrels,
at 60° gravity,
ſecond wort 20 barrels,
at 35° gravity.

60°　　　　35°
30 barrels　20 barrels
—————　—————
1800　　　700
700
—————
50)2500(50° mean gravity required.
2500

When the heat of the worts cannot be conveniently tried at 60° of the thermometer, the following ſmall table ſhows the number of diviſions to be added for the heat:

Degrees of the thermometer	60	0	Degrees of the hydrometer to be addded.
	72	1	
	82	2	
	91	3	
	99	4	

This table is not philoſophically true; yet the error from it will not exceed a quarter of a pound *per* barrel in any gravity, and for fermentation; but for more accuracy in this particular Mr Quin completes a ſcale which may be applied to any particular degree of heat.

Mr Nicholſon has lately improved the conſtruction of the hydrometer, and made it a new inſtrument for meaſuring the ſpecific gravity of bodies; and for that purpoſe it appears the moſt accurate of any yet conſtructed. See fig. 9. where AA repreſents a ſmall ſcale, which may be taken off at D; diameter $1\frac{1}{2}$ inch, weight 44 grains. B a ſtem of hardened ſteel wire; diameter $\frac{1}{40}$ inch. E a hollow copper globe; diameter $2\frac{8}{10}$ inches, weight with ſtem 369 grains. FF a ſtirrup of wire ſcrewed to the globe at C. G a ſmall ſcale ſerving likewiſe as a counterpoiſe; diameter $1\frac{1}{2}$ inch, weight with ſtirrup 1634 grains. The other dimenſions may be had from the figure, which is $\frac{1}{2}$ of the linear magnitude of the inſtrument itſelf.

In the conſtruction, it is aſſumed, that the upper ſcale ſhall conſtantly carry 1000 grains when the lower ſcale is empty, and the inſtrument ſunk in diſtilled water at the temperature of 60° Fahrenheit to the middle of the wire or ſtem. The length of the ſtem is arbitrary, as is likewiſe the diſtance of the lower ſcale from the ſurface of the globe. But the length of the ſtem being ſettled, the lower ſcale may be made lighter, and conſequently the globe leſs, the greater its diſtance is taken from the ſurface of the globe; and the contrary. It is to be noted that the diameter of each ſcale muſt not be leſs than the ſide of a cube of water weighing 1000 grains.

The diſtances of the upper and lower ſcales reſpectively from the neareſt ſurface of the globe being ſettled, add half the ſide of a cube of water weighing 1000 grains to the diſtance of the upper ſcale. This increaſed diſtance, and the ſaid diſtance of the lower ſcale, may be conſidered as the two arms of a lever; and, by the property of that mechanical power,

As the number expreſſing the lower diſtance,

Is to the whole weight above; namely 1000 grains added to the weight of the upper ſcale;

So is the number expreſſing the upper diſtance,

To the lower weight, when the inſtrument has no tendency to any one poſition.

This laſt found weight muſt be conſiderably increaſed, in order that the inſtruments may acquire and preſerve a perpendicular poſition.

Add together into one ſum the weight of the lower ſcale thus found, the weight of the upper ſcale and its load, and the eſtimate weight of the ball and wires. Find the ſolid content of an equal weight of water; and thence, by the common rules of menſuration the diameter of an equal ſphere. This will be the diameter, from outſide to outſide, of the globe that will float the whole.

As this proceſs, and every other part of the preſent deſcription, may be eaſily deduced from the well known laws of hydroſtatics, it is unneceſſary to enlarge here on the demonſtrative part.

To meaſure the ſpecific gravities and thermometrical expanſions of fluids. If the extreme length or height of the inſtrument be moderate, its weight, when loaded, will be about 3100 grains. It is, however, neceſſary in practice, that its weight ſhould be accurately found by experiment. This whole weight is equal to that of a quantity of diſtilled water at the temperature of 60°, whoſe bulk is equal to that part of the inſtrument which is below the middle of the ſtem. If, therefore, the inſtrument be immerſed to the middle of the ſtem in any other fluid at the ſame temperature (which may be done by altering the load), the difference between this laſt load and 1000 grains will be the difference between equal bulks of water and of the other fluid, the weight or the maſs of water being known to be 3100 grains. If the ſaid difference be exceſs above 1000 grains it muſt be added, or if it be defect ſubtracted from 3100 grains: the ſum or remainder will be a number whoſe ratio to 3100 will expreſs the ratio of the ſpecific gravity of the aſſumed fluid to that of water. And this ratio will be expreſſed with conſiderable accuracy; for the inſtrument having a cylindrical ſtem of no more than $\frac{1}{40}$ of an inch diameter, will be raiſed or depreſſed near one inch by the ſubtraction or addition of $\frac{1}{10}$ of a grain, and will therefore indicate with eaſe ſuch mutations of weight as do not fall ſhort of $\frac{1}{10}$ of a grain, or $\frac{1}{31000}$th part of the whole. Conſequently, the ſpecific gravities of all fluids, in which this inſtrument can be immerſed, will be found to five places of figures.

It is evident, that this inſtrument is a kind of thermometer, perhaps better adapted than the common one for meaſuring the expanſions of fluids by heat. As the fluid, in the common thermometer, riſes by the exceſs of expanſion of the fluid beyond the expanſion of the glaſs veſſel; ſo this inſtrument will fall by the exceſs of the ſame expanſion beyond the proper expanſion of the materials it is compoſed of.

To meaſure the ſpecific gravities of ſolid bodies. The ſolid bodies to be tried by this inſtrument muſt not exceed 1000 grains in weight. Place the inſtrument in diſtilled water, and load the upper ſcale or diſh till the ſurface of the water interſects the middle of the ſtem. If the weights required to effect this be exactly 1000 grains, the temperature of the water anſwers to 60° of Fahrenheit's ſcale; if they be more or leſs than 1000 grains, it follows, that the water is colder or warmer. Having taken a note of this weight, unload the ſcale, and place therein the body whoſe ſpecific gravity is required. Add more weight, till the ſurface of the water again biſects the ſtem. The difference between the added weight and the former load is the weight of the body in air. Place now the body in the lower ſcale or diſh under water, and add weights on the upper ſcale till the ſurface of the water once more biſects the ſtem. This laſt added weight will be the difference between 1000 grains and the weight of the body in water. To illuſtrate this by an example.

N. B. The ſpecific gravity of lead and tin, and (probably other metals) will vary in the third figure when the ſame piece of metal is melted and cooled a ſecond time. This difference probably ariſes from the arrangement of the parts in cooling more or leſs ſuddenly.

	Grains.
The load was found by experiment -	999,10
A piece of caſt lead required the additional weight - - -	210,85
Difference is abſolute weight in air	788,25
Additional weight when the lead was in the lower ſcale - -	280,09
Difference between the two additional weights or loſs by immerſion -	69,24

$$\text{Hence ſpecific gravity } \frac{788.25}{69.24} = \frac{11384}{1000}$$

When the inſtrument is once adjuſted in diſtilled water, common water may be afterwards uſed. For the ratio of the ſpecific gravity of the water made uſe of to that of diſtilled water being known $(=\frac{b}{a})$, and the ratio of the ſpecific gravity of the ſolid to the water made uſe of being alſo known $(=\frac{c}{b})$, the ratio of the ſpecific gravity of the ſolid to that of diſtilled water will be compounded of both (that is, $\frac{cb}{ab}$).

There is reaſon to conclude from the experiments of various authors, that they have not paid much attention either to the temperature or ſpecific gravity of the water they made uſe of. They who are inclined to be contented with a leſs degree of preciſion than is intended in the conſtruction here deſcribed, may change the ſtem, which for that purpoſe may be made to take out for a larger.

One of the greateſt difficulties that attend hydroſtatical experiments, ariſes from the attraction or repulſion that obtains at the ſurface of the water. After trying many expedients to obviate the irregularities ariſing from this cauſe, Mr Nicholſon finds reaſon to prefer the ſimple one, of carefully wiping the whole inſtrument, and eſpecially the ſtem, with a clean cloth. The weights in the diſh muſt not be eſteemed accurate while there is either a cumulus or a cavity in the water round the ſtem.

Yet, after all, we cannot with great geometrical certainty rely upon either the hydrometer or the hydroſtatic balance; for there are ſome natural inconveniences that diſturb the exactneſs with which they diſcover the ſpecific gravities of different bodies. Thus, if the weather be hotter at one time than another, all fluids will ſwell, and conſequently they will be lighter than when the weather is cold: the air itſelf is at one time heavier than at another, and will buoy up bodies weighed in it; they will therefore appear lighter, and will of conſequence ſeem heavier in water. In ſhort, there are many cauſes that would prevent us from making tables of the ſpecific gravities of bodies, if rigorous exactneſs were only expected; for the individuals of every kind of ſubſtance differ from each other, gold from gold, and water from water. In ſuch tables, therefore, all that is expected is to come as near the exact weight as we can; and from an inſpection into ſeveral, we may make an average near the truth. Thus, Muſchenbroek's table makes the ſpecific gravity of rain-water to be nearly eighteen times and an half leſs than that of a guinea; whereas the Engliſh tables make it to be but ſeventeen times and an half, nearly, leſs than the ſame. But though there may be ſome minute variation in all our tables, yet they in general may ſerve to conduct us with ſufficient accuracy.

In conſtructing tables of ſpecific gravities with accuracy, the gravity of water muſt be repreſented by unity or 1.000, where three cyphers are added to give room for expreſſing the ratios of other gravities in decimal parts, as in the the following table.

19 Table of ſpecific gravities.

A TABLE of the SPECIFIC GRAVITIES of ſeveral Solid and Fluid Bodies.

	Troy weight.			Avoirdu.		Comparative weight.
A cubic inch of	oz.	pw.	gr.	oz.	drams.	
Very fine gold	10	7	3.83	1	5.80	19.637
Standard gold	9	19	6.44	10	14.90	18.888
Guinea gold	9	7	17.18	10	4.76	17.793
Moidore gold	9	0	19.84	9	14.71	17.140
Quickſilver	7	7	11.61	8	1.45	14.019
Lead - -	5	19	17.55	6	9.08	11.325
Fine ſilver -	5	16	23.23	6	6.66	11.087
Standard ſilver	5	11	3.36	6	1.54	10.535
Copper - -	4	13	7.04	5	1.89	8.843
Plate-braſs	4	4	9.60	4	10.09	8.000
Steel - -	4	2	20.12	4	8.70	7.852
Iron - -	4	0	15.20	4	6.77	7.645
Block tin -	3	17	5.68	4	3.79	7.321
Spelter -	3	14	12.86	4	1.42	7.065
Lead ore -	3	11	17.76	3	14.96	6.800
Glaſs of antimony	2	15	16.89	3	0.89	5.280
Germ. antimony	2	2	4.80	2	5,04	4.000
Copper ore -	2	1	11.83	2	4.43	3.775
Diamond -	1	15	20.88	1	15.48	3.400
Clear glaſs -	1	13	5.58	1	13.16	3.150
Lapis lazuli -	1	12	5.27	1	12.27	3.054
Welch aſbeſtos	1	10	17.57	1	10.97	2.913
White marble	1	8	13.41	1	9.06	2.707
Black ditto -	1	8	12.65	1	9.02	2.704
Rock cryſtal	1	8	1.00	1	8.61	2.658
Green glaſs -	1	7	15.38	1	8.26	2.620
Cornelian ſtone	1	7	1.21	1	7.73	2.568
Flint - -	1	6	19.63	1	7.53	2.542
Hard paving ſtone	1	5	22.87	1	6.77	2.460
Live ſulphur -	1	1	2.40	1	2.52	2.000
Nitre - - -	1	0	1.08	1	1.59	1.900
Alabaſter -	0	19	18.74	1	1.35	1.875
Dry ivory -	0	19	6.09	1	0.89	1.825
Brimſtone -	0	18	23.76	1	0.66	1.800
Alum - -	0	17	21,92	0	15.72	1.714
Ebony - -	0	11	18.82	0	10.34	1.117
Human blood	0	11	2.89	0	9.76	1.054
Amber - -	0	10	20.79	0	9.54	1.030
Cow's milk -	0	10	20.79	0	9.54	1.030
Sea-water -	0	10	20,79	0	9.54	1.030
Pump-water -	0	10	13.30	0	9.26	1.000
Spring-water -	0	10	12.94	0	9.25	0.999
Diſtilled water	0	10	11.42	0	9.20	0.993
Red wine -	0	10	11.42	0	9.20	0.993
Oil of amber	0	10	7.63	0	9.06	0.978
Proof ſpirits	0	9	19.73	0	8.62	0.931
Dry oak -	0	9	18.00	0	8.56	0.925
Olive oil -	0	9	15.17	0	8.45	0.913
Pure ſpirits -	0	9	3.27	0	8.02	0.866
Spirit of turpent.	0	9	2.76	0	7.99	0.864
Oil of turpentine	0	8	8.53	0	7.33	0.772
Dry crabtree	0	8	1.69	0	7.08	0.765
Saſſafras wood	0	5	2.04	0	4.46	0.482
Cork - -	0	2	12.77	0	2.21	0.240

Take away the decimal point from the numbers in the right-hand column, or (which is the ſame) multiply them by 1000, and they will ſhow how many ounces avoirdupoiſe are contained in a cubic foot of each body.

20 How to find out the quantity of adulteration in metals.

The uſe of the table of ſpecific gravities will beſt appear by an example. Suppoſe a body to be compoſed of gold and ſilver, and it is required to find the quantity of each metal in the compound.

Firſt find the ſpecific gravity of the compound, by weighing it in air and in water; and dividing its aerial weight by what it loſes thereof in water, the quotient will ſhow its ſpecific gravity, or how many times it is heavier than its bulk of water. Then ſubtract the ſpecific gravity of ſilver (found in the table) from that of the compound, and the ſpecific gravity of the compound from that of gold: the firſt remainder ſhows the bulk of gold, and the latter the bulk of ſilver, in the whole compound: and if theſe remainders be multiplied by their reſpective ſpecific gravities, the products will ſhow the proportion of weights of each metal in the body.

Suppoſe the ſpecific gravity of the compounded body be 13; that of ſtandard ſilver (by the table) is 10.5, and that of gold 19.63: therefore 10.5 from 13, remains 2.5, the proportional bulk of the gold; and 13 from 19.63, remains 6.63, the proportional bulk of ſilver in the compound. Then, the firſt remainder 2.5, multiplied by 19,63, the ſpecific gravity of gold, produces 49.075 for the proportional weight of gold; and the laſt remainder 6.63 multiplied by 10.5, the ſpecific gravity of ſilver, produces 69,615 for the proportional weight of ſilver in the whole body. So that for every 49.07 ounces or pounds of gold, there are 69.6 pounds or ounces of ſilver in the body.

Hence it is eaſy to know whether any ſuſpected metal be genuine or allayed, or counterfeit; by finding how much it is heavier than its bulk of water, and comparing the ſame with the table: if they agree, the metal is good; if they differ, it is allayed or counterfeited.

21 How to try ſpirituous liquors.

A cubical inch of good brandy, rum, or other proof ſpirits, weighs 235.7 grains; therefore, if a true inch cube of any metal weighs 235.7 grains leſs in ſpirits than in air, it ſhows the ſpirits are proof. If it loſes leſs of its aerial weight in ſpirits, they are above proof; if it loſes more, they are under: For, the better the ſpirits are, they are the lighter; and the worſe, the heavier.

SECT. IV. *Hydraulics.*

HYDRAULICS is that part of Hydroſtatics, which teaches to eſtimate the ſwiftneſs or the force of fluids in motion.

It has been always thought an enquiry of great curioſity, and ſtill greater advantage, to know the cauſes by which water ſpouts from veſſels to different heights and diſtances. We have obſerved, for inſtance, an open veſſel of liquor upon its ſtand, pierced at the bottom: the liquor, when the opening is firſt made, ſpouts out with great force; but as it continues to run, becomes leſs violent, and the liquor flows more feebly. A knowledge of hydraulics will inſtruct us in the cauſe of this diminution of its ſtrength; it will ſhow preciſely how far the liquor will ſpout from any veſſel, and how faſt or in what quantities it will flow. Upon the principles of this ſcience, many machines worked by water are entirely conſtructed; ſeveral different engines uſed in the mechanic arts, various kinds of mills, pumps, and fountains, are the reſult of this theory, judiciouſly applied.

22 The velocity of ſpouting water.

And what is thus demonſtrated of the bottom of the veſſel, is equally true at every other depth whatſoever, Let us then reduce this into a theorem: *The velocity with which water ſpouts out at a hole in the ſide or bottom of a veſſel, is as the ſquare root of the depth or diſtance of the hole below the ſurface of the water.* For, in order to make double the quantity of a fluid run through one hole as through another of the ſame ſize, it will require four times the preſſure of the other, and therefore muſt be four times the depth of the other below the ſurface of the water: and for the ſame reaſon, three times the quantity running in an equal time through the ſame ſort of hole, muſt, run with three times the velocity; which will require nine times the preſſure, and conſequently muſt be nine times as deep below the ſurface of the fluid: and ſo on.—To prove this by an experiment: Let two pipes, as C and *g*, of equal-ſized bores, be fixed into the ſide of the veſſel AB; the pipe *g* being four times as deep below the ſurface of the water at *b* in the veſſel as the pipe C is: and whilſt theſe pipes run, let water be conſtantly poured into the veſſel, to keep the ſurface ſtill at the ſame height. Then if a cup that holds a pint be ſo placed as to receive the water that ſpouts from the pipe C, and at the ſame moment a cup that holds a quart be ſo placed as to receive the water that ſpouts from the pipe *g*, both cups will be filled at the ſame time by their reſpective pipes.

Plate ccxxxix. fig. 9.

23 The horizontal diſtance to which water will ſpout from pipes.

The horizontal diſtance to which a fluid will ſpout from a horizontal pipe in any part of the ſide of an upright veſſel below the ſurface of the fluid, is equal to twice the length of a perpendicular to the ſide of the veſſel, drawn from the mouth of the pipe to a ſemicircle deſcribed upon the altitude of the fluid: and therefore, the fluid will ſpout to the greateſt diſtance poſſible from a pipe whoſe mouth is at the the centre of the ſemicircle; becauſe a perpendicular to its diameter (ſuppoſed parallel to the ſide of the veſſel) drawn from that point, is the longeſt that can poſſibly be drawn from any part of the diameter to the circumference of the ſemicircle. Thus, if the veſſel AB be full of water, the horizontal pipe D be in the middle of its ſide, and the ſemicircle N*edcb* be deſcribed upon D as a centre, with the radius or ſemidiameter D*g*N, or D*ſb*, the perpendicular D*d* to the diameter ND*b* is the longeſt than can be drawn from any part of the diameter to the circumference N*edcb*. And if the veſſel be kept full, the jet G will ſpout from the pipe D, to the horizontal diſtance NM, which is double the length of the perpendicular D*d*. If two other pipes, as C and E, be fixed into the ſide of the veſſel at equal diſtances above and below the pipe D, the perpendicular C*c* and E*e*, from theſe pipes to the ſemicircle, will be equal: and the jets F and H ſpouting from them will each go to the horizontal diſtance NK; which is double the length of either of the equal perpendiculars C*c* or E*e*.

24 How water may be conveyed over hills and valleys.

Fluids by their preſſure may be conveyed over hills and valleys in bended pipes, to any height not greater than the level of the ſpring from whence they flow. This is what the ancients were ignorant of; and therefore they uſually built AQUEDUCTS (vaſt rows of arches one above another, between two hills, at a vaſt expence of money, time, and labour), in order to convey water over them, croſs the valley, in a common channel. This is now done to equal advantage, and at much leſs expence, by a range of pipes laid down one hill and up the other. An inſtance whereof may be given by a bent tube or crane; into one of the equal legs whereof if water be poured, it will riſe to the ſame level exactly in the other. The reaſon is obvious: In the leg A, (fig. 14.) there are, ſuppoſe, two ounces of water endeavouring by the power of gravity to deſcend with the force of 2; theſe will thruſt forward, buoy up, and ſupport an equal quantity of a like fluid in B; and the bottom of the machine C, againſt which both ſides equally bear, will of conſequence ſuſtain a double preſſure, or that of four ounces; and in the preſent caſe will pretty well repreſent the prop or fixed point of a balance beam; as the equal fluid-columns A C, and B C, may be admitted to denote equal weights, ſuſpended on the balance arms, counterpoiſing each other. So that the riſe of fluids to their firſt level, thus conſidered, is a caſe truly ſtatical; and all their other motions proceed only from weight added.

25 The ſyphon. A *ſyphon*, generally uſed for decanting liquors, is a bended pipe, whoſe legs are of unequal lengths; and the ſhorteſt leg muſt always be put into the liquor intended to be decanted, that the perpendicular altitude of the column of liquor in the other leg may be longer than the column in the immerſed leg, eſpecially above the ſurface of the water. For, if both columns were equally high in that reſpect, the atmoſphere, which preſſes as much upward as downward, and therefore acts as much upward againſt the column in the leg that hangs without the veſſel, as it acts downward upon the ſurface of the liquor in the veſſel, would hinder the running of the liquor through the ſyphon, even though it were brought over the bended part by ſuction. So that there is nothing left to cauſe the motion of the liquor, but the ſuperior weight of the column in the longer leg, on account of its having the greater perpendicular height.

Fig. 10 Let D be a cup filled with water to C; and ABC a ſyphon, whoſe ſhorter leg B C F is immerſed in the water from C to F. If the end of the other leg were no lower than the line AC, which is level with the ſurface of the water, the ſyphon would not run, even though the air ſhould be drawn out of it at the mouth A. For although the ſuction would draw ſome water at firſt, yet the water would ſtop at the moment the ſuction ceaſed; becauſe the air would act as much upward againſt the water at A, as it acted downward for it by preſſing on the ſurface at C. But if the leg A B comes down to G, and the air be drawn out at G by ſuction, the water will immediately follow, and continue to run until the ſurface of the water in the cup comes down to F: becauſe, till then, the perpendicular height of the column BAG will be greater than that of the column CB; and, conſequently, its weight will be greater, until the ſurface comes down to F; and then the ſyphon will ſtop, though the leg CF ſhould reach to the bottom of the cup. For which reaſon, the leg that hangs without the cup is always made long enough to reach below the level of its bottom; as from *d* to E: and then when the ſyphon is emptied of air by ſuction at E, the water immediately follows, and by its continuity brings away the whole from the cup; juſt as pulling one end of a thread will make the whole clue follow.

If the perpendicular height of a ſyphon, from the ſurface of the water to its bended top at B, be more than 33 feet, it will draw no water, even though the other leg were much longer, and the ſyphon quite emptied of air, becauſe the weight of a column of water 33 feet high, is equal to the weight of as thick a column of air, reaching from the ſurface of the earth to the top of the atmoſphere: ſo that there will then be an equilibrium; and conſequently, though there would be weight enough of air upon the ſurface C to make the water aſcend in the leg CB almoſt to the height B, if the ſyphon were emptied of air, yet the weight would not be ſufficient to force the water over the bend; and therefore it could never be brought into the leg BAG.

Mercury may be drawn through a ſyphon in the ſame manner as water; but then the utmoſt height of the ſyphon muſt always be leſs than 30 inches, as mercury is near 14 times heavier than water. That fluids are forced through the ſyphon by the preſſure of the atmoſphere, is proved experimentally by the air-pump; for, if a ſyphon immerſed in a veſſel of water be placed when running in the receiver, and the air extracted, the running will immediately ceaſe. It is however certain, that a ſyphon of a particular kind, once ſet a running, will perſiſt in its motion, though removed into the moſt perfect vacuum our air-pumps will make: or, if the lower orifice of a full ſyphon be ſhut, and the whole be thus placed in a receiver, with a contrivance for opening the orifice when the air is exhauſted; the water will be all emptied out of the veſſel, as if it had been in open air.

This fact has been ſufficiently aſcertained by many approved hydroſtatical writers. Deſaguliers informs us, that he made the experiment both with water and mercury; for having filled a ſyphon, recurved at the extremities of its legs, ſucceſſively with thoſe liquors, and ſuſpended it by a ſlip-wire in the receiver of an air-pump, over two ſmall jars containing mercury to unequal heights (and water, when water was uſed in the ſyphon), he exhauſted the air out of the receiver, and when letting down the ſyphon, ſo that its two ends went into the liquor in the jars, the liquor ran from the higher into the lower veſſel. He alſo made an expement in the open air, where the mercury ran through a ſyphon, whoſe bend was more than 31 inches above the lower orifice of the ſhort leg of the ſyphon. But neither of theſe experiments afford a juſt objection againſt the preceding doctrine, *viz.* that the air is the cauſe of the diſcharge of liquors from one veſſel into another by means of ſyphons; for its running in *vacuo* was only owing to the attraction of coheſion, which acts for a ſmall height; becauſe the experiment will not ſucceed in *vacuo*, if the ſyphon uſed for mercury has its bend ſix inches higher than the orifice of the ſhort leg, and if the bend for the ſyphon of water be two or three feet high; neither will the laſt mentioned with mercury in the open air anſwer, if the bend of the ſyphon be forty inches high: and in all the experiments the bores of the ſyphons muſt be very ſmall.

Plate CCXLII.

The figure of the ſyphon may be varied at pleaſure, (ſee *fig.* 1. 2. 3.) provided only the orifice C be below the level of the ſurface of the water to be drawn up; but ſtill the farther it is diſtant from it, the faſter will the fluid be carried off. And if, in the courſe of the flux, the orifice A be drawn out of the fluid, all the liquor in the ſyphon will go out at the lower orifice C; that in the leg CB dragging, as it were, that in the ſhorter leg AB after it. If a filled ſyphon be ſo diſpoſed, as that both orifices A and C be in the ſame horizontal line; the fluid will remain pendant in each leg, how unequal ſoever the length of the legs may be. Fluids, therefore, in ſyphons, ſeem as it were to form one continued body; ſo that the heavier part deſcending like a chain, pulls the lighter after it.

Upon the principle of the ſyphon depend the experiments of *Tantalus's cup*, n° 44; *the Fountain at command*, n° 45; *and the inverted drinking-glaſs*, n° 58. As to the laſt of theſe, it may be here obſerved, that if the paper was put dry on ſuch a veſſel empty, it would ſink in the air, and fall away even by its own gravity; and if put on wet, it were to be doubted whether a very ſmall weight added thereto would not ſeparate it from the glaſs, ſo inconſiderable would the tenacity of the water be in this caſe. The paper therefore cannot be ſuppoſed to ſupport the incumbent weight of water; and the true cauſe thereof muſt be this: The bottom and ſides of the inverted glaſs-veſſel being rigid, keep off the preſſure of the air from the fluid above, whereas it hath liberty of acceſs and freely acts thereon below: and that it does ſo, will in part appear to an obſerver by the concavity of the paper underneath. Could the air's preſſure in this caſe be any-how admitted through the foot of the veſſel inverted, without doubt the whole column would deſcend together. And the like would happen ſhould the paper be removed; but for a different reaſon, viz. the large column of water in the mug, being compoſed of many collateral ones, which, being diſpoſed as in a bundle, reſt on the paper wherewith the veſſel is covered, as on a common baſe; and theſe being all equally denſe, and equally fluid, are all retained, and continued of the ſame length, by the general and uniform preſſure of the air againſt the paper below; and ſo long as this continues, none of them getting the leaſt advantage over the reſt, they are all ſuſtained in a body compact together. But when the paper is removed, it being ſcarce poſſible to hold the veſſel ſo exactly level, but that ſome one or other of theſe ſmaller fluid columns will become longer, conſequently heavier, than thoſe adjacent, and, over-balancing the reſt, will deſcend, and give the lighter fluid, the air, leave to riſe in its place, even to the top of the glaſs: the general preſſure whereof being there admitted, will ſoon cauſe the reſt of them to move, and the whole quantity will then deſcend, ſeemingly together.

Again, ſhould a veſſel be but part filled with water, the ſame effect will follow to a certain degree. For inſtance, ſuppoſe we fill a long glaſs half with water, cover it with paper, and turn it down as before. Six inches ſuppoſe of water, endeavouring to deſcend, will by its weight rarefy the air in the glaſs above it, perhaps a 60th part or more. The denſer air without will then overpoiſe the air rarefied within; and therefore a certain quantity of water, equal to the difference of the two preſſures, will in this caſe be thereby buoyed up and ſupported. But the air within the glaſs being dilated as aforeſaid, the water ſuſpended muſt be expected to hang ſomething below the mouth of it; though not enough, perhaps, to overcome the tenacity of the water, and make it all deſcend.

26 Intermitting ſprings Plate CCXLI. fig. 2.

Upon the principle of the ſyphon alſo we may eaſily account for *intermitting* or *reciprocating ſprings*. Let AA be part of a hill, within which there is a cavity BB; and from this cavity a vein or channel running in the direction of BCDE. The rain that falls upon the ſide of the hill will ſink and ſtrain through the ſmall pores and crannies G, G, G, G; and fill the cavity K with water. When the water riſes to the level HHC, the vein BCDE will be filled to C, and the water will run through CDF as through a ſyphon; which running will contiue until the cavity be emptied, and then it will ſtop until the cavity be filled again.

27 Jets-d'eau

We have ſeen that fluids led in pipes will always riſe to the level of the reſervoir whence they are ſupplied; the riſing column being puſhed forward, and raiſed by another equally heavy, at the ſame time endeavouring to deſcend. A like effect might be expected from jets of water thus impelled, did not friction againſt the ſides of the machines, and the reſiſtance of the air, both lateral and perpendicular, generally prove an abatement, and prevent its riſing ſo high as the head.

Where jets are executed in the beſt manner, and the friction ſpoken of is as much as poſſible removed, the impediment of the air only, through which they needs muſt beat in their riſe, will cauſe them, according to experiment, to fall ſhort of the height of the reſervoirs, in the following proportions, *viz.*

JET.	RESERVOIR.	
Feet.	Feet.	Inches.
5	5 :	1
10	10 :	4
15	15 :	9
20	21 :	4
25	27 :	1
30	33 :	0
35	39 :	1
40	45 :	4
45	51 :	9
50	58 :	4
55	65 :	1
60	72 :	0
65	79 :	1
70	86 :	4
75	93 :	9
80	101 :	4
85	109 :	1
90	117 :	0
95	125 :	1
100	153 :	4

Whence in general it may be obſerved:

That as often as a five-foot jet (to be taken in theſe matters as a ſtandard,)

Shall be contained in the height of any jet propoſed;
By ſo many inches multiplied into themſelves, or ſquared,
The ſurface of the water in the reſervatory which ſupplies it, ought to exceed that jet in height.

Thus, to obtain a jet of 30 feet, which contains five feet ſix times, the reſervoir ought to be 36 inches or a yard higher; and a jet of 60 feet may be had from a head higher by four times that difference, 144 inches, or four yards. So that *jets done in the beſt manner fall ſhort of the heights of their reſervatories, in a kind of ſub-duplicate ratio of the heights to which they riſe.*

This great diſproportion in the riſe of jets muſt in general be owing to the reſiſtance of the air they are made to move through; which has been ſhown to be in proportion to the ſquares of their celerities reſpectively: nor can the acceleration of the falling water in the pipe, or the retardment of the riſing ſtream by the action of gravity, be concerned at all in it; ſince theſe are probably adequate, and counterbalance each other every where in the ſame level.

The air's reſiſtance being thus conſiderable, it will always be found neceſſary to increaſe the bore of the adjutage or ſpouting pipe with the height of the reſervatory: for if it be too ſmall, the riſing ſtream will want ſufficient weight and power to divide the air; which being denſeſt near the earth, a ſmall ſtream of water, endeavouring to mount to a great height, will be daſhed againſt it with ſo great violence, as to fall away in a miſt and be wholly loſt. And it may be obſerved, that the weightier any body is, the greater force it will have when in motion: ſince an ounce-ball fired from a muſket, will go much farther, and do greater execution, than will an equal weight of ſhot; and theſe again may be projected farther than ſo much lead raſped into powder and fired off. A charge of water fired from a piſtol would ſcarce wet a paper at the diſtance of ſix feet. Accordingly, ſhould a caſk of water be any where pierced with holes of two, four, ſix, eight, and twelve lines over, all in the ſame level, the larger bore will always be found to throw the water fartheſt.

It may be of uſe here to add Mr Marriote's proportions of the bores of the adjutages and pipes of conduct, who was very converſant in theſe things, and hath written very well on this ſubject.

N. B. The French divide their inch into 12 equal parts, which they call *lines.*

Heights of Reſervoirs.	*Diameters of fit Adjutages.*	*Diameters of the Pipes of Conduct.*
FEET.	LINES.	LINES.
5	3, 4, 5, or 6	22
10	4, 5, or 6 ——	25 INCHES.
15	5, or 6 ——	27, or $2\frac{1}{4}$
20	6, or half an inch	30, or $2\frac{1}{2}$
25	Ditto ——	33, or $2\frac{3}{4}$
30	Ditto ——	36, or 3
40	7, or 8 ——	51, or $4\frac{1}{4}$
50	8, or 10 ——	65, or $5\frac{1}{4}$
60	10, or 12 ——	72, or 6
80	12, or 14 ——	84, or 7
100	12, 14, or 15	96, or 8

Hence it may be remarked, that there is a certain and fit proportion to be obſerved between the adjutage whereby the jet is delivered, and the pipe conducting it from the head. In general, *About five times the diameter of the adjutage for jets under half an inch, and ſix or ſeven times for all above, will ſize the pipes of conduct pretty well:* not but it will always be an error on the right ſide, to have them rather larger than in ſtrictneſs they ought to be, that the jet may always be freely ſupplied with water, and in due time.

For a like reaſon, if there be occaſion for a cock to be placed in any part of the pipe of conduct, particular care muſt be taken that it ſhould be there bigger in proportion, that the water-way may not be pinched; but that the cavity be left at leaſt equal to the bore of the reſt of the pipe.

The bore of an adjutage cannot be too ſmooth or true. Thoſe that are cylindrical are beſt: thoſe that are bored conical worſt, becauſe of the reflections of the water from the inclined ſides of the machine, which in the hurry of the iſſuing ſtream will in them unavoidably be made.

When fluids are deſigned to be raiſed higher than the ſprings from whence they flow, forcing engines muſt be uſed; of which and other hydraulic machines, we come now to give a particular account.

SECT. V. *Hydraulic Engines.*

28 Of pumps.

THE pump is at once the moſt common and moſt uſeful of all the hydraulic inſtruments. It was firſt invented by Cteſebes, a mathematician of Alexandria, 120 B. C.; when the air's preſſure came afterwards to be known, it was much improved, and it is now brought to a great degree of perfection.

Plate CCXLIII, fig. 15.

Cteſebes's pump acted both by ſuction and pulſion; and its ſtructure and action are as follow:—A braſs cylinder ABCD, furniſhed with a valve in L, is placed in the water. 2. In this is fitted the embulus MK, made of green wood, which will not ſwell in the water, and adjuſted to the aperture of the cylinder with a covering of leather, but without any valve. In H is fitted on another tube NH, with a valve that opens upwards in I. Now, the embulus EK being raiſed, the water opens the valve in L, and riſes into the cavity of the cylinder:—and when the ſame embulus is again depreſſed, the valve I is opened, and the water driven up through the tube HN. This is the pump uſed among the ancients, and that from which the others aftermentioned are deduced. Sir S. Moreland has endeavoured to increaſe its force by leſſening the friction; which he has done to good effect, inſomuch as to make it work without almoſt any friction at all.

Of this pump as now uſed there are ſimply three kinds, viz. the ſucking, the forcing, and the lifting-pump. By the two laſt, water may be raiſed to any height, with an adequate apparatus and ſufficient power: by the former it may, by the general preſſure of the atmoſphere on the ſurface of the well-water, be raiſed no more than 33 feet, as was before hinted, though in practice it is ſeldom applied to the raiſing it much above 28; becauſe from the variations obſerved on the barometer, it is apprehended that the air may, on certain occaſions, be ſomewhat lighter than 33 feet of water; and whenever that ſhall happen, for want of the due counterpoiſe, this pump may fail in its performance.

29 The common pump.

The *common ſucking-pump*, with which we draw water out of wells, is an engine both pneumatic and hydraulic. It conſiſts of a pipe open at both ends, in which is a moveable piſton, bucket, or ſucker, as big as the bore of the pipe in that part wherein it works; and is leathered round, ſo as to fit the bore exactly; and may be moved up and down, without ſuffering any air to come between it and the pipe or pump-barrel.

We ſhall explain the conſtruction of this and the forcing-pump by pictures of glaſs models, in which both the action of the piſtons and motion of the valves are ſeen.

Plate CCXLI. fig. 3.

Hold the model DCBL upright in the veſſel of water L, the water being deep enough to riſe at leaſt as high as from A to L. The valve *a* on the moveable bucket G, and the valve *b* on the fixed box H (which box quite fills the bore of the pipe or barrel at H), will each lie cloſe, by its own weight, upon the hole in the bucket and box, until the engine begins to work. The valves are made of braſs, and covered underneath with leather for cloſing the holes the more exactly: and the bucket G is raiſed and depreſſed alternately by the handle E and rod D *d*, the bucket being ſupported at B before the working begins.

Take hold of the handle E, and thereby draw up the bucket from B to C, which will make room for the air in the pump all the way below the bucket to dilate itſelf, by which its ſpring is weakened, and then its force is not equivalent to the weight or preſſure of the outward air upon the water in the veſſel K: and therefore, at the firſt ſtroke, the outward air will preſs up the water through the notched foot A, into the lower pipe, about as far as *e*: this will condenſe the rarefied air in the pipe between *e* and C to the ſame ſtate it was in before; and then, as its ſpring within the pipe is equal to the force or preſſure of the outward air, the water will riſe no higher by the firſt ſtroke; and the valve *b*, which was raiſed a little by the dilation of the air in the pipe, will fall, and ſtop the hole in the box H; and the ſurface of the water will ſtand at *e*. Then depreſs the piſton or bucket from C to B; and as the air in the part B cannot get back again through the valve *b*, it will (as the bucket deſcends) raiſe the valve *a*, and ſo make its way through the upper part of the barrel *d* into the open air. But upon raiſing the bucket G a ſecond time, the air between it and the water in the lower pipe at *a* will be again left at liberty to fill a larger ſpace; and ſo its ſpring being again weakened, the preſſure of the outward air on the water in the veſſel K will force more water up into the lower pipe from *e* to *f*; and when the bucket is at its greateſt height C, the lower valve *b* will fall, and ſtop the hole in the box H as before. At the next ſtroke of the bucket or piſton, the water will riſe through the box H towards B; and then the valve *b*, which was raiſed by it, will fall when the bucket G is at its greateſt height. Upon depreſſing the bucket again, the water cannot be puſhed back through the valve *b*, which keeps cloſe upon the hole whilſt the piſton deſcends. And upon raiſing the piſton again, the outward preſſure of the air will force the water up through H, where it will raiſe the valve, and follow the bucket to C. Upon the next depreſſion of the bucket G, it will go down into the water in the barrel B; and as the water cannot be driven back through the now cloſe valve *b*, it will raiſe the valve *a* as the bucket deſcends, and will be lifted up by the bucket when it is next raiſed. And now the whole ſpace below the bucket being full, the water above it cannot ſink when it is next depreſſed; but upon its depreſſion, the valve will riſe to let the bucket go down; and when it is quite down, the valve *a* will fall by its weight, and ſtop the hole in the bucket. When the bucket is next raiſed, all the water above it will be lifted up, and begin to run off by the pipe F. And thus, by raiſing and depreſſing the bucket alternately, there is ſtill more water raiſed by it; which getting above the pipe F, into the wide top I, will ſupply the pipe, and make it run with a continued ſtream.

So at every time the bucket is raiſed, the valve *b* riſes, and the valve *a* falls; and at every time the bucket is depreſſed, the valve *b* falls, and *a* riſes.

As it is the preſſure of the air or atmoſphere which cauſes the water to riſe and follow the piſton or bucket G as it is drawn up; and ſince a column of water 33 feet high is of equal weight with as thick a column of the atmoſphere from the earth to the very top of the air; therefore the perpendicular height of the piſton or bucket from the ſurface of the water in the well muſt always be leſs than 33 feet; othewiſe the water will never get above the bucket. But when the height is leſs, the preſſure of the atmoſphere will be greater than the weight of the water in the pump, and will therefore raiſe it above the bucket: and when the water has once got above the bucket, it may be lifted thereby to any height, if the rod D be made long enough, and a ſufficient degree of ſtrength be employed to raiſe it with the weight of the water above the bucket.

The force required to work a pump, will be as the height to which the water is raiſed, and as the ſquare of the diameter of the pump-bore in that part where the piſton works. So that if two pumps be of equal heights, and one of them be twice as wide in the bore as the other, the wideſt will raiſe four times as much water as the narroweſt; and will therefore require four times as much ſtrength to work it.

The wideneſs or narrowneſs of the pump, in any other part beſides that in which the piſton works, does not make the pump either more or leſs difficult to work, except what difference may ariſe from the friction of the water in the bore; which is always greater in a narrower bore than in a wide one, becauſe of the greater velocity of the water.

The pump-rod is never raiſed directly by ſuch a handle as E at the top, but by means of a lever, whoſe longer arm (at the end of which the power is applied) generally exceeds the length of the ſhorter arm five or ſix times; and, by that means, it gives five or ſix times as much advantage to the power. Upon theſe principles, it will be eaſy to find the dimenſions of a pump that ſhall work with a given force, and draw water from any given depth. But as theſe calculations have been generally neglected by pump-makers (either for want of ſkill or induſtry), the following table was calculated by the late ingenious Mr Booth for their benefit. In this calculation, he ſuppoſed the handle of the pump to be a lever increaſing the power five times; and had often found that a man can work a pump four inches

Plate CCXLI

HYDROSTATICS

Fig 7

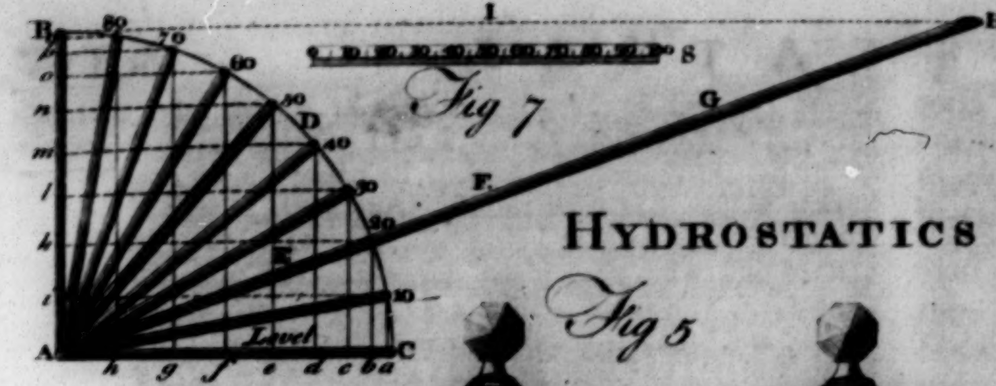
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Fig 1

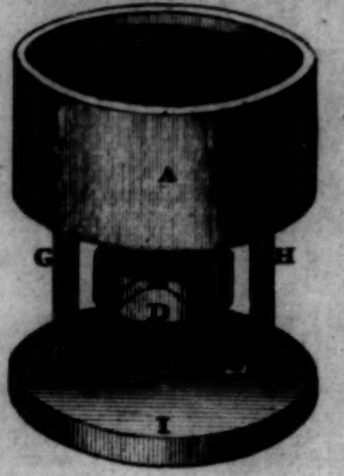

Fig 5

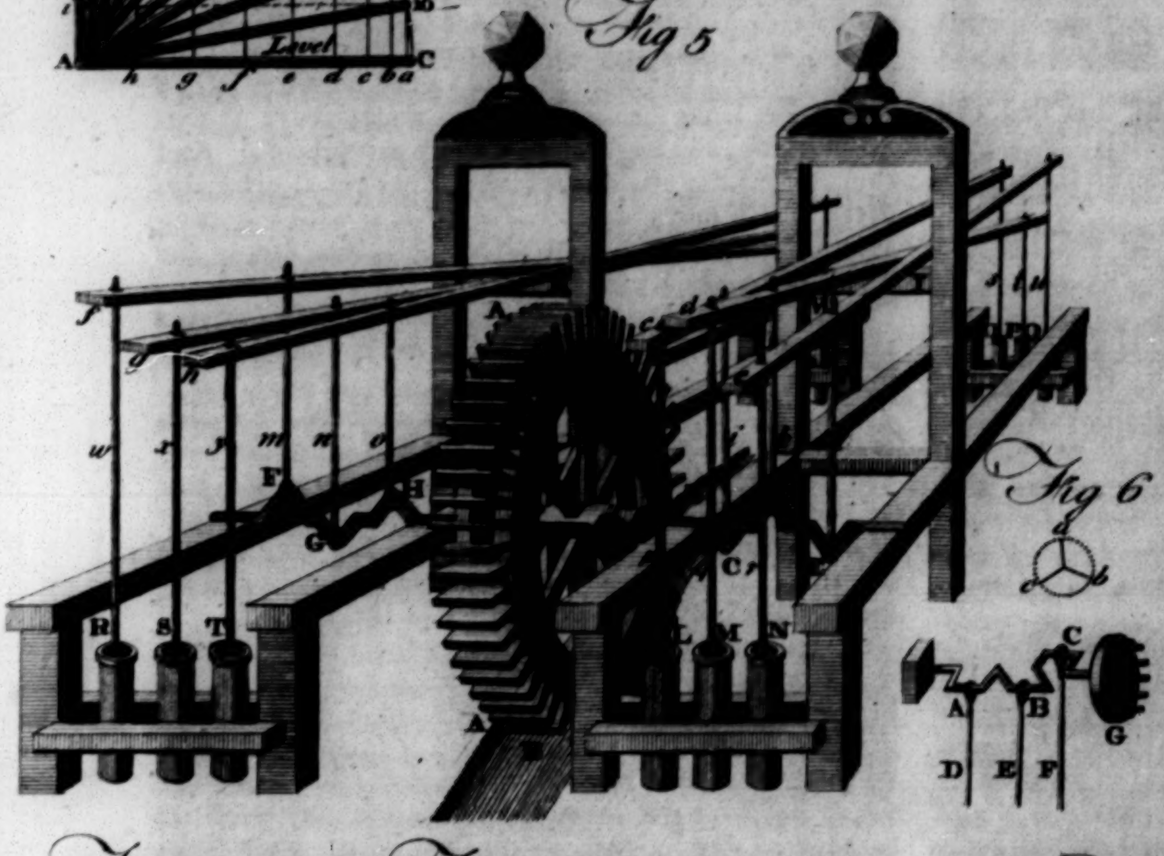
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Fig 6

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Fig 2

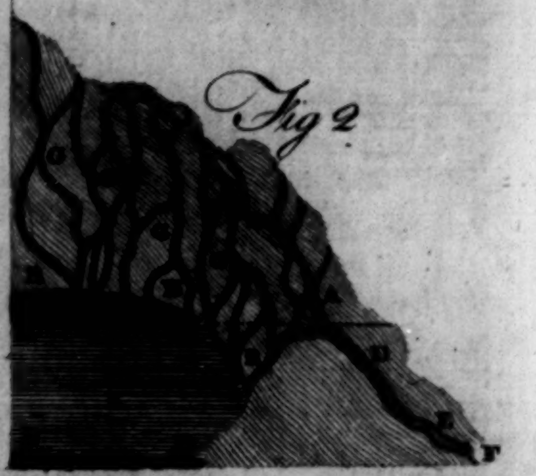

Fig 3

Fig 4

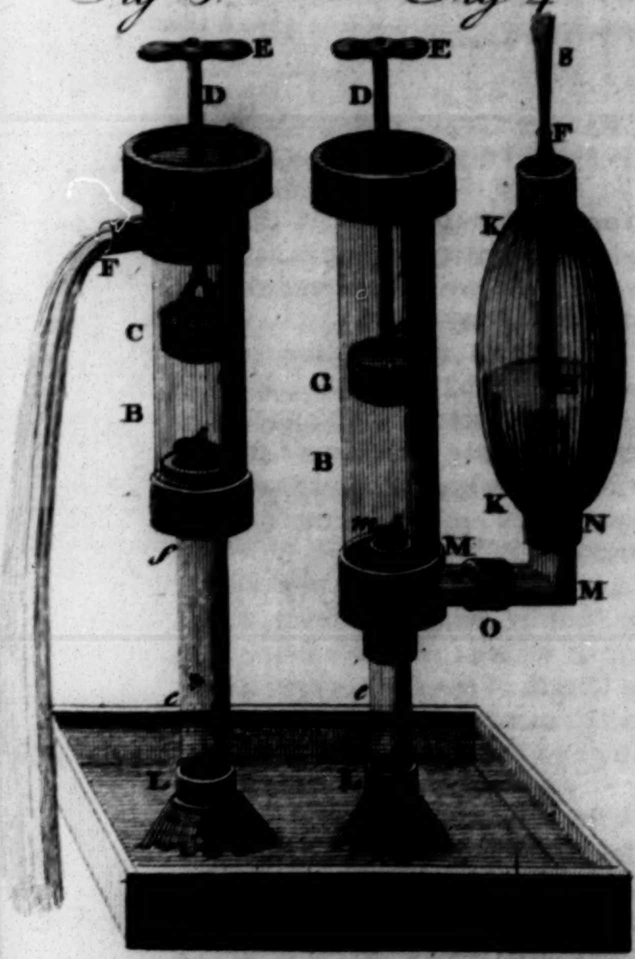
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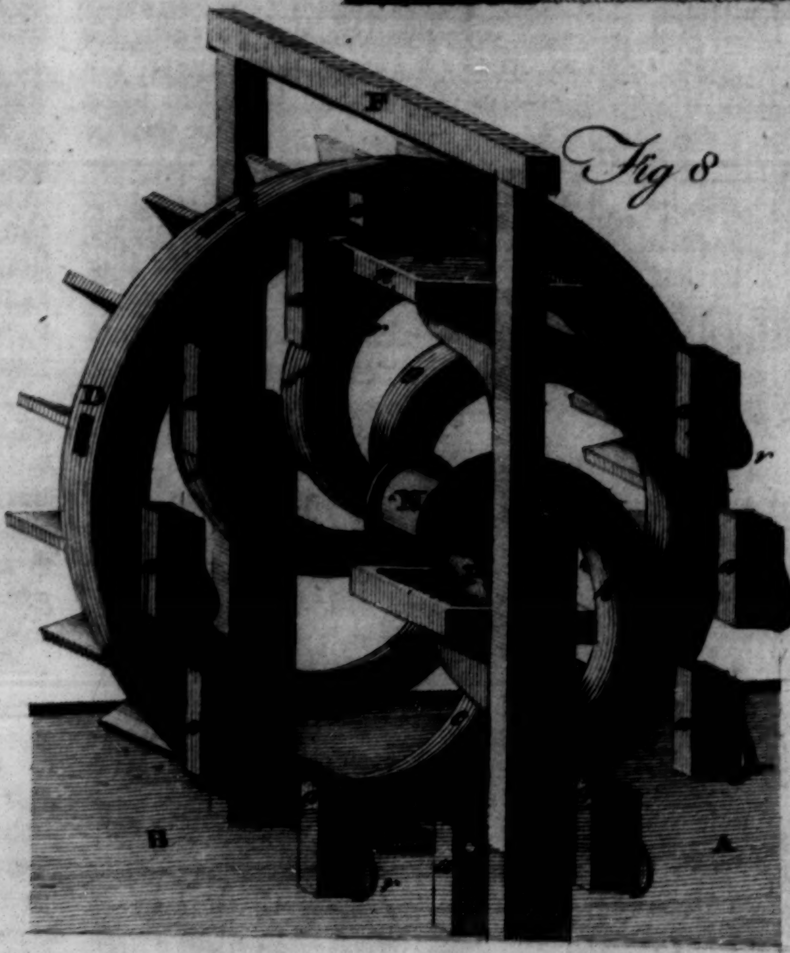
Fig 8



R. Scot Sculp. Philad.a

BRITISH MUSEUM

inches diameter and 30 feet high, and diſcharge 27¼ gallons of water (Engliſh wine-meaſure) in a minute. Now, if it be required to find the diameter of a pump that ſhall raiſe water with the ſame eaſe from any other height above the ſurface of the *well*; look for that height in the firſt column, and over againſt it in the ſecond you have the diameter or width of the pump, and in the third you find the quantity of water which a man of ordinary ſtrength can diſcharge in a minute.

Height of the pump above the ſurface of the *well*.	Diameter of the bore where the bucket works.		Water diſcharged in a minute, Engliſh wine-meaſure.	
Feet.	Inches.	100 parts.	Gallons.	Pints.
10	6	.93	81	6
15	5	.66	54	4
20	4	.90	40	7
25	4	.38	32	6
30	4	.00	27	2
35	3	.70	23	3
40	3	.46	20	3
45	3	.27	18	1
50	3	.10	16	3
55	2	.95	14	7
60	2	.84	13	5
65	2	.72	12	4
70	2	.62	11	5
75	2	.53	10	7
80	2	.45	10	2
85	2	.38	9	5
90	2	.31	9	1
95	2	.25	8	5
100	2	.19	8	1

30 The forcing pump. Plate CCXLI. fig. 4.

The *forcing-pump* raiſes water through the box H in the ſame manner as the ſucking pump does, when the plunger or piſton *g* is lifted up by the rod *D d*. But this plunger has no hole through it, to let the water in the barrel BC get above it, when it is depreſſed to B, and the valve *b* (which roſe by the aſcent of the water through the box H when the plunger *g* was drawn up) falls down and ſtops the hole in H, the moment that the plunger is raiſed to its greateſt height. Therefore, as the water between the plunger *g* and box H can neither get through the plunger upon its deſcent, nor back again into the lower part of the pump L *e*, but has a free paſſage by the cavity around H into the pipe MM, which opens into the air-veſſel KK at P; the water is forced through the pipe MM by the deſcent of the plunger, and driven into the air-veſſel; and in running up through the pipe at P, it opens the valve *a*; which ſhuts at the moment the plunger begins to be raiſed, becauſe the action of the water againſt the under ſide of the valve then ceaſes.

The water, being thus forced into the air veſſel KK by repeated ſtrokes of the plunger, gets above the lower end of the pipe GHI, and then begins to condenſe the air in the veſſel KK. For, as the pipe GH is fixed air-tight into the veſſel below F, and the air has no way to get out of the veſſel but through the mouth of the pipe at I, and cannot get out when the mouth I is covered with water, and is more and more condenſed as the water riſes upon the pipe, the air then begins to act forcibly by its ſpring againſt the ſurface of the water at H: and this action drives the water up through the pipe IHGF, from whence it ſpouts in a jet S to a great height; and is ſupplied by alternately raiſing and depreſſing of the plunger *g*, which conſtantly forces the water that it raiſes through the valve H, along the pipe MM, into the air-veſſel KK.

The higher that the ſurface of the water H is raiſed in the air-veſſel, the leſs ſpace will the air be condenſed into which before filled that veſſel; and therefore the force of its ſpring will be ſo much the ſtronger upon the water, and will drive it with the greater force through the pipe at F: and as the ſpring of the air continues whilſt the plunger *g* is riſing, the ſtream or jet S will be uniform, as long as the action of the plunger continues; and when the valve *b* opens, to let the water follow the plunger upward, the valve *a* ſhuts, to hinder the water, which is forced into the air-veſſel, from running back by the pipe MM into the barrel of the pump.

If there was no air-veſſel to this engine, the pipe GHI would be joined to the pipe MMN at P; and then the jet S would ſtop every time the plunger is raiſed, and run only when the plunger is depreſſed.

31 The lifting pump. Plate ccxxxix. fig. 13.

Of *lifting-pumps* there are ſeveral ſorts; the moſt common is thus conſtructed. AB is the barrel, fixed in the frame KILM; which is alſo fixed immoveable, with the lower part in the water that is to be pumped up. GEQHO is a frame with two ſtrong iron rods, moveable through holes in the upper and lower parts of the pump, IK and LM. In the bottom of this frame is fixed an inverted piſton BD, with its bucket and valve uppermoſt at D. From the top of the barrel there goes off a part KH, either fixed to the barrel, or moveable by a ball and ſocket (as here repreſented at F); but in either caſe ſo very exact and tight, that no water or air can poſſibly get into the barrel, as that would prevent the effect of the pump. In this part, at C, is fixed a valve opening upward.

When the piſton frame is thruſt down into the water, the piſton D will deſcend, and the water beneath it ruſh up through the valve at D, and get above the piſton; where, upon the frame's being lifted up, the piſton will force the water through the valve C, into the ciſtern P, there to run off by the ſpout. It is to be remembered, that this ſort of pump muſt be ſet ſo far in the water, that the piſton may play below its ſurface. It appears by the above deſcription, that this is only a different manner of conſtructing a forcing-pump.

By means of forcing-pumps, water may be raiſed to any height above the level of a river or ſpring; and machines may be contrived to work theſe pumps, either by a running ſtream, a fall of water, or by horſes. An inſtance in each ſort will be ſufficient to ſhow the method.

Plate CCXLI. fig. 5.

1. By a running ſtream, or a fall of water. Let AA be a wheel, turned by the fall of water BB; and

have any number of cranks (ſuppoſe ſix) as C, D, E, F, G, H, on its axis, according to the ſtrength of the fall of water, and the height to which the water is intended to be raiſed by the engine. As the wheel turns round, theſe cranks move the levers, *c, d, e, f, g, h,* up and down, by the iron rods *i, k, l, m, n, o*; which alternately raiſe and depreſs the piſtons by the other iron rods *p, q, r, ſ, t, u, w, x, y,* in 12 pumps; nine whereof, as L, M, N, O, P, Q, R, S, T, appear in the plate; the other three being hid behind the work at V. And as pipes may go from all theſe pumps, to convey the water (drawn up by them to a ſmall height) into a cloſe ciſtern, from which the main pipe proceeds, the water will be forced into this ciſtern by the deſcent of the piſtons. And as each pipe, going from its reſpective pump into the ciſtern, has a valve at its end in the ciſtern, theſe valves will hinder the return of the water by the pipes; and therefore, when the ciſtern is once full, each piſton upon its deſcent will force the water (conveyed into the ciſtern by a former ſtroke) up the main pipe, to the height the engine was intended to raiſe it: which height depends upon the quantity raiſed, and the power that turns the wheel. When the power upon the wheel is leſſened by any defect of the quantity of water turning it, a proportionable number of the pumps may be laid aſide, by diſengaging their rods from the vibrating levers.

32 A pump-engine to go by water.

This figure is a repreſentation of the engine erected at Blenheim for the duke of Marlborough, by the late ingenious Mr Alderſea. The water-wheel is 7½ feet in diameter, according to Mr Switzer's account in his Hydraulics.

When ſuch a machine is placed in a ſtream that runs upon a ſmall declivity, the motion of the levers and action of the pumps will be but ſlow: ſince the wheel muſt go once round for each ſtroke of the pumps. But when there is a large body of ſlow running water, a cog or ſpur-wheel may be placed upon each ſide of the water-wheel AA, upon its axis, to turn a trundle upon each ſide; the cranks being upon the axis of the trundle. And by proportioning the cog-wheels to the trundles, the motion of the pumps may be made quicker, according to the quantity and ſtrength of the water upon the firſt wheel; which may be as great as the workman pleaſes, according to the length and breadth of the float-boards or wings of the wheel. In the ſame manner the engine for raiſing water at London-bridge is conſtructed.

Plate CCXLII. fig. 7.

The wheels of the London-bridge water-works are placed under the arches of the bridge, and moved by the common ſtream of the tide-water of the river. A B the axle-tree of the water-wheel is nineteen feet long, and three feet in diameter; in which C, D, E, F, are four ſets of arms, eight in each place, on which are fixed G G G G, four ſets or rings of felloes twenty feet in diameter, and the floats H H H H fourteen feet long, and eighteen inches deep, being about twenty-ſix in number. The wheel lies with its two gudgeons, or centre pins, A, B, upon two braſſes in the pieces MN, which are two great levers, whoſe fulcrum or prop is an arched piece of timber L; the levers being made circular on their lower ſides to an arch of the radius M O, and kept in their places by two arching ſtuds fixed in the ſtock L, through two mortoiſes in the lever MN. The wheel is by theſe levers made to riſe and fall with the tide in the following manner. The levers M N are ſixteen feet long; from M the fulcrum of the lever to O the gudgeon of the water-wheel, ſix feet; and from O to the arch at N, ten feet. To the bottom of the arch N is fixed a ſtrong triple chain P, made after the faſhion of a watch-chain, but the links arched to a circle of one foot diameter, having notches or teeth to take hold of the leaves of a pinion of caſt iron Q, ten inches diameter, with eight teeth in it moving on an axis. The other looſe end of this chain has a large weight hanging at it to help to counterpoiſe the wheel, and preſerve the chain from ſliding on the pinion. On the ſame axis is fixed a cog-wheel R, ſix feet diameter, with forty-eight cogs. To this is applied a trundle, or pinion S of ſix rounds or teeth; and upon the ſame axis is fixed T, a cog-wheel of fifty-one cogs, into which the trundle V of ſix rounds works, on whoſe axis is a winch or windlaſs W, by which one man with the two windlaſſes raiſes or lets down the wheel as there is occaſion. And becauſe the fulcrums of theſe levers M N are in the axis of the trundle K, *viz.* at M or X, in what ſituation ſoever the wheel is raiſed or let down, the cog-wheel I, I, is always equidiſtant from M, and works or geers truly. By means of this machine the ſtrength of an ordinary man will raiſe about fifty ton weight.

I, I, is a cog-wheel fixed near the end of the great axis eight feet diameter, and forty-four cogs working into a trundle K, of four feet and an half diameter, and twenty rounds, whoſe axis or ſpindle is of caſt iron four inches in diameter, lying in braſſes at each end as at X. ZZ is a quadruple crank of caſt iron, the metal being ſix inches ſquare, each of the necks being turned one foot from the centre, which is fixed in braſſes at each end in two headſtocks faſtened down by caps. One end of this crank at Y is placed cloſs abutting to the end of the axle-tree X, where they are at thoſe ends ſix inches diameter, each having a ſlit in the ends where an iron wedge is put one half into the end X, the other half into Y, by means of which the axis X turns about the crank ZZ. The four necks of the crank have each an iron ſpear or rod fixed at their upper ends to the reſpective libra or lever, *a* 1, 2, 3, 4, within three feet at the end. Theſe levers are twenty-four feet long, moving on centres in the frame *b b b b*; at the end of which, at *c* 1, 2, 3, 4, are joined four rods with their forcing plugs working into *d* 1, 2, 3, 4, four caſt iron cylinders four feet three quarters long, ſeven inches bore above and nine below where the valves lie, faſtened by ſcrewed flanches over the four holes of a hollow trunk of caſt iron, having four valves in it juſt over *e e e e*, at the joining on of the bottom of the barrels or cylinders, and at one end a ſucking pipe and grate *f* going into the water, which ſupplies all the four cylinders alternately.

From the lower part of the cylinders *d* 1, *d* 2, *d* 3, *d* 4, come out necks turning upward arch-wiſe, as *g g g g*, whoſe upper parts are caſt with flanches to ſcrew up to the trunk *h h h h*; which necks have bores of ſeven inches diameter, and holes in the trunk above communicating with them, at which joining are placed four valves. The trunk is caſt with four boſſes or protuberances ſtanding out againſt the valves to give room for their opening and ſhutting; and on the upper ſide are four holes ſtopped with plugs to take out on occaſion to cleanſe the valves. One end of this trunk is ſtopped by a plug *i*. To the other iron pipes are joined as *i* 2, by flanches, through which the water is forced up to any height or place required.

Beſides theſe four forcers there are four more placed at the other ends of the libræ, or levers (not ſhown here to avoid confuſion, but to be ſeen on the left hand), the rods being fixed at *a* 1, 2, 3, 4, working in four ſuch cylinders, with their parts *d d*, &c. *e e*, *f*, *g g*, and *i*, as before deſcribed, ſtanding near *k k*.

At the other end of the wheel (at B) is placed all the ſame ſort of work as at the end A is deſcribed, *viz.*

The cog-wheel I.
The trundle K.
The ſpindle X.
The crank Y, Z.
The ſucking pipes *f*.
The four levers *a c*, *a c*, &c.
8 forcing rods *a d*, *a d*, &c.
8 Cylinders *d e*, *d e*, &c.
4 Trunks ſuch as *e e*, *h h*.
2 Forcing pipes as *i*.

So that one ſingle wheel works 16 pumps.

All which work could not be drawn in one perſpective view without making it very much confuſed.

Mr Beighton, who has deſcribed the ſtructure and operation of this engine (ſee Phil. Tranſ. abr. vol. vi. p. 358.) has calculated the quantity of water raiſed by it in a given time. In the firſt arch next the city there is one wheel with double work of ſixteen forcers; and in the third arch one wheel with double work at one end and ſingle at the other, having twelve forcers; a ſecond wheel in the middle having eight forcers, and a third wheel with ſixteen: ſo that there are in all fifty-two forcers; one revolution of a wheel produces in every forcer $2\frac{1}{5}$ ſtrokes; ſo that one turn of the four wheels makes 114 ſtrokes. When the driver acts with moſt advantage, the wheels go ſix times round in a minute, and but $4\frac{1}{2}$ at middle water: hence the number of ſtrokes in a minute are 684; and as the ſtroke is $2\frac{1}{2}$ feet in a ſeven inch bore, it raiſes three ale gallons; and all raiſe per minute 2052 ale gallons; *i. e.* 123120 gallons = 1954 hogſheads per hour, and at the rate of 46896 hogſheads in a day, to the height of 120 feet. Such is the utmoſt quantity they can raiſe, ſuppoſing that there were no imperfections or loſs at all; but Mr Beighton infers, from experiments performed on engines whoſe parts were large and excellently conſtructed, that they will loſe one fifth and ſometimes one fourth of the calculated quantity. For an eſtimate of the power by which the wheels are moved, ſee Phil. Tranſ. ubi ſupra.

Mr Beighton obſerves, that though theſe water-works may juſtly be eſteemed as good as any in Europe, yet ſome things might be altered much for the better. If (he ſays), inſtead of ſixteen forcers, they worked only eight, the ſtroke might be five feet in each forcer, which would draw much more water with the ſame power in the wheel; becauſe much water is loſt by the too frequent opening and ſhutting of the valves; and that the bores that carry off the water from the forcers are too ſmall; and that they ſhould be near nine inches in diameter. This objection Dr Deſaguliers ſays is of no force, unleſs the velocity of the piſtons was very great; but here the velocity of the water paſſing through the bores is much leſs than two feet in a ſecond. This laſt writer obſerves, that a triple crank diſtributes the power better than a quadruple one. He adds, that forcers made with thin leather tanned, of about the thickneſs of the upper-leather of a countryman's ſhoe, would be much better than thoſe of the ſtiff leather commonly uſed. Dr Deſaguliers has formed a compariſon of the powers of this engine with thoſe of the famous machine at Marly. Eſtimating the quantity of water merely raiſed by theſe machines, the former raiſes almoſt twice and a quarter as much as the latter; but conſidering that the London bridge water-works raiſe this water but 120 feet high, and that the Marly engine raiſes its water 533 feet high, he deduces from a calculation formed on theſe different heights, and on the difference of the fall of water on both engines, this concluſion, *viz.* that the effect of the four wheels at London-bridge is three times greater than that of four of the wheels at Marly.

The engine at London-bridge was put up by Mr Sorocold towards the beginning of this century: the contrivance for raiſing and falling the water-wheel was the invention of Mr Hadley, who put up the firſt of that kind at Worceſter, for which he obtained a patent.

33
A quadruple pump-mill, for raiſing water.
Plate CCXXXIX. fig. 1.

ABCD is a wheel turned by water according to the order of the letters. On the horizontal axis are four ſmall wheels, toothed almoſt half round; and the parts of their edges on which there are no teeth are cut down ſo as to be even with the bottoms of the teeth where they ſtand.

The teeth of theſe four wheels take alternately into the teeth of four racks, which hang by two chains over the pullies Q and L; and to the lower ends of theſe racks there are four iron rods fixed, which go down into the four forcing-pumps, S, R, M, and N. And, as the wheels turn, the racks and pump-rods are alternately moved up and down.

Thus ſuppoſe the wheel G has pulled down the rack I, and drawn up the rack K by the chain: as the laſt tooth of G juſt leaves the uppermoſt tooth of I, the firſt tooth of H is ready to take into the lowermoſt tooth of the rack K, and pull it down as far as the teeth go; and then the rack I is pulled upward thro' the whole ſpace of its teeth, and the wheel G is ready to take hold of it, and pull it down again, and ſo draw up the other.—In the ſame manner, the wheels E and F work the racks O and P.

Theſe four wheels are fixed on the axle of the great wheel in ſuch a manner, with reſpect to the poſitions of their teeth, that, whilſt they continue turning round, there is never one inſtant of time in which one or other of the pump-rods is not going down and forcing the water. So that, in this engine, there is no occaſion for having a general air-veſſel to all the pumps, to procure a conſtant ſtream of water flowing from the upper end of the main pipe.

From each of theſe pumps, near the loweſt end, in the water, there goes off a pipe, with a valve on its fartheſt end from the pump; and theſe ends of the pipes all enter one cloſe box, into which they deliver the water: and into this box the lower end of the main conduct pipe is fixed. So that, as the water is forced or puſhed into the box, it is alſo puſhed up by the main pipe to the height that it is intended to be raiſed.

34
A pump-engine to go by horſes.

2. Where a ſtream or fall of water cannot be had, and gentlemen want to have water raiſed, and brought to their houſes from a rivulet or ſpring; this may be effected by a horſe-engine, working three forcing-

Plate CCXLI. fig. 6.

pumps which ſtand in a reſervoir filled by the ſpring or rivulet: the piſtons being moved up and down in the pumps by means of a triple crank ABC, which, as it is turned round by the trundle G, raiſes and depreſſes the rods D, E, F. If the wheel has three times as many cogs as the trundle has ſtaves or rounds, the trundle and cranks will make three revolutions for every one of the wheel: and as each crank will fetch a ſtroke in the time it goes round, the three cranks will make nine ſtrokes for every turn of the great wheel.

The cranks ſhould be made of caſt iron, becauſe *that* will not bend; and they ſhould each make an angle of 120 with both of the others, as at *a*, *b*, *c*; which is (as it were) a view of their *radii* in looking endwiſe at the axis: and then there will be always one or other of them going downward, which will puſh the water forward with a continued ſtream into the main pipe. For when *b* is almoſt at its loweſt ſituation, and is therefore juſt beginning to loſe its action upon the piſton which it moves, *c* is beginning to move downward, which will by its piſton continue the propelling force upon the water: and when *c* is come down to the poſition of *b*, *a* will be in the poſition of *c*.

The more perpendicularly the piſton rods move up and down in the pumps, the freer and better will their ſtrokes be: but a little deviation from the perpendicular will not be material. Therefore, when the pump-rods D, E, and F, go down into a deep well, they may be moved directly by the cranks, as is done in a very good horſe-engine of this ſort at the late Sir James Creed's at Greenwich, which forces up water about 64 feet from a well under ground, to a reſervoir on the top of his houſe. But when the cranks are only at a ſmall height above the pumps, the piſtons muſt be moved by vibrating levers as in the above engine at Blenheim: and the longer the levers are, the nearer will the ſtrokes be to a perpendicular.

35 A calculation of the quantity of water that may be raiſed by a horſe engine.

Let us ſuppoſe, that in ſuch an engine as Sir James Creed's, the great wheel is 12 feet diameter, the trundle 4 feet, and the radius or length of each crank 9 inches, working a piſton in its pump. Let there be three pumps in all, and the bore of each pump be four inches diameter. Then, if the great wheel has three times as many cogs as the trundle has ſtaves, the trundle and cranks will go three times round for each revolution of the horſes and wheel, and the three cranks will make nine ſtrokes of the pumps in that time, each ſtroke being eighteen inches (or double the length of the crank) in a four-inch bore. Let the diameter of the horſe-walk be 18 feet, and the perpendicular height to which the water is raiſed above the ſurface of the well be 64 feet.

If the horſes go at the rate of two miles an hour (which is very moderate walking) they will turn the great wheel 187 times round in an hour.

In each turn of the wheel the piſtons make nine ſtrokes in the pumps, which amount to 1683 in an hour.

Each ſtroke raiſes a column of water 18 inches long and four inches thick, in the pump-barrels; which column, upon the deſcent of the piſton, is forced into the main pipe, whoſe perpendicular altitude above the ſurface of the well is 64 feet.

Now, ſince a column of water 18 inches long, and 4 inches thick, contains 226.18 cubic inches, this number multiplied by 1683 (the ſtrokes in an hour) gives 380661 for the number of cubic inches of water raiſed in an hour.

A gallon, in wine-meaſure, contains 231 cubic inches, by which divide 380661, and it quotes 1468 in round numbers, for the number of gallons raiſed in an hour; which, divided by 63, gives $26\frac{1}{7}$ hogſheads. If the horſes go faſter, the quantity raiſed will be ſo much the greater.

In this calculation it is ſuppoſed that no water is waſted by the engine. But as no forcing engine can be ſuppoſed to loſe leſs than a fifth part of the calculated quantity of water, between the piſtons and barrels, and by the opening and ſhutting of the valves, the horſes ought to walk almoſt $2\frac{1}{4}$ miles *per* hour to fetch up this loſs.

A column of water 4 inches thick and 64 feet high, weighs $349\frac{7}{12}$ pounds avoirdupois, or $424\frac{5}{12}$ pounds troy; and this weight, together with the friction of the engine, is the reſiſtance that muſt be overcome by the ſtrength of the horſes.

The horſe-tackle ſhould be ſo contrived, that the horſes may rather puſh on than drag the levers after them. For, if they draw, in going round the walk, the outſide leather-ſtraps will rub againſt their ſides and hams; which will hinder them from drawing at right angles to the levers, and ſo make them pull at a diſadvantage. But if they puſh the levers before their breaſts, inſtead of dragging them, they can always walk at right angles to theſe levers.

It is no ways material what the diameter of the main or conduct pipe be: for the whole reſiſtance of the water therein againſt the horſes will be according to the height to which it is raiſed, and the diameter of that part of the pump in which the piſton works, as we have already obſerved. So that by the ſame pump, an equal quantity of water may be raiſed in (and conſequently made to run from) a pipe of a foot diameter, with the ſame eaſe as in a pipe of five or ſix inches: or rather with more eaſe, becauſe its velocity in a large pipe will be leſs than in a ſmall one, and therefore its friction againſt the ſides of the pipe will be leſs alſo.

Plate CCXLI. fig. 7.

And the force required to raiſe water depends not upon the length of the pipe, but upon the perpendicular height to which it is raiſed therein above the level of the ſpring. So that the ſame force which would raiſe water to the height AB in the upright pipe A *i k l m n o p q* B, will raiſe it to the ſame height or level BIH in the oblique pipe AEFGH. For the preſſure of the water at the end A of the latter is no more than its preſſure againſt the end A of the former.

The weight or preſſure of water at the lower end of the pipe, is always as the ſine of the angle to which the pipe is elevated above the level parallel to the horizon. For although the water in the upright pipe AB would require a force applied immediately to the lower end A equal to the weight of all the water in it, to ſupport the water, and a little more to drive it up and out of the pipe; yet, if that pipe be inclined from its upright poſition to an angle of 80 degrees (as in A 80), the force required to ſupport or to raiſe

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raiſe the ſame cylinder of water will then be as much leſs as the ſine 80 *h* is leſs than the radius AB ; or as the ſine of 80 degrees is leſs than the ſine of 90. And ſo, decreaſing as the ſine of the angle of elevation leſſens, until it arrives at its level AC or place of reſt, where the force of the water is nothing at either end of the pipe. For although the abſolute weight of the water is the ſame in all poſitions, yet its preſſure at the lower end decreaſes as the ſine of the angle of elevation decreaſes ; as will appear plainly by a farther conſideration of the figure.

Let two pipes AB and AC, of equal lengths and bores, join each other at A ; and let the pipe AB be divided into 100 equal parts, as the ſcale S is ; whoſe length is equal to the length of the pipe.— Upon this length, as a radius, deſcribe the quadrant BDC, and divide it into 90 equal parts or degrees.

Let the pipe AC be elevated to 10 degrees upon the quadrant, and filled with water : then, part of the water that is in it will riſe in the pipe AB ; and if it be kept full of water, it will raiſe the water in the pipe AB from A to *i* ; that is, to a level *i* 10 with the mouth of the pipe at 10 : and the upright line *a* 10, equal to A *e*, will be the ſine of 10 degrees elevation ; which being meaſured upon the ſcale S, will be about 17.4 of ſuch parts as the pipe contains 100 in length : and therefore, the force or preſſure of the water at A, in the pipe A 10, will be to the force or preſſure at A in the pipe AB, as 17.3 to 100.

Let the ſame pipe be elevated to 20 degrees in the quadrant ; and if it be kept full of water, part of that water will run into the pipe AB, and riſe therein to the height A *k*, which is equal to the length of the upright line *b* 20, or to the ſine of 20 degrees elevation ; which, being meaſured upon the ſcale S, will be 34.2 of ſuch parts as the pipe contains 100 in length. And therefore, the preſſure of the water at A, in the full pipe A 20, will be to its preſſure, if that pipe were raiſed to the perpendicular ſituation AB, as 34.2 to 100.

Elevate the pipe to the poſition A 30 on the quadrant, and if it be ſupplied with water, the water will riſe from it, into the pipe AB, to the height A *l*, or to the ſame level with the mouth of the pipe at 30. The ſine of this elevation, or of the angle of 30 degrees, is *c* 30 ; which is juſt equal to half the length of the pipe, or to 50 of ſuch parts of the ſcale as the length of the pipe contains 100. Therefore, the preſſure of the water at A, in a pipe elevated 30 degrees above the horizontal level, will be equal to one half of what it would be if the ſame pipe ſtood upright in the ſituation AB.

And thus, by elevating the pipe to 40, 50, 60, 70, and 80 degrees on the quadrant, the ſines of theſe elevations will be *d* 40, *e* 50, *f* 60, *g* 70, and *h* 80 ; which will be equal to the heights A*m*, A*n*, A*o*, A*p* and A*q* : and thoſe heights meaſured upon the ſcale S will be 64.4, 76.6, 86.6, 94.0, and 98.5 ; which expreſs the preſſures at A in all theſe elevations, conſidering the preſſure in the upright pipe AB as 100.

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Sine of	Parts	Sine of	Parts	Sine of	Parts
D. 1	17	D. 31	515	61	875
2	35	32	530	62	883
3	52	33	545	63	891
4	70	34	559	64	899
5	87	35	573	65	906
6	104	36	588	66	913
7	122	37	602	67	920
8	139	38	616	68	927
9	156	39	629	69	934
10	174	40	643	70	940
11	191	41	656	71	945
12	208	42	669	72	951
13	225	43	682	73	956
14	242	44	695	74	961
15	259	45	707	75	966
16	276	46	719	76	970
17	292	47	731	77	974
18	309	48	743	78	978
19	325	49	755	79	982
20	342	50	766	80	985
21	358	51	777	81	988
22	375	52	788	82	990
23	391	53	799	83	992
24	407	54	809	84	994
25	423	55	819	85	996
26	438	56	829	86	997
27	454	57	839	87	998
28	469	58	848	88	999
29	485	59	857	89	1000
30	500	60	866	90	1000

Becauſe it may be of uſe to have the lengths of all the ſines of a quadrant from 0 degrees to 90, we have given the foregoing Table, ſhowing the length of the ſine of every degree in ſuch parts as the whole pipe (equal to the radius of the quadrant) contains 1000. Then the ſines will be integral or whole parts in length. But if you ſuppoſe the length of the pipe to be divided only into 100 equal parts, the laſt figure of each part or ſine muſt be cut off as a decimal ; and then thoſe which remain at the left hand of this ſeparation will be integral or whole parts.

Thus, if the radius of the quadrant (ſuppoſed to be equal to the length of the pipe AC) be divided into 1000 equal parts, and the elevation be 45 degrees, the ſine of that elevation will be equal to 707, of theſe parts : but if the radius be divided only into 100 equal parts, the ſame ſine will be only 70.7 or $70\frac{7}{10}$ of theſe parts. For, as 1000 is to 707, ſo is 100 to 70.7.

As, it is of great importance to all engine-makers, to know what quantity and weight of water will be contained in an upright round pipe of a given diameter and height ; ſo as, by knowing what weight is to be raiſed, they may proportion their engines to the force which they can afford to work them ; we ſhall ſubjoin Tables ſhowing the number of cubic inches of water contained in an upright pipe of a round bore, of any diameter from one inch to ſix and a half, and of any height from one foot to two hundred : together with the weight of the ſaid number of cubic inches, both

in

Hydroſtatic Tables.

in troy and avoirdupois ounces. The number of cubic inches divided by 231, will reduce the water to gallons in wine meaſure; and divided by 282, will reduce it to the meaſure of ale-gallons. Alſo, the troy ounces divided by 12, will reduce the weight to troy pounds, and the avoirdupois ounces divided by 16, will reduce the weight to avoirdupois pounds.

And here we muſt repeat it again, that the weight or preſſure of the water acting againſt the power that works the engine, muſt always be eſtimated according to the perpendicular height to which it is to be raiſed, without any regard to the length of the conduct-pipe, when it has an oblique poſition, and as if the diameter of that pipe were juſt equal to the diameter of that part of the pump in which the piſton works. Thus, by the following Tables, the preſſure of the water, againſt an engine whoſe pump is of a 4½ inch bore, and the perpendicular height of the water in the conduct-pipe is 80 feet, will be equal to 8057.5 troy ounces, and to 8848.2 avoirdupois ounces; which makes 671.4 troy pounds, and 553 avoirdupois.

Example. *Required the number of cubic inches, and the weight of the water, in an upright pipe 278 feet high, and 1½ inch diameter.*

	Feet.	*Cubic inches.*	*Troy oz.*	*Avoir. oz.*
	200	4241.1	2238.2	2457.8
	70	1484.4	783.3	860.2
	8	169.6	89.5	98.3
Anſw.	278	5895.1	3111.0	3416.3

Here the neareſt ſingle decimal figure is only taken into the account; and the whole being reduced by diviſion, amounts to 25½ wine-gallons in meaſure to 259¼ pounds troy, and to 213½ pounds avoirdupois.

Theſe tables were at firſt calculated to ſix decimal places for the ſake of exactneſs: but in tranſcribing them there are no more than two decimal figures taken into the account, and ſometimes but one; becauſe there is no neceſſity for computing to hundreth-parts of an inch or of an ounce in practice.

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Hydroſtatic Tables.

Feet high.	Inch diameter.		
	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	9.42	4.97	5.46
2	18.85	9.95	10.92
3	28.27	14.92	16.38
4	37.70	19.89	21.85
5	47.12	24.87	27.31
6	56.55	29.84	32.77
7	65.97	34.82	38.23
8	75.40	39.79	43.69
9	84.82	44.76	49.16
10	94.25	49.74	54.62
20	188.49	99.48	109.24
30	282.74	149.21	163.86
40	376.99	198.95	218.47
50	471.24	248.69	273.09
60	565.49	298.43	327.71
70	659.73	348.17	382.33
80	753.98	397.90	436.95
90	843.23	447.64	491.57
100	942.48	497.38	546.19
200	1884.96	994.76	1092.38

Feet high.	1½ Inches diameter.		
	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	21.21	11.19	12.29
2	42.41	22.38	24.58
3	63.62	33.57	36.87
4	84.82	44.76	49.16
5	106.03	55.95	61.45
6	127.23	67.15	73.73
7	147.44	78.34	86.02
8	169.65	89.53	98.31
9	190.85	100.72	110.60
10	212.06	111.91	122.89
20	424.12	223.82	245.78
30	636.17	335.73	368.68
40	848.23	447.64	491.57
50	1060.29	559.55	614.46
60	1272.35	671.46	737.35
70	1484.40	783.37	860.24
80	1696.46	895.28	983.14
90	1908.52	1007.19	1106.03
100	2120.58	1119.09	1228.92
200	4241.15	2238.18	2457.84

Hydroſtatic Tables.

HYDROSTATICAL TABLES.

2 Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	37.70	19.89	21.85
2	75.40	39.79	43.69
3	113.10	59.68	65.54
4	150.80	79.58	87.39
5	188.50	99.47	109.24
6	226.19	119.37	131.08
7	263.89	139.26	152.93
8	301.59	159.16	174.78
9	339.29	179.06	196.63
10	376.99	198.95	218.47
20	753.98	397.90	436.95
30	1130.97	596.85	665.42
40	1507.97	795.80	873.90
50	1884.96	994.75	1092.37
60	2261.95	1193.70	1310.85
70	2638.94	1392.65	1529.32
80	3015.93	1591.60	1747.80
90	3392.92	1790.56	1966.27
100	3769.91	1989.51	2184.75
200	7539.82	3979.00	4369.50

2½ Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	58.90	31.08	34.14
2	117.81	62.17	68.27
3	176.71	93.26	102.41
4	235.62	124.34	136.55
5	294.52	155.43	170.68
6	353.43	186.52	204.82
7	412.33	217.60	238.96
8	471.24	248.69	273.09
9	530.14	279.77	307.23
10	589.05	310.86	341.37
20	1178.10	621.72	682.73
30	1767.15	932.58	1024.10
40	2356.20	1243.44	1365.47
50	2545.25	1554.30	1706.83
60	3534.29	1865.16	2048.20
70	4123.34	2176.02	2389.57
80	4712.39	2486.88	2730.94
90	5301.44	2797.74	3072.30
100	5890.49	3108.60	2413.67
200	11780.98	6217.20	4827.34

3 Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	84.8	44.76	49.16
2	169.6	89.53	98.31
3	254.5	134.29	147.47
4	239.3	179.06	196.63
5	424.1	223.82	245.78
6	508.9	268.58	294.94
7	533.7	313.35	344.10
8	698.6	358.11	393.25
9	763.4	402.87	442.41
10	848.2	447.64	491.57
20	1696.5	895.28	983.14
30	2244.7	1342.92	1474.70
40	3392.9	1790.56	1966.27
50	4241.1	2238.19	2457.84
60	5089.4	2685.83	2949.41
70	5937.6	3133.47	3440.98
80	6785.8	3581.11	3932.55
90	7634.1	4028.75	4424.12
100	8482.3	4476.39	4915.68
200	16964.6	8952.78	9831.36

3½ Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	115.4	60,9	66.9
2	230.9	121.8	133.8
3	346.4	182.8	200.7
4	461.8	243.7	267.6
5	577.3	304.6	334.5
6	692.7	365.6	401.4
7	808.2	426.5	468.4
8	923.6	487.4	535.3
9	1039.1	548.3	602.2
10	1154.5	609.3	669.1
20	2309.1	1218.6	1338.2
30	3463.6	1827.9	2007.2
40	4618.1	2437.1	2676.3
50	5772.7	3046.4	3345.4
60	6927.2	3655.7	4014.5
70	8081.7	4265.0	4683.6
80	9236.3	4874.3	5352.6
90	10390.8	5483.6	6021.7
100	11545.4	6092.0	6690.8
200	23090.7	12185.7	13381.5

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4 Inches diameter.

Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	150.8	79.6	87.4
2	301.6	159.2	174.8
3	452.4	238.7	262.2
4	603.2	318.3	349.6
5	754.0	397.9	436.9
6	904.8	477.5	524.3
7	1055.6	557.1	611.7
8	1206.4	636.6	699.1
9	1357.2	716.2	786.5
10	1508.0	795.8	873.9
20	3115.9	1591.6	1747.8
30	4523.9	2387.4	2621.7
40	6631.9	3183.2	3495.6
50	7539.8	3997.0	4369.5
60	9047.8	4774.8	5243,4
70	10555.8	5570.6	6117.3
80	12063.7	6366.4	6991.2
90	13571.7	7162.2	7865.1
100	15079.7	7958.0	8739.0
200	30159.3	15916.0	17478.0

5 Inches diameter.

Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	235.6	124.3	136.5
2	471.2	248.7	273.1
3	706.8	373.0	409.6
4	942.5	497.4	546.2
5	1178.1	621.7	682.7
6	1413.7	746.1	819.3
7	1649.3	870.4	955.8
8	1884.9	994.8	1092.4
9	2120.6	1119.1	1228.9
10	2356.2	1243.4	1365.5
20	4712.4	2486.9	2730.9
30	7068.6	3730.3	4096.4
40	9424.8	4973.8	5461.9
50	11780.0	6217.2	6827.3
60	14137.2	7460.6	8192.6
70	16493.4	8704.1	9558.3
80	18849.6	9947.5	10923.7
90	21205.8	11191.0	12289.2
100	23562.0	12434.4	13654.7
200	47124.0	24863.8	27309.3

4½ Inches diameter.

Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	190.8	100.7	110.6
2	381.7	201.7	221.2
3	572.6	302.2	331.8
4	763.4	402.9	442.4
5	954.3	503.6	453.0
6	1145.1	604.3	663.6
7	1337.9	705.0	774.2
8	1526.8	805.7	884.8
9	1717.7	906.5	995.4
10	1908.5	1007.2	1106.0
20	3817.0	2014.4	2212.1
30	5725.6	3021.6	3818.1
40	7634.1	4028.7	4424.1
50	9542.6	5035.9	5530.1
60	11451.1	6043.1	6636.2
70	13359.6	7050.3	7742.2
80	15268.2	8057.5	8848.2
90	17176.7	9064.7	9954.3
100	19085.2	10071.9	11060.3
200	38170.4	20143.8	22120.6

5¼ Inches diameter.

Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	285.1	150.5	164.3
2	570.2	300.9	328.3
3	855.3	451.4	492.8
4	1140.4	601.8	657.1
5	1425.5	752.3	821.3
6	1710.6	902.7	985.6
7	1995.7	1053.2	1149.9
8	2280.8	1203.6	1314.2
9	2565.9	1354.1	1478.4
10	2851.0	1504.6	1642.7
20	5702.0	3009.1	3285.4
30	8553.0	4513.7	4928.1
40	11404.0	6018.2	6570.8
50	14255.0	7522.8	8213.5
60	17106.0	9027.4	9856.2
70	19957.0	10531.9	11498.9
80	22808.0	12036.5	13141.6
90	25659.0	13541.1	14784.3
100	29510.0	15045.6	16426.9
200	57020.0	30091.2	32853.9

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6 Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	339.3	179.0	196.6
2	678.6	358.1	393.3
3	1017.9	537.2	589.9
4	1357.2	716.2	786.5
5	1696.5	895.3	983.1
6	2035.7	1074.3	1179.8
7	2375.0	1253.4	1376.4
8	2714.3	1432.4	1573.0
9	3053.6	1611.5	1769.6
10	3392.9	1790.6	1966.3
20	6785.8	3581.1	3932.5
30	10178.8	5371.7	5898.8
40	13571.7	7162.2	7865.1
50	16964.6	8952.8	9831.4
60	20357.5	10743 3	11797.6
70	23750.5	12533.9	13763.9
80	27143.4	14324.4	15730.2
90	30536.3	16115.0	17696.5
100	33929.2	17905.6	19662.7
200	67858.4	35811.2	39325.4

6¼ Inches diameter.			
Feet high.	Solidity in cubic inches.	Weight in troy ounces.	In avoirdupois ounces.
1	398.2	210.1	230.7
2	797.4	420.3	461.4
3	1195.6	630.4	692.1
4	1593.8	840.6	922.8
5	1991.9	1050.8	1153.6
6	2390.1	1260.9	1384.3
7	2788.3	1471.1	1615.0
8	3186.5	1681.2	1845.7
9	3584.7	1891.3	2076.4
10	3982.9	2101.5	2307.1
20	7965.8	4202.9	4614.3
30	11948.8	6304.4	6921.4
40	15931.7	8405.9	9228.6
50	19914.6	10507.4	11535.7
60	23897.6	12608.9	13842.9
70	27880.5	14710.4	16150.0
80	31863.4	16811.8	18457.2
90	35846.3	18913.3	20764.3
100	39829.3	21014.8	23071.5
200	79658.6	42029.6	46143.0

Hydraulic Engines.

36 Steam-engine

Under the article *Steam-Engine*, the reader will find a particular account of that uſeful invention, with a correct deſcription and plate of it in its improved ſtate.

37 Engine for raiſing water by a multiplying wheel. Plate CCXLIV. fig. 6.

The multiplying machine, has no dependence on the action of the atmoſphere: but, by the weight of water only, and without pump-work of any kind, raiſes water ſufficient to ſerve a gentleman's ſeat, with an overplus for fountains, fiſh-ponds, &c.

AB are two copper pans or buckets of unequal weight and ſize, ſuſpended to chains, which alternately wind off and on the multiplying-wheel YZ; whereof the wheel Y is ſmaller in diameter, and Z larger, in proportion to the different lifts each is deſigned to perform.

When the buckets are empty, they are ſtopped level with the ſpring at X, whence they are both filled with water in the ſame time.

The greater of the two, A, being the heavier when full, preponderates and deſcends ten feet, perhaps from C to D; and the leſſer, B, depending on the ſame axis, is thereby weighed up or raiſed from E to F, ſuppoſe 30 feet.

Here, by particular little contrivances, opening the valves placed at the bottom of each of theſe buckets, they both diſcharge their water in the ſame time, through apertures proportionable to their capacities; the ſmaller into the ciſtern W, whence it is conveyed for ſervice by the pipe T, and the larger at D, to run waſte by the drain below at H. The bucket B being empty, is ſo adjuſted as then to overweigh; and deſcending ſteadily as it roſe betwixt the guiding rods VV, brings or weighs up A to its former level at X, where both being again repleniſhed from the ſpring, they thence proceed as before. And thus will they continue conſtantly moving (merely by their circumſtantial difference of water-weight, and without any other aſſiſtance than that of ſometimes giving the iron-work a little oil) ſo long as the materials ſhall laſt, or the ſpring ſupply water.

The ſteadineſs of the motion is in part regulated by a worm turning a jack-fly, and a little ſimple wheelwork at LM; which communicating with the multiplying wheel axle at M, is thereby moved forward or backward as the buckets either riſe or deſcend. But what principally keeps the whole movement ſteady, is the equilibrium preſerved in the whole operation by a certain weight of lead, at the end of a lever of fit length, and fixed on one of the ſpindles of the wheelwork, the numbers whereof are ſo calculated as, during the whole performance up and down, to let it move no more than one-fourth of a circle, from G to K; by which contrivance, as more or leſs of the chains ſuſpending the buckets come to be wound off their reſpective wheels Y and Z, this weight gradually falls in as a counterbalance, and ſo continues the motion equable and eaſy in all its parts.

The water waſted by this machine is not above the hundredth part of what a water-wheel will expend, to raiſe an equal quantity. But where a fall, proportionable to the intended riſe of water, cannot be had, with a convenient ſewer to carry off the waſte water over and above, this device cannot be well put in practice.

38 The Perſian wheel.

WATER may alſo be raiſed by means of a ſtream AB turning a wheel CDE, according to the order of the let-

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Plate CCXLI. fig. 8.

letters, with buckets *a, a, a, a,* &c. hung upon the wheel by ſtrong pins *b, b, b, b,* &c. fixed in the ſide of the rim: but the wheel muſt be made as high as the water is intended to be raiſed above the level of that part of the ſtream in which the wheel is placed. As the wheel turns, the buckets on the right hand go down into the water, and are thereby filled, and go up full on the left hand, until they come to the top at K, where they ſtrike againſt the end *n* of the fixed trough M, and are thereby overſet, and empty the water into the trough; from which it may be conveyed in pipes to the place which it is deſigned for: and as each bucket gets over the trough, it falls into a perpendicular poſition again, and goes down empty, until it comes to the water at A, where it is filled as before. On each bucket is a ſpring *r*, which, going over the top or crown of the bar *m*, (fixed to the trough M), raiſes the bottom of the bucket above the level of its mouth, and ſo cauſes it to empty all its water into the trough.

Sometimes this wheel is made to raiſe water, no higher than its axis; and then, inſtead of buckets hung upon it, its ſpokes, C, *d, e, f, g, h,* are made of a bent form, and hollow within; theſe hollows opening into the holes C, D, E, F, in the outſide of the wheel, and alſo into thoſe at O in the box N upon the axis. So that as the holes CD, &c. dip into the water, it runs into them; and as the wheel turns, the water riſes in the hollow ſpokes *c, d,* &c. and runs out in a ſtream P from the holes at O, and falls into the trough Q, from whence it is conveyed by pipes. And this is a very eaſy way of raiſing water, becauſe the engine requires neither men nor horſes to turn it.

39 Fire-engines.

ENGINES for extinguiſhing fire are either forcing or lifting-pumps; and being made to raiſe water with great velocity, their execution in a great meaſure depends upon the length of their levers, and the force wherewith they are wrought.

Plate CCXLII. fig. 5.

For example, AB is the common ſquirting fire-engine. DC is the frame of a lifting-pump wrought by the levers E and F acting always together. During the ſtroke, the quantity of water raiſed by the piſton N ſpouts with force through the pipe G, made capable of any degree of elevation by means of the yielding leather pipe H, or by a ball and ſocket, capable of turning every way, ſcrewed on the top of the pump. Between the ſtrokes on this machine the ſtream is diſcontinued. The engine is ſupplied by water poured in with buckets above; the dirt and filth whereof are kept from choaking the pump-work by help of the ſtrainer IK.

A conſiderable improvement has ſince been made to theſe machines, in order to keep them diſcharging a continual ſtream. In doing whereof it is not to be underſtood that they really throw out more water than do the ſquirting ones of the ſame ſize and dimenſions with themſelves; but that the velocity of the water, and of courſe the friction of all the parts, being leſs violent, the ſtream is more even and manageable, and may be directed hither or thither with greater eaſe and certainty than if it came forth only by fits and ſtarts: The machine, thus improved, is therefore generally better adapted to the purpoſe intended than the former, eſpecially in the beginning of theſe calamitous accidents.

Hydraulic Engines.

Plate CCLXII. fig. 6.

The ſtream is made continual from the ſpring of air confined in a ſtrong metal veſſel CC, in the fire engine AB, fixed between the two forcing-pumps D and E, wrought with a common double lever FG moving on the centre H. The piſtons in D and E both ſuck and force alternately, and are here repreſented in their different actions; as are alſo their reſpective valves at IK and LM.

The water to ſupply this engine, if there be no opportunity of putting the end of a ſucking-pipe, occaſionally to be ſcrewed on, into a moat or canal, which would ſpare much hurry and labour in caſe of fire, is alſo poured into the veſſel AB; and being ſtrained through the wire grate N, is, by the preſſure of the atmoſphere, raiſed through the valves K and M into the barrels of D or E, when either of their forcers aſcend; whence again it will be powerfully puſhed when they deſcend into the air-veſſel CC, through the valves I and L by turns: by the force whereof the common air between the water and the top of the air-veſſel O will from time to time be forcibly crowded into leſs room, and much compreſſed; and the air being a body naturally endowed with a ſtrong and lively ſpring, and always endeavouring to dilate itſelf every way alike in ſuch a circumſtance, bears ſtrongly both againſt the ſides of the veſſel wherein it is confined, and the ſurface of the water thus injected; and ſo makes a conſtant regular ſtream to riſe through the metal pipe P into the leather one Q, ſcrewed thereon; which being flexible, may be led about into rooms and entries, as the caſe may require.

Should the air contained in this veſſel be compreſſed into half the ſpace it took up in its natural ſtate, the ſpring thereof will be much about doubled; and as before it equalled and was able to ſuſtain the preſſure of a ſingle atmoſphere, it having now a double force, by the power of that ſpring alone will throw water into air, of the common degree of denſity, about thirty feet high. And ſhould this compreſſure be ſtill augmented, and the quantity of air which at firſt filled the whole veſſel be reduced into one-third of that ſpace, its ſpring will be then able to reſiſt, and conſequently to raiſe the weight of a treble atmoſphere; in which caſe, it will throw up a jet of water ſixty feet high. And ſhould ſo much water again be forced into the veſſel as to fill three parts of the capacity, it will be able to throw it up about ninety feet high: and wherever the ſervice ſhall require a ſtill greater riſe of water, more water muſt be thruſt into this veſſel; and the air therein being thus driven by main force into a ſtill narrower compaſs, at each exploſion, the gradual reſtitution thereof to its firſt dimenſions is what regularly carries on the ſtream between the ſtrokes, and renders it continual during the operation of the machine.

This experiment, in little, may be either made on the lifting or forcing pump, the noſels of which may be left large, on purpoſe for the reception of the ſmall pipe F, reaching nearly to the valve at E, and occaſionally to be ſcrewed in. Between this pipe and the ſides and top of the noſel H, a quantity of air will neceſſarily be lodged, which, when the forcer acts, will be compreſſed at every ſtroke by the riſe of the water; more whereof will be puſhed through E than can immediately get away through the pipe F, which

Fig. 5

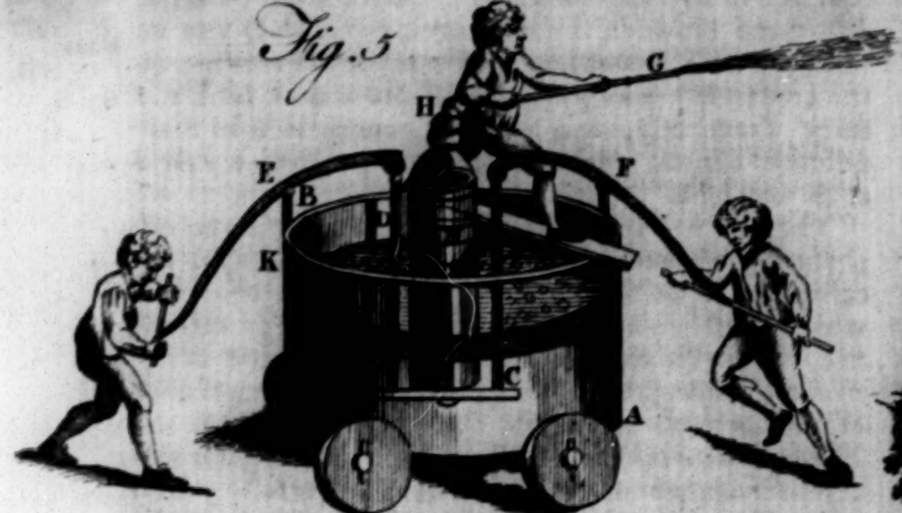


Fig. 4

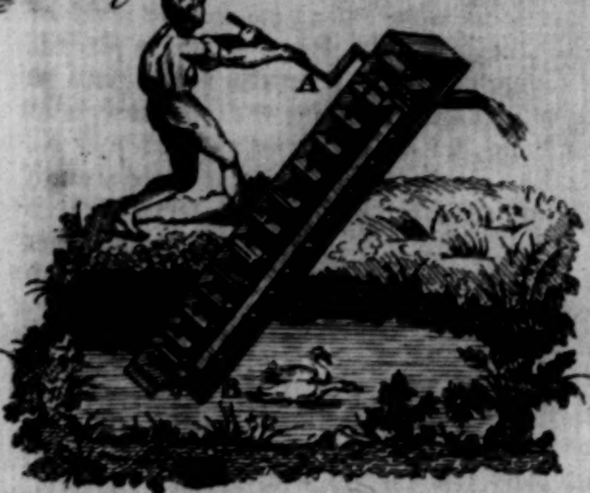


Fig. 1

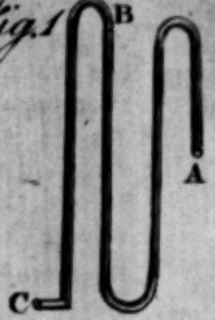


Fig. 2

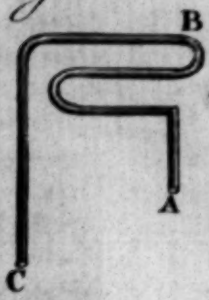


Fig. 3

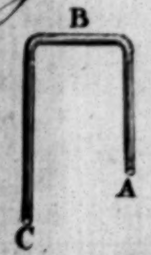


Fig. 6

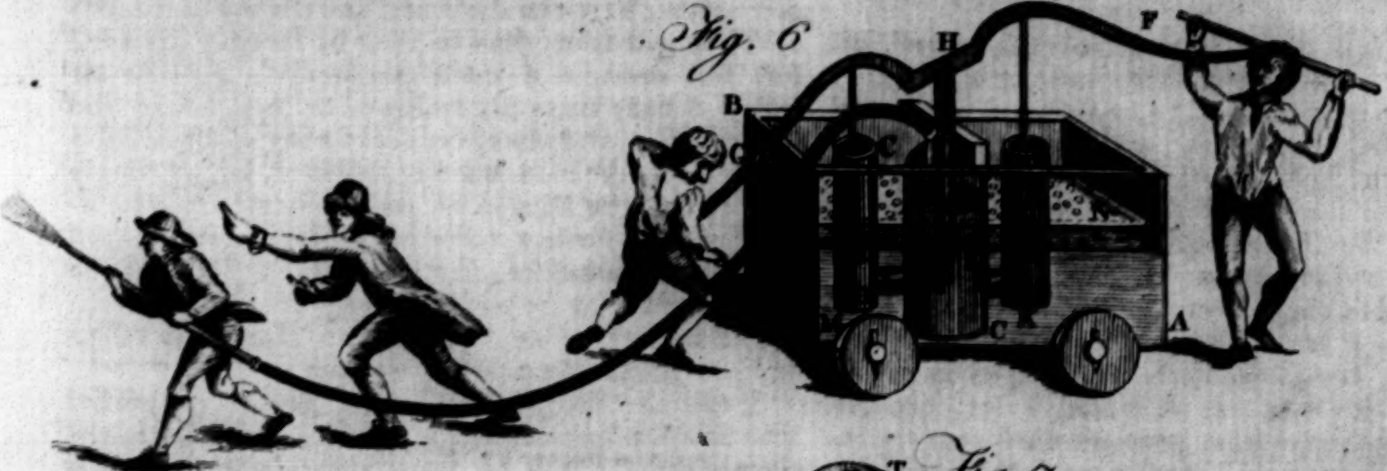
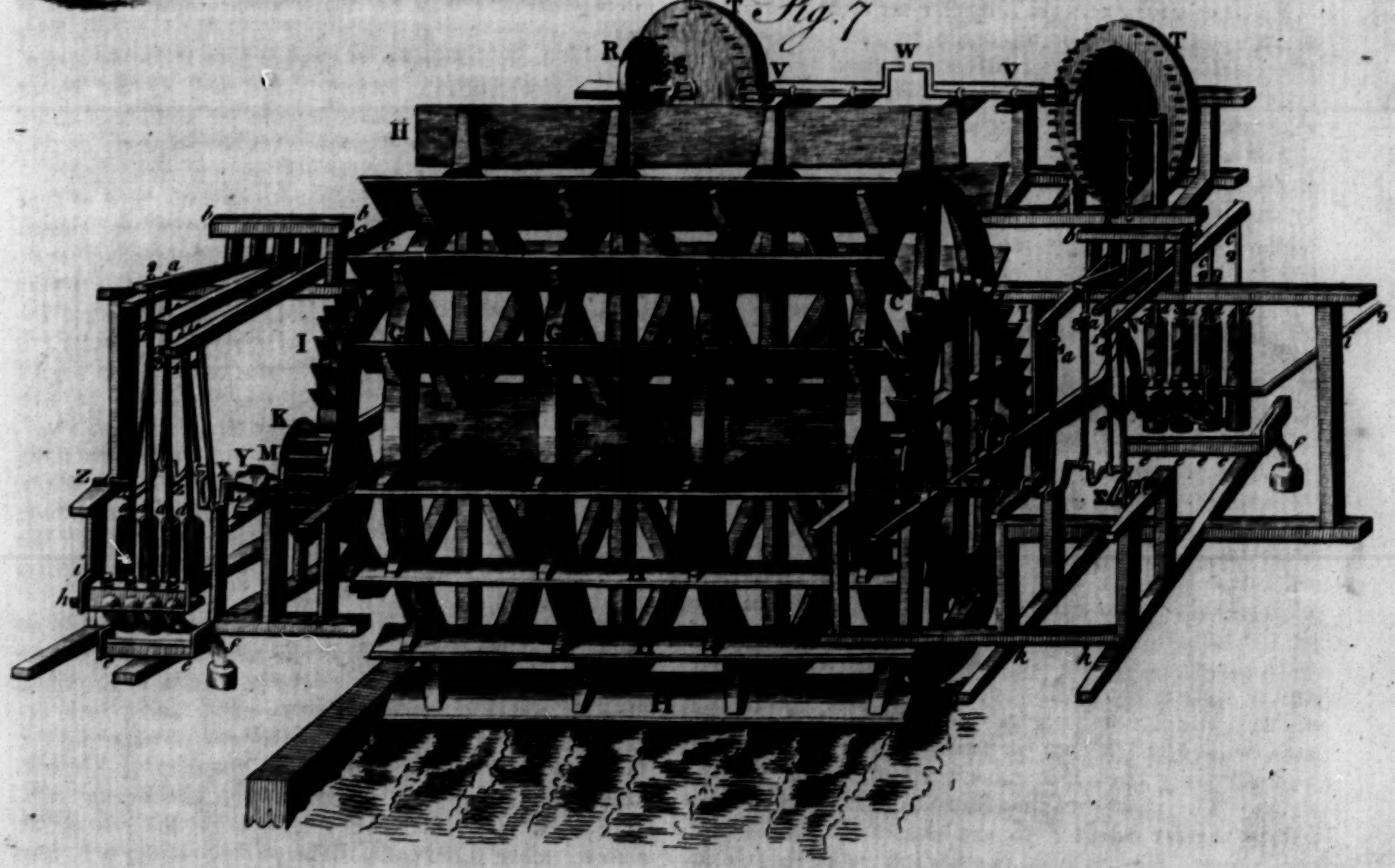


Fig. 7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it to be always leſs in diameter than the opening of valve at E: the degree of which condenſation, and that of the reſtitution to its natural ſtate of denſity, may be obſerved through the glaſs-machines, to ſatisfaction.

40
The ſcrew of Archimedes, Plate CCXLIII, fig. 1.

ARCHIMEDES's SCREW is a ſort of ſpiral pump, and receives its name from its inventor. It conſiſts of a long cylinder AB with a hollow pipe CD round it; and is placed in an oblique poſition, with the lower end in the water, the other end being joined to the lower end of the winch IK, ſupported by the upright piece IR.

When this ſcrew is immerſed in the water, it immediately riſes in the pipe by the orifice C to a level with the ſurface of the water EF; and if the point in the ſpiral, which in the beginning of the motion is coincident with the ſurface of the water, happen not to be on the lower ſide of the cylinder, the water, upon the motion of the ſcrew, will move on in the ſpiral till it come to the point on the other ſide that is coincident with the water. When it arrives at that point, which we will ſuppoſe to be O, it cannot afterwards poſſeſs any other part of the ſpiral than that on the loweſt part of the cylinder: for it cannot moves from O toward H or G, becauſe they are higher above the horizon; and as this will be conſtantly the caſe after the water in the ſpiral has attained the point O, it is plain it muſt always be on the under ſide of the cylinder.

But becauſe the cylinder is in conſtant motion, every part of the ſpiral ſcrew, from O to D, will by degrees ſucceed to the under part of the cylinder. The water therefore muſt ſucceed to every part of it, from O to D, as it comes on the lower ſide; that is, it muſt aſcend on the lower part of the cylinder through all the length of the pipe, till it come to the orifice at D, where it muſt run out, having nothing further to ſupport it.

41
The balance-pumps. fig. 3, 4.

THERE is a ſimple and eaſy method of working two pumps at once, by means of the balance AB, having a large iron ball at each end, and placed in equilibrium on the two ſpindles C, as repreſented in the 6th figure. On the right and left are two boards I, nailed to two croſs pieces, faſtened to the axis of the machine. On theſe boards the perſon who is to work the pump ſtands, and ſupports himſelf by a croſs piece nailed to the two poſts ED, fig. 5. At the diſtance of ten inches on each ſide the axis are faſtened the piſtons MN.

The man, by leaning alternately on his right and left foot, puts the balance in motion, by which the pumps OP are worked, and the water thrown into the pipe H, and carried to a height proportional to the diameter of the valves and the force of the balance. There muſt be placed on each ſide an iron ſpring, as F and G, to return the balance, and prevent its acquiring too great velocity.

42
The chain-pump. Plate CCXLII, fig. 4.

THE Chain-pump, AB, is ordinarily made from twelve to twenty-four feet long; and conſiſts of two collateral ſquare barrels, and a chain of piſtons of the ſame form, fixed at proper diſtances thereon. The chain is moved in theſe round a coarſe kind of wheel-work at either end of the machine, the teeth whereof are ſo made as to receive one half of the flat piſtons, and let them fold in; and they take hold of the links as they riſe in one of the barrels, and return by the other. The machine is wrought either by the turning of one handle or two, according to the labour required, depending on the height to which the water is to be raiſed. A whole row of the piſtons (which go free of the ſides of the barrel by perhaps a quarter of an inch) are always lifting when the pump is at work; yet do they, by the general puſh in the ordinary wa[illegible] of working, as it is pretty briſk, commonly bring[illegible] a full bore of water in the pump. This machi[illegible] ſo contrived, that, by the continual folding in o[illegible] piſtons, ſtones, dirt, and whatever happens to [illegible] in the way, may alſo be cleared; and therefo[illegible] generally made uſe of to drain ponds, to em[illegible] ers, and remove foul waters, in which no oth[illegible] could work.

[illegible] The hy-[illegible] [illegible]oop. Plate CCXLIII, fig. 2.

THE laſt machine to be deſcribed conſi[illegible] pieces of board, forming a ſort of ſcoop, as B. [illegible] handle C is ſuſpended by a rope faſtened to three po[illegible] placed in a triangle, and tied together at A.

The working of this machine conſiſts entirely in balancing the ſcoop that contains the water, and directing it in ſuch a manner that the water may be thrown in any given direction. It is evident that the operation of this machine is ſo verv eaſy, that it may rather be conſidered as an agreeable and ſalutary recreation than hard labour.

With this machine a man of moderate ſtrength, by two ſtrokes in four ſeconds, can draw half a cubic foot of water, that is, more than four hundred cubic feet in an hour.

This machine is frequently uſed by the Dutch in emptying the water from their dikes.

SECT. VI. *Entertaining Experiments.*

44
Of the ſyphon diſguiſed, Tantalus's cup, &c. Plate CCXXXIX.

1. SEVERAL amuſing appearances may be produced by diſguiſing or diverſifying a ſyphon. It may, for example, be diſguiſed in a cup, from which no liquor will flow till the fluid is raiſed therein to a certain height; but when the efflux is once begun, it will continue till the veſſel is emptied. Thus, fig. 11. is a cup, in the centre whereof is fixed a glaſs-pipe A, continued through the bottom at B, over which is put another glaſs tube, made air-tight at top by means of the cork at C; but left ſo open at foot, by holes made at D, that the water may freely riſe between the tubes as the cup is filled. Till the fluid in the cup ſhall have gained the top of the inmoſt pipe at A, no motion will appear. The air however from between the two pipes being in the mean time extruded, by the riſe of the denſer fluid, and paſſing down the inner tube will get away at bottom; and the water as ſoon as the top of the incloſed tube ſhall be covered thereby, will very ſoon follow, and continue to riſe in this machine, as in the ſyphon, till the whole is run off.

This is called by ſome, a *Tantalus's cup*; and, to humour the thought, a hollow figure is ſometimes put over the inner tube, of ſuch a length, that when the fluid is got nearly up to the lips of the man, the ſyphon may begin to act and empty the cup.

This is in effect no other than if the two legs of the ſyphon were both within the veſſel, as in fig. 12. into which the water poured will riſe in the ſhorter leg of the machine, by its natural preſſure upwards, to its own level; and when it ſhall have gained the bend of the ſyphon, it will come away by the longer leg, as already deſcribed. An apple, an orange, or any other ſolid, may be put into the veſſel, to raiſe the water, when it is near the bend, to ſet it a-running, by way of amuſement.

Plate CCXLIII.

Again, let the handle of the cup, fig. 11. be hollow; let the tube CD, ſcrewed therein, communicate freely with the water poured into the cup, that it may riſe equally in both. Being once above the level ED, it will overflow, and deſcending through the cavity DB, will empty the cup of its liquor.

45 The fountain at command. Plate CCXLI. fig. 1.

3. The device called *the fountain at command*, acts upon the ſame principle with the ſyphon in the cup. Let two veſſels A and B be joined together by the pipe C, which opens into them both. Let A be opened at top, B cloſe both at top and bottom (ſave only a ſmall hole at *b* to let the air get out of the veſſel B), and A be of ſuch a ſize as to hold about ſix times as much water as B. Let a ſyphon DEF be ſoldered to the veſſel D, ſo that the part DE*e* may be within the veſſel, and F without it; the end D almoſt touching the bottom of the veſſel, and the end F below the level of D: the veſſel B hanging to A by the pipe C (ſoldered into both), and the whole ſupported by the pillars G and H upon the ſtand I. The bore of the pipe muſt be conſiderably leſs than the bore of the ſyphon.

The whole being thus conſtructed, let the veſſel A be filled with water, which will run through the pipe C, and fill the veſſel B. When B is filled above the top of the ſyphon at E, the water will run through the ſyphon, and be diſcharged at F. But as the bore of the ſyphon is larger than the bore of the pipe, the ſyphon will run faſter than the pipe, and will ſoon empty the veſſel B; upon which the water will ceaſe from running through the ſyphon at F, until the pipe C refills the veſſel B, and then it will begin to run as before. And thus the ſyphon will continue to run and ſtop alternately, until all the water in the veſſel A has run through the pipe C.—So that, after a few trials, one may eaſily gueſs about what time the ſyphon will ſtop, and when it will begin to run; and then, to amuſe others, he may call out, "*ſtop*," or "*run*," accordingly.

46 Portable fountain and clepſydra. Plate CCXLIII. fig. 7.

3. This figure repreſents a very pretty portable fountain, which, being charged with water, and inverted, will play a jet nearly as high as the reſervoir, till the fluid is exhauſted; and then turned up on the other end, the ſame thing will happen, and a real clepſydra, or water-clock, be thereby formed.

This device conſiſts of two hollow veſſels, A and B, communicating with each other only by the recurved tubes C and D; at the ends of which E and F, are placed ſmall adjutages to direct the jet. G and H are two open tubes, ſoldered into the bottom of the baſons belonging to A and B, through which the water flows in, and fills thoſe veſſels to a certain height, that is, according to their length. They by their diſpoſition alſo prevent the return of the water the ſame way, when the machine is turned upſide down.

47 Hydroſcope, or water-clock. Plate CCXLIV. fig. 4.

4. Provide a cylindric veſſel of glaſs or china, ABCD, about a foot high, and four inches diameter. Make a hole in its bottom, in which glue a ſmall glaſs-tube E, of about one-third of an inch diameter, and whoſe end has been partly cloſed in the flame of a lamp, ſo that it will not ſuffer the water to paſs out but by drops, and that very ſlowly. Cover the top of the veſſel with a circle of wood F, in the centre of which make a round hole about half an inch diameter.

Have a glaſs tube GH, a foot high, and a quarter of an inch diameter; and at one end let it have a ſmall glaſs globe I, to which you may hang a weight L, by which it is kept in *equilibrio*, on or near the ſurface of the water; or you may pour a ſmall quantity of mercury into the tube, for the ſame purpoſe. Fill the veſſel with water; put the tube in it, and over it place the cover F, through the hole of which the tube muſt paſs freely up and down. Now, as the water drops gradually out of the veſſel, the tube will continue to deſcend till it come to the bottom.

Therefore, paſte on the tube a graduated paper, and put it in the veſſel when nearly full of water. Hang a watch by it, ſet to a certain hour; and as the tube deſcends, mark the hours, with the half and quarter hours. If the veſſel be ſufficiently large, with regard to the hole at the bottom, it will go for 12 hours, a day, or as much longer as you pleaſe, and requires no other trouble than that of pouring in water to a certain height. Care muſt be had, however, that the water be clean; for if there be any ſediment, it will in time ſtop the ſmall hole at bottom, or at leaſt render the motion of the water irregular.

The veſſel may be of tin, but the pipe at bottom ſhould be glaſs, that its ſmall aperture may not alter by uſe. It is to be obſerved, that the tube of one of theſe clocks is not to be graduated by another: for though the veſſel be of the ſame diameter at top, it may not be perfectly cylindrical throughout; nor is it eaſy to make the hole at the bottom of one veſſel exactly of the ſame dimenſions with that of another.

48 Clepſydra. fig. 7.

5. The Hon. Mr Charles Hamilton has deſcribed a curious clepſydra or water-clock of a new conſtruction. An open canal *e e*, ſupplied with a conſtant and equal ſtream by the ſyphon *d*, has at each end *f f*, open pipes of exactly equal bores, which deliver the water that runs along the canal *e* alternately into the veſſels *g* 1, *g* 2, in ſuch a quantity as to raiſe the water from the mouth of the tantalus *t*, exactly in an hour. The canal *e e* is equally poiſed by the two pipes *f* 1, *f* 2, upon a centre *r*, the ends of the canal *e* are raiſed alternately, as the cups *z z* are depreſſed, to which they are connected by lines running over the pullies *l l*. The cups *z z* are fixed at each end of the balance *m m*, which moves up and down upon its centre *v*. *n* 1, *n* 2, Are the edges of two wheels or pullies, moving different ways alternately, and fitted to the cylinder *o* by oblique teeth both in the cavity of the wheel and upon the cylinder, which, when the wheel *n* moves one way, that is, in the direction of the minute hand, meet the teeth of the cylinder and carry the cylinder with it, and, when *n* moves the contrary way, ſlip over thoſe of the cylinder, the teeth not meeting, but receding from each other. One or other of theſe wheels *n n* continually moves *o* in the ſame direction, with an equable and uninterrupted motion. A fine chain goes twice round each wheel, having at one end a weight *x*, always out of water, which equiponderates with *y* at the other end, when kept floating on the ſurface of the water in the veſſel *g*, which *y* muſt always be; the two cups *z*, *z*, one at each end of the balance, keep it in *equilibrio*, till one of them is forced

down by the weight and impulſe of the water, which it receives from the tantalus $t t i$: each of theſe cups z, z, has likewiſe a tantalus of its own h, k, which empties it after the water has done running from g, and leaves the two cups again in *equilibrio*: q is a drain to carry off the water. The dial-plate, &c. needs no deſcription. The motion of the clepſydra is effected thus: As the end of the canal $e e$, fixed to the pipe f 1, is, in the figure, the loweſt, all the water ſupplied by the ſyphon runs through the pipe f 1, into the veſſel g 1, till it runs over the top of the tantalus t; when it immediately runs out at i into the cup z, at the end of the balance m, and forces it down; the balance moving on its centre v. When one ſide of m is brought down, the ſtring which connects it to f 1; running over the pulley l, raiſes the end f 1, of the canal e, which turns upon its centre r, higher than f 2; conſequently, all the water which runs through the ſyphon d paſſes through f 2 into g 2, till the ſame operation is performed in that veſſel, and ſo on alternately. As the height the water riſes in g in an hour, *viz.* from s to t, is equal to the circumference of n, the float y riſing through the height along with the water, lets the weight x act upon the pulley n, which carries with it the cylinder o; and this, making a revolution, cauſes the index k to deſcribe an hour on the dial plate. This revolution is performed by the pulley n 1; the next is performed by n 2, whilſt n 1 goes back, as the water in g 1 runs out through the tantalus; for y muſt follow the water, as its weight increaſes, out of it. The axis o always keeps moving the ſame way; the index p deſcribes the minutes; each tantalus muſt be wider than the ſyphon, that the veſſels $g g$ may be emptied as low as s, before the water returns to them.

49
A fountain which ſpouts water in form of a ſhower, fig. 2.

6. To the tube wherein the water is to riſe, fit a ſpherical or lenticular head, AB, made of a plate of metal, and perforated at top with a great number of little holes. The water riſing with vehemence towards AB, will be there divided into innumerable little threads, and afterwards broke, and diſperſed into the fineſt drops.

50
A fountain which ſpreads the water in form of a table cloth. fig. 3.

7. To the tube AB, ſolder two ſpherical ſegments C and D, almoſt touching each other; with a ſcrew E, to contract or amplify the interſtice or chink at pleaſure. Others chooſe to make a ſmooth, even cleft, in a ſpherical or lenticular head, fitted upon the tube. The water ſpouting through the chink, or cleft, will expand itſelf in manner of a cloth.

51
The globular fountain Plate CCXLIII. fig. 10.

8. Make a hollow globe A, of copper or lead, and of a ſize adapted to the quantity of water that comes from the pipe to which it is to be placed. Pierce a number of ſmall holes thro' this globe, that all tend towards its centre; obſerving, however, that the diameters of all theſe holes, taken together, muſt not exceed that of the pipe at the part from whence the water flows. Annex to it a pipe B, of ſuch height as you think convenient; and let it be ſcrewed at C, to the pipe from whence the jet flows. The water that comes from the jet ruſhing with violence into the globe will be forced out at the holes, with the direction in which they are made, and will produce a very pleaſing ſphere of water.

52
The hydraulic dancer, fig. 5.

9. Procure a little figure made of cork, as AB, which you may paint, or dreſs in a light ſtuff, after your own fancy. In this figure you are to place the ſmall hollow cone C, made of thin leaf-braſs. When the figure is placed on the jet-d'eau that plays in a perpendicular direction, it will remain ſuſpended on the top of the water, and perform a great variety of motions.

If a hollow ball of copper, of an inch diameter, and very light, be placed on a ſimilar jet, it will, in like manner, remain ſuſpended, revolving on its centre, and ſpreading the water all round it, in the manner repreſented by fig. 6. or Plate CCXLIV. fig. 1.—But note, that as it is neceſſary the ball, &c. when on the deſcent, ſhould keep the ſame preciſe perpendicular wherein it roſe (ſince otherwiſe it would miſs the ſtream and fall downright), ſuch a *fountain* ſhould only be played in a place free from wind.

53
The hemiſpherical caſcade. Plate CCXLV. fig. 1.

10. Make a hollow leaden cone A, whoſe axis is one-third of the diameter of its baſe. The circle C, that forms its baſe, muſt be in proportion to the ſurface of water that flows from the jet on which it is to be placed, that it may flow from it equally on all ſides. To the cone join the pipe B, which ſerves not only as a ſupport, but is to be pierced with a number of holes, that it may ſupply the cone with a ſufficient quantity of water—Screw the tube juſt mentioned to the top of that from whence the jet proceeds.—The water that ruſhes into the cone from the pipe, will run over its circumference, and form a hemiſpherical caſcade. If this piece be ſo conſtructed that it may be placed in a reverſed poſition, it will produce a fountain in the form of a vaſe, (ſee fig. 2.); and if there be a ſufficient quantity of water, both theſe pieces may be placed on the ſame pipe, the fountain at top and the caſcade underneath which by their variety will produce a very pleaſing appearance.

54
The water-ſun. Plate CCXLIV. fig. 5.

11. Let there be two portions of a hollow ſphere, that are very ſhallow: and let them be ſo joined together, that the circular ſpace between them may be very narrow. Fix them vertically to a pipe from whence a jet proceeds. In that part by which the portions of the ſphere are joined, there muſt be made a number of holes; then the water ruſhing into the narrow cavity will be forced out from the holes, and produce a regular figure of the ſun, as in the plate. This piece requires a large quantity and force of water to make it appear to advantage.

Several pieces of this ſort may be placed over each other, in a horizontal direction, and ſo that the ſame pipe may ſupply them all with water (ſee fig. 6. of plate CCXLV.) It is proper to obſerve, that the diameter of theſe pieces muſt continually diminiſh, in proportion to their diſtance from the bottom.

55
The revolving water-ſun. Plate CCXLIII. fig. 8.

12. Make a hollow circle A, the ſides of which are to be pierced with 12 or 15 holes, made in an inclined direction: or you may place the like number of ſmall tubes round the circle. Fix this circle on the top of a jet, in ſuch manner that it may turn freely round. The water ruſhing violently into the hollow circle will keep it in continual motion; and at the ſame time forcing out of the holes or ſmall tubes, will form a revolving figure with rays in different directions, as in the plate.

56
The compreſſed jet d'eau, fig. 12.

13. Provide a ſtrong copper veſſel A, of ſuch figure as you think convenient; in which ſolder a pipe BE, of the ſame metal. Let there be a cock at H, which muſt be made ſo tight that no air can paſs by it. The pipe BE muſt go very near the bottom of the veſſel, but

not touch it. There muſt be another pipe F, at whoſe extremity G there is a very ſmall hole: this pipe muſt be ſcrewed into the former.

The veſſel being thus diſpoſed, take a good ſyringe; and placing the end of it in the hole at G, open the cock, and force the air into the veſſel; then turn the cock and take out the ſyringe. Repeat this operation ſeveral times, till the air in the veſſel be ſtrongly condenſed. Then fill the ſyringe with water, and force it into the veſſel, in the ſame manner as you did the air; and repeat this operation till you can force no more water into the veſſel; then ſhut the cock. This veſſel will be always ready to perform an extempore jet d'eau: for, on turning the cock, the ſpring of the compreſſed air will force out the water with great violence, and the jet will continue, though conſtantly decreaſing in force, till the water is all exhauſted, or the air within the veſſel is come to the ſame denſity with that without.

57 The marvellous veſſel, fig. 14.

14. Let there be made a tin veſſel, about ſix inches high, and three inches in diameter. The mouth of this veſſel muſt be only one quarter of an inch wide; and in its bottom make a great number of ſmaller holes about the ſize of a common ſewing needle. Plunge this veſſel in water, with its mouth open; and when it is full, cork it up and take it out of the water. So long as the veſſel remains corked, no water whatever will come out; but as ſoon as it is uncorked, the water will iſſue out from the ſmall holes at its bottom. You muſt obſerve, that if the holes at the bottom of the veſſel be more than one ſixth of an inch diameter, or if they be in too great number, the water will run out though the veſſel be corked; for then the preſſure of the air againſt the bottom of the veſſel will not be ſufficient to confine the water.

58 A glaſs full of water inverted, and the water not ſpilt, fig. 13.

An experiment ſimilar to this is made with a glaſs filled with water, over which a piece of paper is placed. The glaſs is then inverted; and the water, by the preſſure of the air under it, will remain in the glaſs. That the paper, though the ſeeming, is not the real ſupport of the water, will appear from nº 25.

59 The circulating fountain. Plate CCXLV. fig. 4.

15. In this fountain, the air being compreſſed by the concealed fall of water, makes a jet, which, after ſome continuance, is conſidered by the ignorant as a perpetual motion; becauſe they imagine that the ſame water which fell from the jet ariſes again. The boxes CE and DYX being cloſe, we ſee only the baſon ABW, with a hole at W, into which the water ſpouting at B falls; but that water does not come up again; for it runs down through the pipe WX into the box DYX, from whence it drives out the air through the aſcending pipe YZ, into the cavity of the box CE, where, preſſing upon the water that is in it, it forces it out through the ſpouting pipe OB, as long as there is any water in CE; ſo that this whole play is only whilſt the water contained in CE, having ſpouted out, falls down through the pipe WX into the cavity DYX. The force of the jet is proportionable to the height of the pipe WX, or of the boxes CE and DY above one another: the height of the water, meaſured from the baſon ABW to the ſurface of the water in the lower box DYX, is always equal to the height meaſured from the top of the jet to the ſurface of the water in the middle cavity at CE. Now, ſince the ſurface CE is always falling, and the water in DY always riſing, the height of the jet muſt continually decreaſe, till it is ſhorter by the height of the depth of the cavity CE, which is emptying, added to the depth of the cavity DY, which is always filling; and when the jet is fallen ſo low, it immediately ceaſes. The air is repreſented by the points in this figure. To prepare this fountain for playing, which ſhould be done unobſerved, pour in water at W, till the cavity DXY is filled; then invert the fountain, and the water will run from the cavity DXY into the cavity CE, which may be known to be full, when the water runs out at B held down. Set the fountain up again, and, in order to make it play, pour in about a pint of water into the baſon ABW; and as ſoon as it has filled the pipe WX, it will begin to play, and continue as long as there is any water in CE. You may then pour back the water left in the baſon ABW, into any veſſel, and invert the fountain, which, being ſet upright again, will be made to play, by putting back the water poured out into ABW; and ſo on as often as you pleaſe.

The fountain fig. 3. is of the ſame kind; but having double the number of pipes and concealed cavities, it plays as high again. In order to underſtand its ſtructure, ſee fig. 7. The baſon is A, the four cavities are B, C, D, and E, from which the water through the pipe *f* G ſpouts up to double the height of the fountain, the air at E, which drives it, being doubly condenſed. The water going down the pipe 1 (*e. gr.* three feet long), condenſes the air that goes up into the cavity C through the pipe 2, ſo as to make it $\frac{1}{10}$ ſtronger than the common air; then the water, which falling in the pipe 3 from C to D, is capable, by the height of its fall, of condenſing the air at E, ſo as to make it $\frac{1}{10}$ ſtronger, being puſhed at C by air already condenſed into $\frac{1}{10}$ leſs ſpace, cauſes the air at E to be condenſed twice as much; that is, to be $\frac{1}{5}$ ſtronger than common air; and therefore it will make the water at G ſpout out with twice the force, and riſe twice as high as it would do if the fountain had been of the ſame ſtructure with the former. In playing this fountain turn it upſide down, and taking out the plugs *g*, *h*, fill the two cavities C and E, and having ſhut the holes again, ſet the fountain upright, and pour ſome water into the baſon A, and the jet will play out at G; but the fountain will begin to play too ſoon, and therefore the beſt way is to have a cock in the pipe 3, which, being open, whilſt the cavities C and E are filled, and ſhut again before the fountain is ſet up, will keep the water thrown into the baſon from going down the pipe 1, and that of the cavity C from going down the pipe 3, by which means the fountain will not play before its time, which will be as ſoon as the cock is opened.

60 The magical caſcade, fig. 5.

16. Procure a tin veſſel ABC, five inches high and four in diameter; and let it be cloſed at top. To the bottom of this veſſel let there be ſoldered the pipe DE, of ten inches length, and half an inch in diameter: this pipe muſt be open at each end, and the upper end muſt be above water in the veſſel. To the bottom alſo fix five or ſix ſmall tubes F, about one eighth of an inch diameter. By theſe pipes the water contained in the veſſel is to run ſlowly out.

Place this machine on a ſort of tin baſon GH, in the middle of which is a hole of one quarter of an inch diameter.

Fig. 1

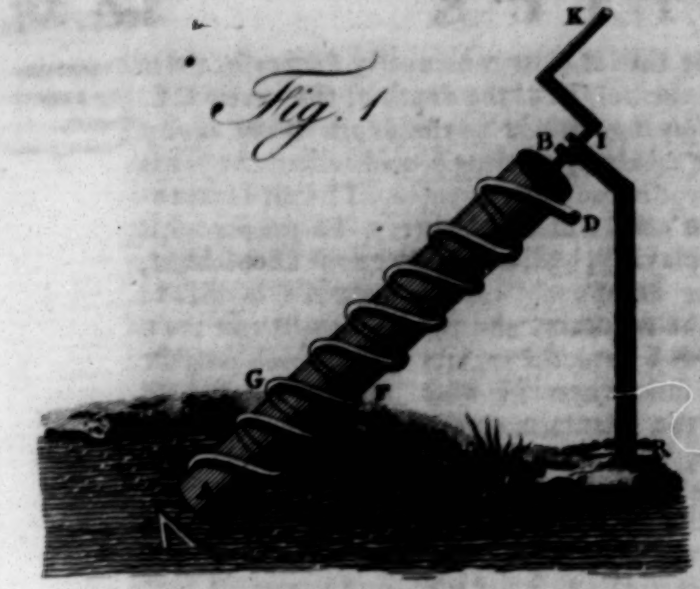

Fig. 2

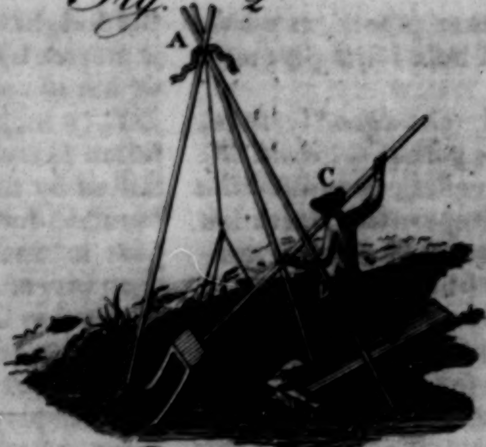

Fig. 15

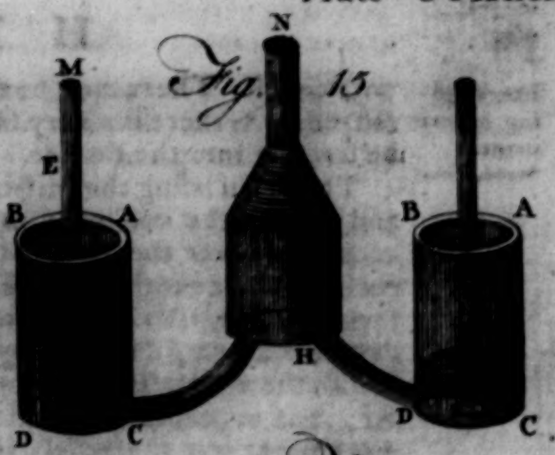
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Fig. 6

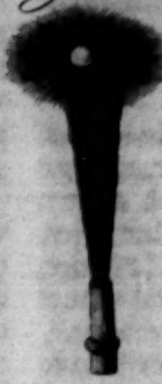

Fig. 7

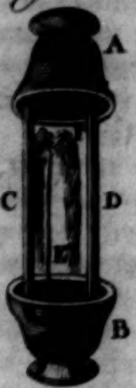

Fig. 5

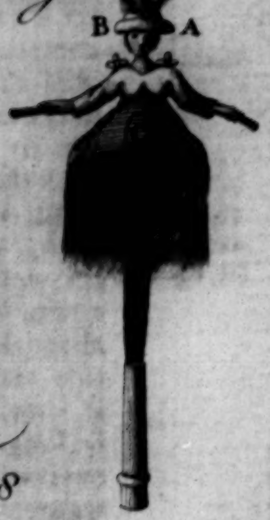

Fig. 3

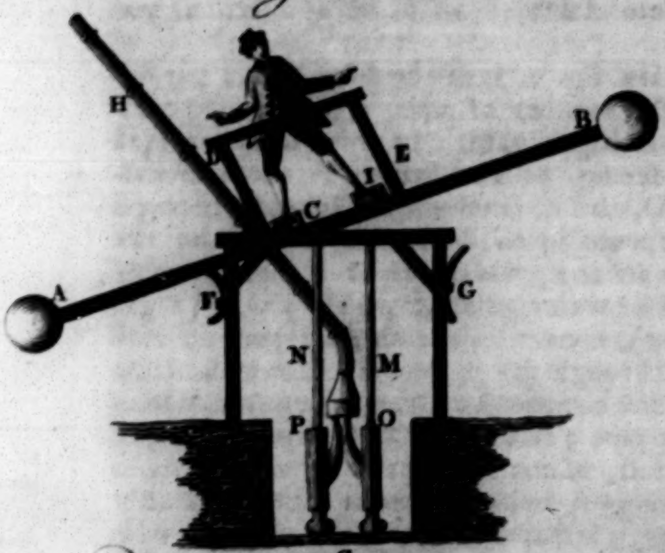
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Fig. 11

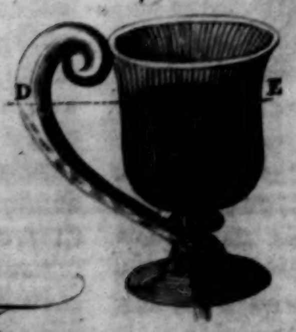

Fig. 8

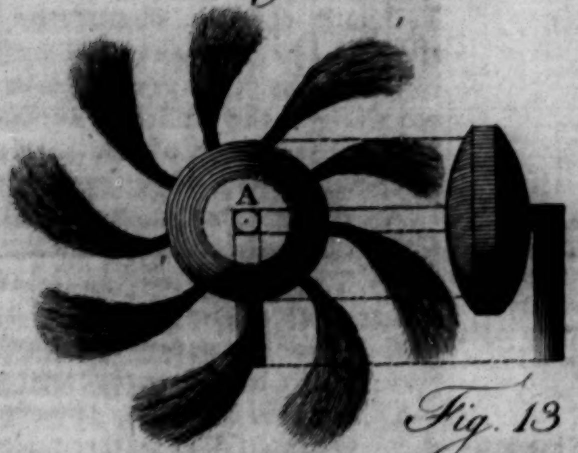

Fig. 4

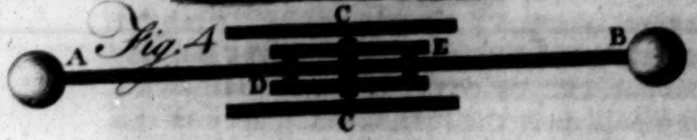

Fig. 9

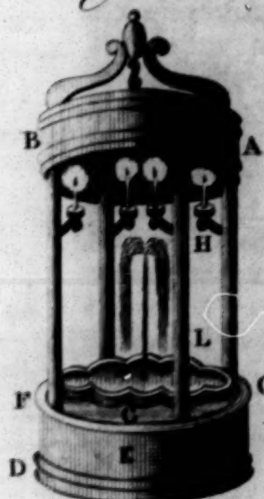

Fig. 10

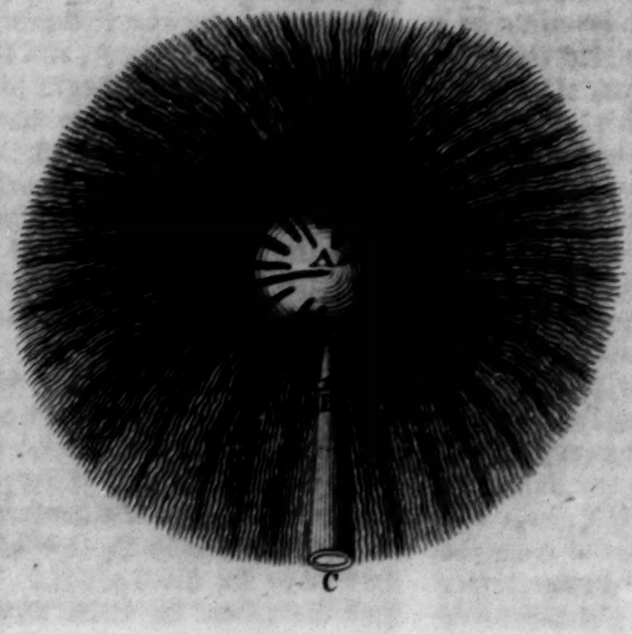

Fig. 13

Fig. 12

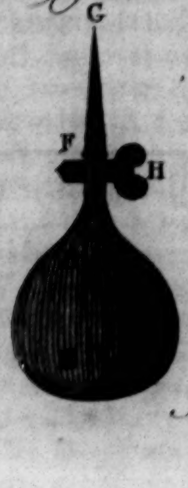

Fig. 14

Scot Philad.ᵒ

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diameter. To this tube DE, fix ſome pieces that may ſupport the veſſel over the baſon; and obſerve that the end D, of the tube DE, muſt be little more than one quarter of an inch from the baſon. There muſt be alſo another veſſel placed under the baſon, to receive the water that runs from it.

Now, the ſmall pipes diſcharging more water into the baſon than can run out at the hole in its centre, the water will riſe in the baſon, above the lower end of the pipe DE, and prevent the air from getting into the veſſel AB; and conſequently the water will ceaſe to flow from the ſmall pipes. But the water continuing to flow from the baſon, the air will have liberty again to enter the veſſel AB, by the tube DE, and the water will again flow from the ſmall pipes. Thus they will alternately ſtop and flow as long as any water remains in the veſſel AB.

As you will eaſily know by obſerving the riſe of the water, when the pipes will ceaſe to flow, and by the fall of it, when they will begin to run again, you may ſafely predict the change; or you may command them to run or ſtop, and they will ſeem to obey your orders.

61 The illuminated fountain Plate CCXLIII. fig. 9.

17. This fountain begins to play when certain candles placed round it are lighted, and ſtops when thoſe candles are extinguiſhed. It is conſtructed as follows. Provide two cylindrical veſſels, AB and CD. Connect them by tubes open at both ends, at HL, FB, &c. ſo that the air may deſcend out of the higher into the lower veſſel. To theſe tubes fix candleſticks H, &c. and to the hollow cover CF, of the lower veſſel, fit a ſmall tube EF, furniſhed with a cock G, and reaching almoſt to the bottom of the veſſel. In G let there be an aperture with a ſcrew, whereby water may be poured into CD.

Now, the candles at H, &c. being lighted, the air in the contiguous pipes will be thereby rarified, and the jet from the ſmall tube EF will begin to play: as the air becomes more rarified, the force of the jet will increaſe and it will continue to play till the water in the lower veſſel is exhauſted. It is evident, that as the motion of the jet is cauſed by the heat of the candles, if they be extinguiſhed, the fountain muſt preſently ſtop.

62 The ſolar fountain. Plate CCXLV. fig. 8.

18. This fountain is contrived to play by the ſpring of the air, increaſed by the heat of the ſun, and ſerves alſo for a dial at the ſame time. GNS is a hollow globe of thin copper, eighteen inches in diameter, ſupported by a ſmall inverted baſon, reſting on a frame ABC, with four legs between which there is a large baſon of two feet diameter. In the leg C there is a concealed pipe, proceeding from G, the bottom of the inſide of the globe, along HV, and joining an upright pipe u I, for making a jet at I. The ſhort pipe I u, going to the bottom of the baſon, has a valve at u under the horizontal part HV, and another valve at V above it, and under the cock, &c. At the north pole N, there is a ſcrew for opening a hole, through which the globe is ſupplied with water. When the globe is half filled, let the machine be ſet in a garden, and as the ſun heats the copper and rarifies the included air, the air will preſs upon the water, which deſcending through the pipe GCHV, will lift up the valve V, and ſhut the valve u, and the cock being open, ſpout out at I, and continue to do ſo for a long time, if the ſun ſhines, and the adjutage be ſmall. At night as the air condenſes again by the cold, the outward air preſſing into the adjutage I, will ſhut the valve V, but by its preſſure on the baſon DuH, puſh up the water which has been played in the day-time through the valve u, and the pipe uHG into the globe, ſo as to fill it up again to the ſame height which it had at firſt, and the next ſun-ſhine will cauſe the fountain to play again, &c. The uſe of the cock is to keep the fountain from playing till you think proper: a ſmall jet will play ſix or eight hours.

If the globe be ſet to the latitude of the place, and rectified before it be fixed, with the hour-lines or meridians drawn upon it, the hours marked, and the countries painted, as on the common globe, it will form a good dial: the ſun then ſhining upon the ſame places in this globe as it does on the earth itſelf. This fountain was invented by Dr Deſaguliers.

63 The hydraulic divers.

19. There is a pretty contrivance, by which the ſpecific gravity of the body is ſo altered, that it riſes and ſinks in water at our pleaſure. Let little images of men, about an inch high, of coloured glaſs, be beſpoke at a glaſs-houſe; and let them be made ſo as to be hollow within, but ſo as to have a ſmall opening into this hollow, either at the ſole of the foot or elſewhere. Let them be ſet a float in a clear glaſs phial of water, filled within about an inch of the mouth of the bottle; then let the bottle have its mouth cloſed with a bladder, cloſely tied round its neck, ſo as to let no air eſcape one way or the other. The images themſelves are nearly of the ſame ſpecific gravity with water, or rather a little more light, and conſequently float near the ſurface. Now when we preſs down the bladder, tied on at the top, into the mouth of the bottle, and thus preſs the air upon the ſurface of the water in the bottle; the water being preſſed will force into the hollow of the image through the little opening: thus the air within the images will be preſſed more cloſely together, and being alſo more filled with water now than before, the images will become more heavy, and will conſequently deſcend to the bottom; but, upon taking off the preſſure from above, the air within them will again drive out the water, and they will riſe to the ſame heights as before. If the cavities in ſome of the images be greater than thoſe in others, they will riſe and fall differently, which makes the experiment more amuſing.

HYDROTHORAX, a collection of water in the breaſt. See (the *Index* ſubjoined to) MEDICINE.

HYDRUNTUM, (anc. geo.), a noble and commodious port of Calabria, from which there was a ſhorter paſſage to Apollonia (Pliny.) Famous for its antiquity, and for the fidelity and bravery of its inhabitants. Now Otranto, a city of Naples, at the entrance of the Gulf of Venice. E. Long. 19° 15'. N. Lat. 40° 12.

HYEMANTES, (in the primitive church), offenders,

ders who had been guilty of ſuch enormities, that they were not allowed to enter the porch of the churches with the other penitents, but were obliged to ſtand without, expoſed to all the inclemency of the weather.

HYGEIA, in mythology. See Health.

HYGIEINE, Ὑγιεινη, formed of ὑγιης; "ſound, healthy," that branch of medicine which conſiders health, and diſcovers proper means and remedies, with their uſe, in the preſervation of that ſtate.

The objects of this branch of medicine are, the non-naturals. See Diet, Exercise, &c.

Hygieine, more largelyt aken; is divided into three parts; prophylactice, which foreſees and prevents diſeaſes; ſynteritice, employed in preſerving health; and analeptice, whoſe office is to cure diſeaſes, and reſtore health.

HYGINUS (Caius Julius), a grammarian, the freedman of Auguſtus, and the friend of Ovid, was born in Spain, or, according to others, in Alexandria. He wrote many books which are mentioned by ancient authors; all of which are loſt, except ſome fables, and a work entitled *Aſtronomicon Poeticon*; and even theſe are come down to us very imperfect. The beſt edition of theſe remains is that of Munker, publiſhed with ſome other pieces of antiquity in 4 vols 8vo, 1681, under the title of *Mythographi Latini*.

HYGROMETER, an inſtrument for meaſuring the degrees of dryneſs or moiſture of the atmoſphere, in like manner as the barometer and thermometer meaſure its different degrees of gravity or warmth.

Though every ſubſtance which ſwells in moiſt, and ſhrinks in dry weather, is capable of becoming an hygrometer; yet this kind of inſtrument is far from being as yet arrived at ſuch a degree of perfection as the barometers and thermometers. There are three general principles on which hygrometers have been conſtructed. 1. The lengthening and ſhortening of ſtrings by dryneſs and moiſture, or their twiſting and untwiſting by the ſame. 2. The ſwelling and the ſhrinking of ſolid ſubſtances by moiſture or dryneſs; and, 3. By the increaſe or decreaſe of the weight of particular bodies whoſe nature is to abſorb the humidity of the atmoſphere.

I. On the firſt of theſe principles Mr Smeaton hath conſtructed an hygrometer greatly ſuperior to any that had appeared before; and of which the following account is given in the 62d volume of the Philoſophical Tranſactions.

"Having ſome years ago attempted to make an accurate and ſenſible hygrometer by means of a hempen cord of a conſiderable length, I quickly found, that, though it was more than ſufficiently ſuſceptible of every change in the humidity of the atmoſphere, yet the cord was upon the whole in a continual ſtate of lengthening. Though this change was the greateſt at firſt, yet it did not apppear probable than any given time would bring it to a certainty; and, furthermore, it ſeemed, that as the cord grew more determinate in mean length, the alteration by certain differences of moiſture grew leſs. Now, as on conſidering wood, catgut, paper, &c. there did not appear to be a likelihood of finding any ſubſtance ſufficiently ſenſible of differences of moiſture that would be unalterable under the ſame degrees thereof; this led me to conſider of a conſtruction which would readily admit of an adjuſtment; ſo that, though the cord whereby the inſtrument is actuated may be variable in itſelf, both as to abſolute length, and difference of length under given degrees of moiſture, yet that, on ſuppoſition of a material departure from its original ſcale, it might be readily reſtored thereto; and, in conſequence, that any number of hygrometers ſimilarly conſtructed, might, like thermometers, be capable of ſpeaking the ſame language.

"The two points of heat the more readily determinable in a thermometer, are the points of freezing and boiling water. In like manner, to conſtruct hygrometers which ſhall be capable of agreement, it is neceſſary to eſtabliſh two different degrees of a moiſture which ſhall be fixed in themſelves, and to which we can have recourſe as readily and as often as poſſible.

"One point is given by making the ſubſtance perfectly wet, which ſeems ſufficiently determinable; the other is that of perfect dry, which I do not apprehend to be attainable with the ſame preciſion. A readineſs to imbibe wet, ſo that the ſubſtance may be ſoon and fully ſaturated, and alſo a facility of parting with its moiſture on being expoſed to the fire to dry; at the ſame time, that neither immerſion, nor a moderate expoſition to the warmth of the fire, ſhall injure its texture, are properties requiſite to the firſt mover of ſuch an hygrometer, that in a manner exclude all ſubſtances that I am acquainted with, beſides hempen and flaxen threads and cords, or ſubſtances compounded of them.

"Upon theſe ideas, in the year 1758, I conſtructed two hygrometers as nearly alike as poſſible, in order that I might have the means of examining their agreement or diſagreement on ſimilar or diſſimilar treatment. The interval or ſcale between dry and wet I divided into 100 equal parts, which I call the degrees of this hygrometer. The point 0 denotes perfect dry; and the numbers increaſe with the degrees of moiſture to 100, which denote pefect wet.

"On comparing them for ſome time, when hung up together in a paſſage or ſtaircaſe, where they would be very little affected by fire, and where they would be expoſed to as free an air as poſſible in the inſide of the houſe, I found that they were generally within one degree, and very rarely differed two degrees; but as theſe compariſons neceſſarily took up ſome time, and were frequently interrupted by long avocations from home, it was ſome years before I could form a tolerable judgment of them. One thing I ſoon obſerved, not altogether to my liking, which was, that the flaxen cords made uſe of ſeemed to make ſo much reſiſtance to the entry of ſmall degrees of moiſture (ſuch as is commonly experienced within doors in the ſituation abovementioned), that all the changes were compriſed within the firſt 30° of the ſcale; but yet, on expoſing them to the warm ſteam of a waſh-houſe, the index quickly mounted to 100. I was therefore deſirous of impregnating the cords with ſomething of a ſaline nature, which ſhould diſpoſe them more forcibly to attract moiſture; in order that the index might, with the ordinary changes of the moiſture in the atmoſphere, travel over a greater part of the ſcale of 100. How to do this in a regular and fixed quantity, was the ſubject of many experiments, and ſeveral years interrupted inquiry. At laſt I tried the one hereafter deſcribed, which ſeemed

Fig. 1.

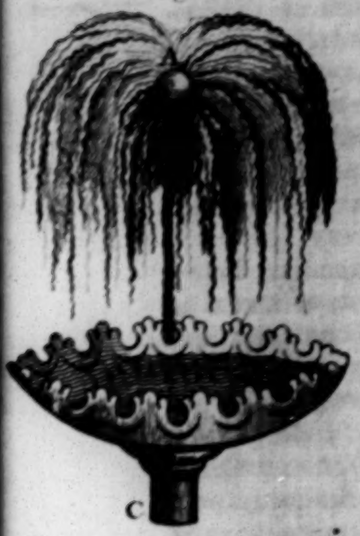


Fig. 2.

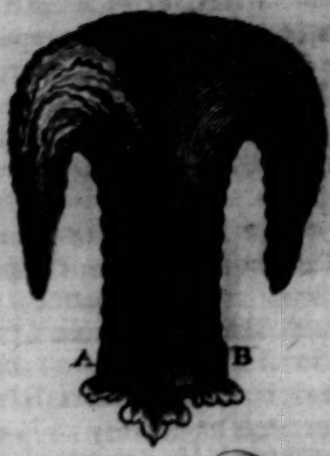


Fig. 3.

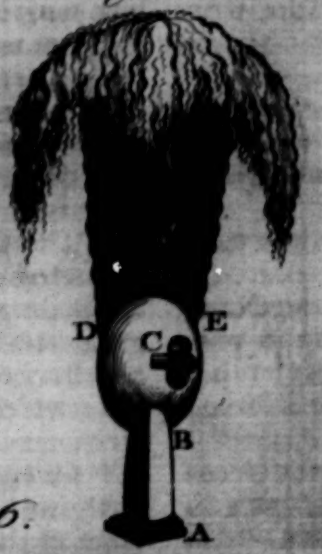
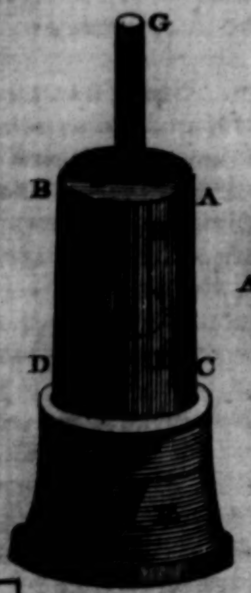


Fig. 4.



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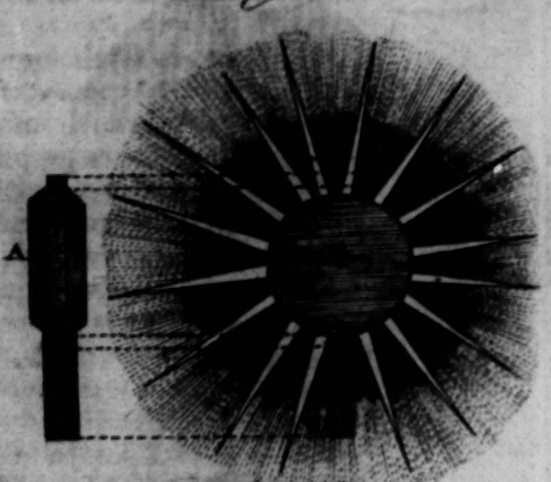

Fig. 6.

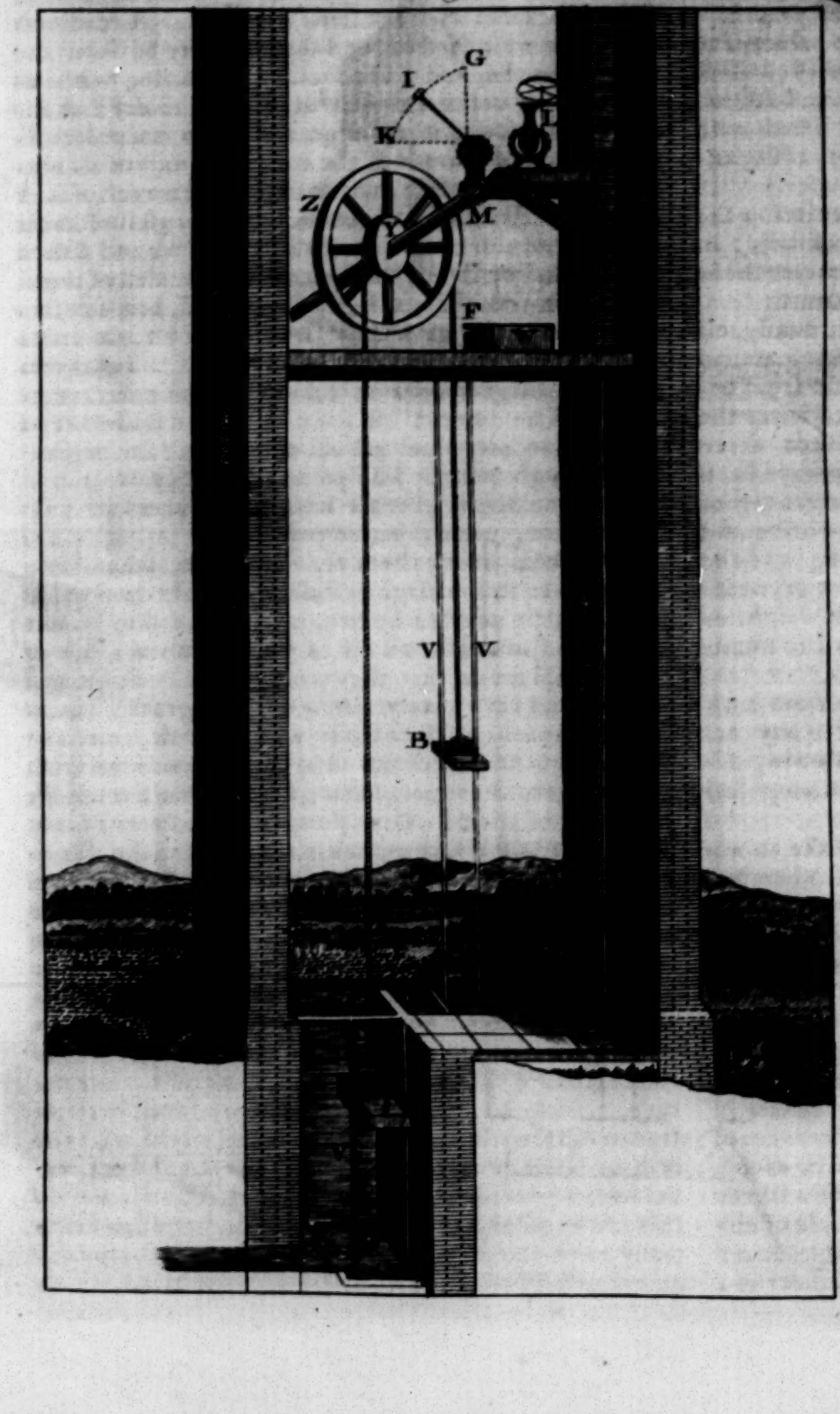
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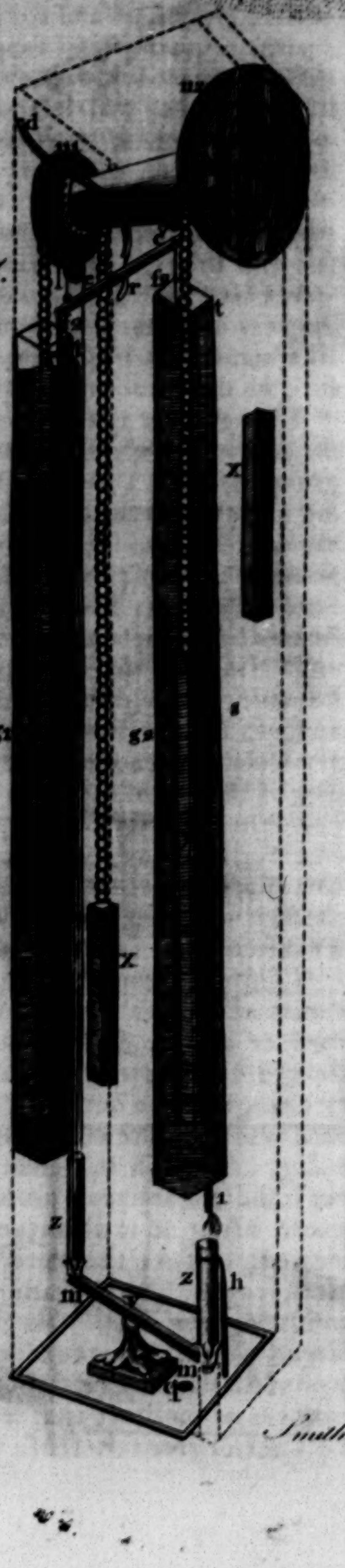
Fig. 7.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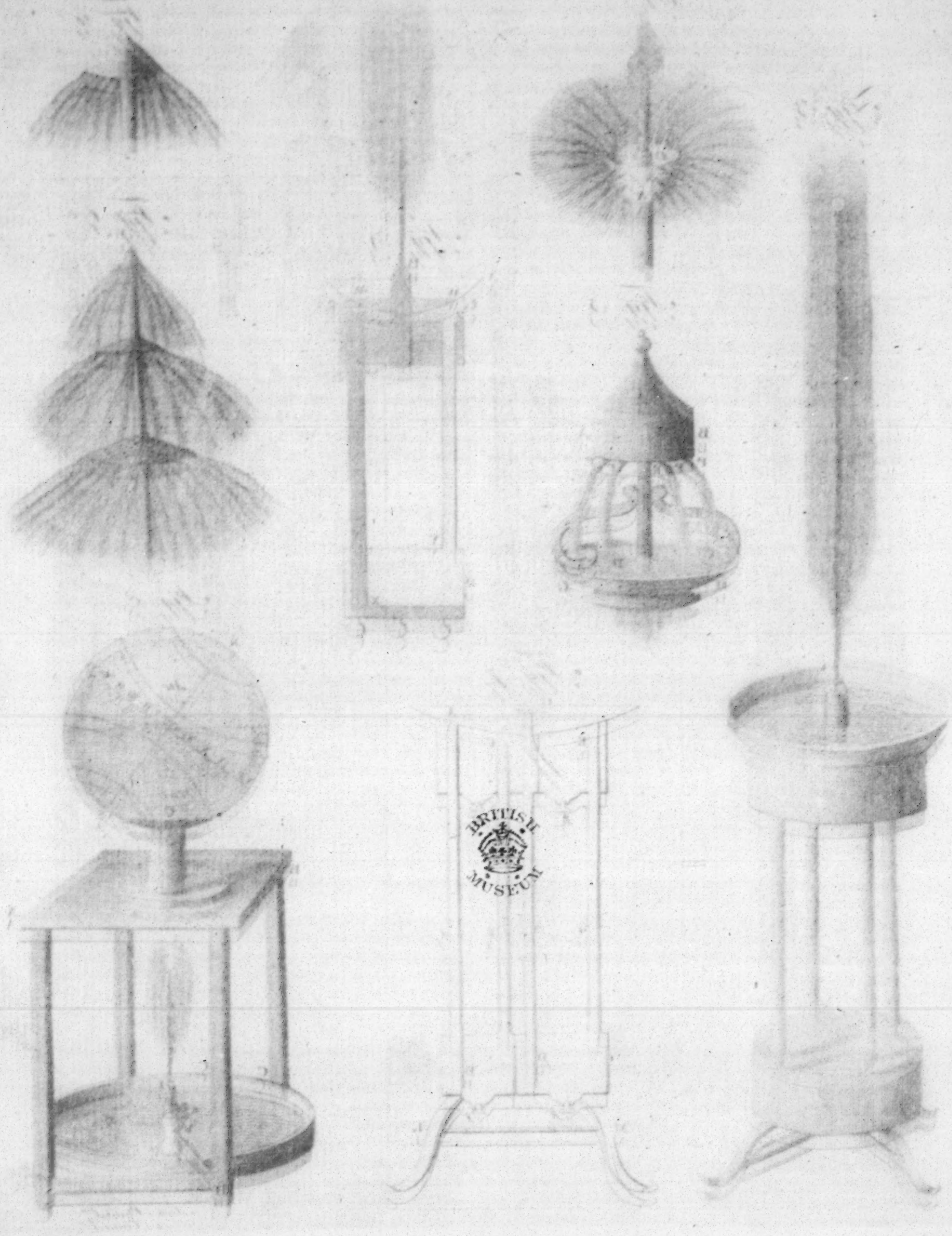

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HYDROSTATICS

Plate CCXLV

Fig. 1

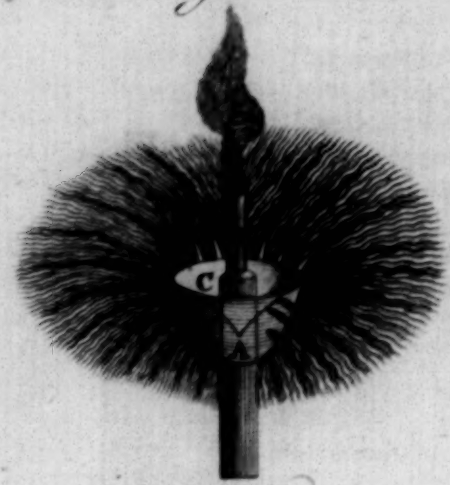

Fig. 2

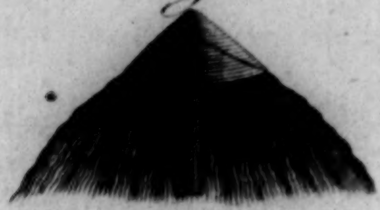

Fig. 3

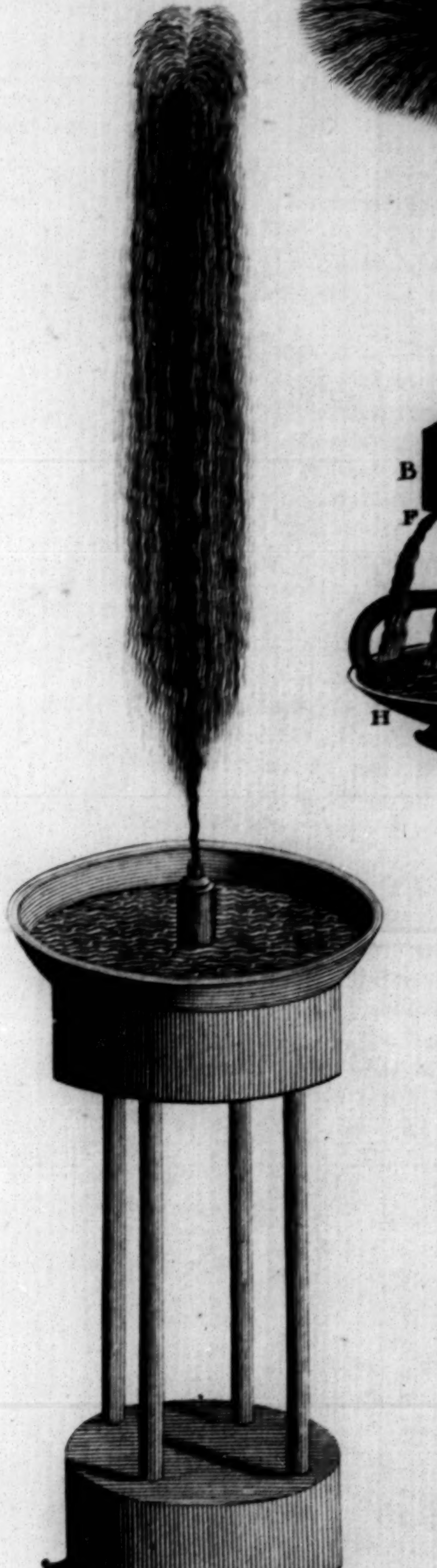

Fig. 4

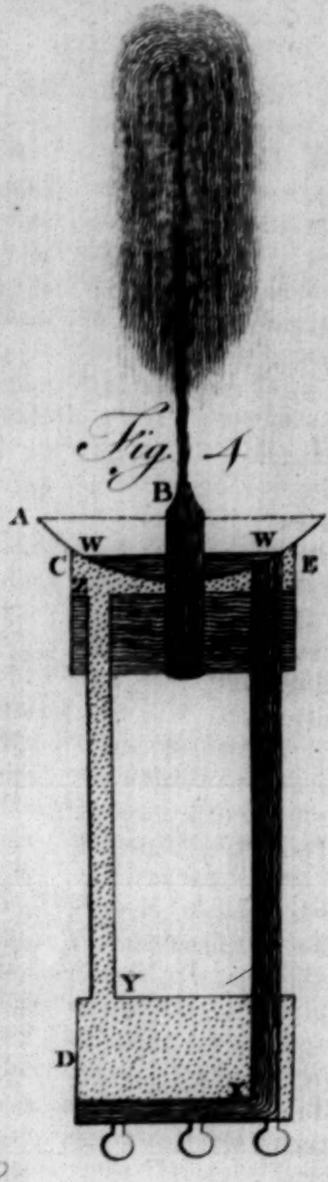

Fig. 5

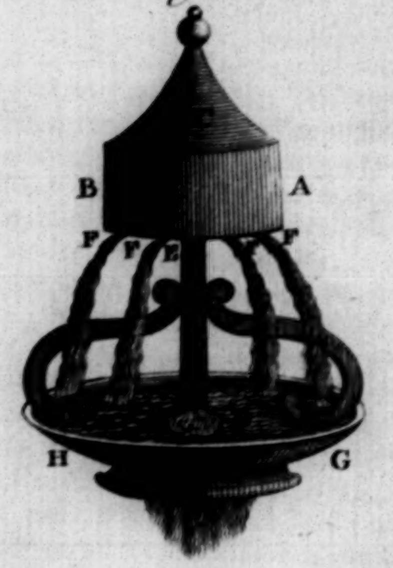

Fig. 6

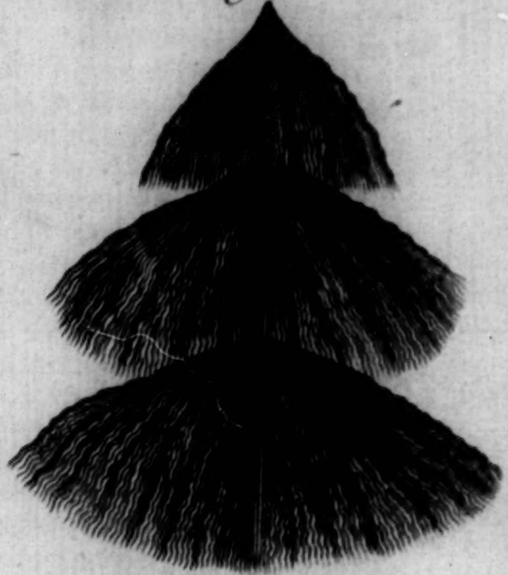

Fig. 7

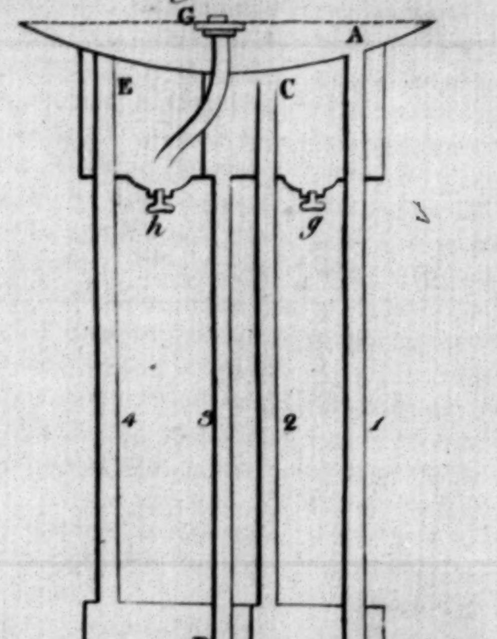
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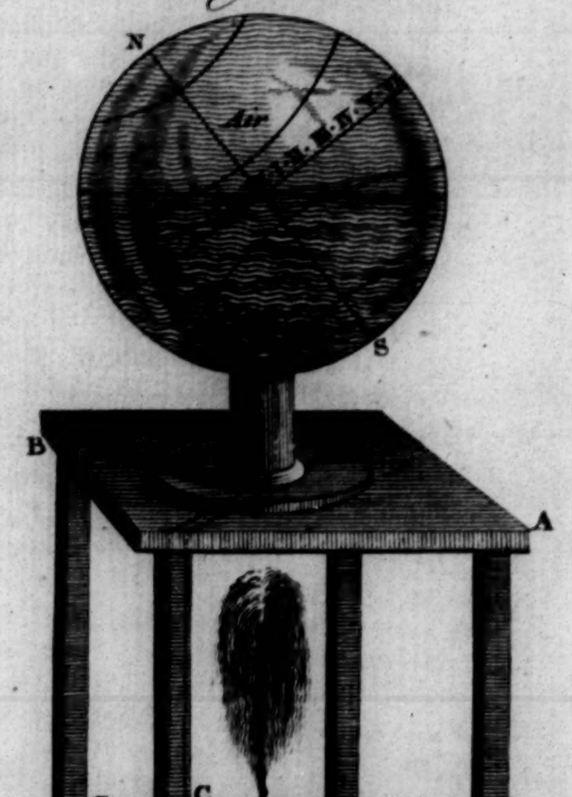
Fig. 8



Scot Philad.a

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ſeemed to anſwer my intention in a great meaſure; and though upon the whole it does not appear probable that ever this inſtrument will be made capable of ſuch an accurate agreement as the mercurial thermometers are, yet if we can reduce all the diſagreements of an hygrometer within $\frac{1}{20}$th part of the whole ſcale, it will probably be of uſe in ſome philoſophical inquiries, in lieu of inſtruments which have not yet been reduced to any common ſcale at all.

Plates CCXLVI. CCXLVII.

"Fig. 1. and 2. ABC is an orthographic delineation of the whole inſtrument ſeen in front in its true proportion. DE is that of the profile, or inſtrument ſeen edgewiſe. FG in both repreſents a flaxen cord about 35 inches long, ſuſpended by a turning peg F, and attached to a loop of braſs-wire at A, which goes down into the box cover H, and defends the index, &c. from injury; and by a glaſs expoſes the ſcale to view.

"Fig. 3. ſhows the inſtrument to a larger ſcale, the upright part being ſhortened, and the box-cover removed; in which the ſame letters repreſent the ſame parts as in the preceding figures; GI are two loops or long links of braſs-wire, which lay hold of the index KL, moveable upon a ſmall ſtud or centre K. The cord FG is kept moderately ſtrained by a weight M of about half a pound avoirdupois.—It is obvious, that, as the cord lengthens and ſhortens, the extreme end of the index riſes and falls, and ſucceſſively paſſes over N 2 the ſcale diſpoſed in the arch of a circle, and containing 100 equal diviſions. This ſcale is attached to the braſs ſliding ruler QP, which moves upon the directing piece RR, fixed by ſcrews to the board, which makes the frame or baſe of the whole; and the ſcale and ruler NQP is retained in any place nearer to or further from the centre K, as may be required by the ſcrew S.

"Fig. 4. repreſents in profile the ſliding piece and ſtud I. (fig. 3.), which traverſes upon that part of the index next the centre K; and which can, by the two ſcrews of the ſtud, be retained upon any part of the index that is made parallel; and which is done for three or four inches from the centre, for that purpoſe. The ſtud is filed to the edges, like the fulcrum of a ſcale-beam; one being formed on the under-ſide, the other on the upper, and as near as may be to one another. An hook formed at the lower end of the wire-loops CI, retains the index, by the lowermoſt edge of the ſtud; while the weight M hangs by a ſmall hook upon the upper edge: by theſe means the index is kept ſteady, and the cords ſtrained by the weight, with very little friction or burthen upon the central ſtud K.

"Fig 5. is a parallelogram of plate-braſs, to keep out duſt, which is attached to the upper edge of the box-cover H; and ſerves to ſhut the part of the box-cover neceſſarily cut away, to give leave for the wire GI to traverſe with the ſliding ſtud nearer to or further from the centre of the index K, and where, in fig. 5. *a* is an hole of about an inch diameter, for the wire GI to paſs through in the riſing and falling of the index freely without touching; *b* is a ſlit of a leſſer ſize, ſufficient to paſs the wire, and admit the cover to come off without deranging the cord or index; *cc* are two ſmall ſcrews applied to two ſlits, by which the plate ſlides lengthways, in order to adapt the hole *a* to the wire GI, at any place of the ſtud I upon the index KL.

"1. In this conſtruction, the index KL being 12 inches long, 4 inches from the extreme end are filed ſo narrow in the direction in which it is ſeen by the eye, that any part of theſe four inches lying over the diviſions of the ſcale, becomes an index thereto. The ſcale itſelf ſlides four inches, ſo as to be brought under any part of the four inches of the index attenuated as abovementioned.

"2. The poſition of the directing piece RR is ſo determined as to be parallel to a right line drawn thro' o upon the ſcale, and the centre K of the index; conſequently, as the attenuated part of the index forms a part of a radius or right line from the ſame centre, it follows, that whenever the index points to o upon the ſcale, though the ſcale is moved nearer to or further from the centre of the index, yet it produces no change in the place to which the index points.

"3. When the divided arch of the ſcale is at 10 inches from the centre (that is, at its mean diſtance); then the centre of the arch and the centre of the index are coincident. At other diſtances, the extremes of which are eight or twelve inches, the centre of the diviſions, and the centre of the index pointing thereto, not being coincident, the index cannot move over the ſpaces *geometrically* proportionable to one another in all ſituations of the ſcale; yet the whole ſcale not exceeding 30° of a circle, it will be found on computation, that the error can never be ſo great as $\frac{1}{100}$ part of the ſcale, or 1° of the hygrometer; which in this inſtrument being conſidered as indiviſible, the mechanical error will not be ſenſible.

"The cord here made uſe of is flax, and between $\frac{1}{20}$th and $\frac{1}{30}$th of an inch in diameter; which can be readily aſcertained by meaſuring a number of turns made round a pencil or ſmall ſtick. It is a ſort of cord uſed in London for making nets, and is of that particular kind called by net-makers *flaxen three-threads laid*. A competent quantity of this cord was boiled in one pound avoirdupois of water, in which was put two pennyweights troy of common ſalt; the whole was reduced by boiling to ſix ounces avoirdupois, which was done in about half an hour. As this aſcertains a given ſtrength of the brine, on taking out the cord, it may be ſuppoſed that every fibre of the cord is equally impregnated with ſalt. The cord being dried, it will be proper to ſtretch it; which may be done ſo as to prevent it from untwiſting, by tying three or four yards to two nails againſt a wall, in an horizontal poſition, and hanging a weight of a pound or two to the middle, ſo as to make it form an obtuſe angle. This done for a week or more in a room, will lay the fibres of the cord cloſe together, and prevent its ſtretching ſo faſt after being applied to the inſtrument as it would otherwiſe be apt to do.

"The hygrometer is to be adjuſted in the following manner. The box-cover, being taken off to prevent its being ſpoiled by the fire, and chooſing a day naturally dry, ſet the inſtrument nearly upright, about a yard from a moderate fire; ſo that the cord may become dry, and the inſtrument warm, but not ſo near as would ſpoil the fineſt linen by too much heat, and yet fully evaporate the moiſture; there let the inſtrument ſtay till the index is got as low as it will go;

now and then ſtroaking the cord betwixt the thumb and finger downwards, in order to lay the fibres thereof cloſe together; and thereby cauſing it to lengthen as much as poſſible. When the index is thus become ſtationary, which will generally happen in about an hour, more or leſs as the air is naturally more or leſs dry, by means of the peg at top raiſe or depreſs the index, till it lies over the point *o*. This done, remove the inſtrument from the fire; and having ready ſome warm water in a tea-cup, take a middling camel's hair pencil, and, dipping it in the water, gently anoint the cord till it will drink no more, and till the index becomes ſtationary and water will have no more effect upon it, which will alſo generally happen in about an hour. If in this ſtate the index lies over the degree marked 100, all is right: if not, ſlack the ſcrew S, and ſlide the ſcale nearer to or further from the centre, till the point 100 comes under the index, and then the inſtrument is adjuſted for uſe: but if the compaſs of the ſlide is not ſufficient to effect this, as may probably happen on the firſt adjuſtment, ſlack the proper ſcrews, and move the ſliding ſtud *I* nearer to or further from the centre of the index, according as the angle formed by the index between the two points of dry or wet happens to be too ſmall or too large for the ſcale."

On this principle, a ſimple hygrometer has been made by Mr Coventry of Southwark, London. It is not upon the moſt accurate conſtruction, yet will act very ſenſibly in the common changes of the air. Fig. 6. repreſents the hygrometer as applied to a wall or board. A is a ſtring of whip-cord, catgut, &c. of any length at pleaſure: it is ſuſpended on a bracket B, and kept extended by a weight at the bottom C. DD is a ſlip of wood, which with the bracket is fixed perpendicularly to a wall or ſide of a room. It has a ſtraight line E drawn down in the middle of the board, ſerving to point out the diviſions upon the edges of the two thin circular cards F and G. At the centre of the bottom of each of theſe cards is glued a piece of cork, through which the ſtring A is drawn: Theſe cork-pieces ſerve to preſerve the horizontal poſition of the cards. The upper card F is divided into 10 equal parts or diviſions, and the under card G into 100 equal parts; the ſtring A being meaſured into 10 equal parts, from the point of ſuſpenſion H to the ſurface of the lower card I. The card F is hung at the firſt part from H, and the card G at the 10th part from the ſame point: conſequently, from the twiſting and untwiſting of the ſtring A by the different changes of the air, the lower card G, from the mechanical principles of motion, will deſcribe 10 revolutions for one of the upper card F; or, when the lower card G has made one revolution, the upper card F will have deſcribed but the 10th part, or one of its diviſions. From whence it appears, that by the aſſiſtance of the upper card F, an index is thereby obtained of the number of revolutions the lower card G performs, which are reckoned by the line E on the ſlip of wood.

Example. It muſt firſt be obſerved what diviſion of the card F the line E is againſt, ſuppoſe 3, and alſo what diviſion of the lower card G is cut by the ſame line, ſuppoſe 10: it then appears, that the ſtate of the hygrometer is thus, 3 degrees and 10 hundredths of another. If the whole 10 diviſions of the card F have paſſed the line E, the lower card G will have revolved 10 times, or 10 hundred parts, equal to 1000; the accuracy to which the principle of this ſimple contrivance anſwers. Before uſe, the hygrometer ſhould be adjuſted; to do which, the cards F and G are firſt ſet to the line E at the 0 of each, or commencement of the graduations: whatever direction the cards afterwards take, it muſt evidently be from the change to greater moiſture or dryneſs in the air; and they will accordingly point it out.

On this principle, but with a degree of ingenuity and pains perhaps never before employed, an hygrometer has been conſtructed by M. de Sauſſure, profeſſor of philoſophy at Geneva. In his *Eſſais ſur l'Hygrometrie*, in 4to, 1783, is an important detail on the ſubject of *hygrometry*; from which the following deſcription of his hygrometer is taken. The author found by repeated experiments, that the difference between the greateſt extenſion and contraction of *a hair*, properly prepared, and that has a weight of about three grains ſuſpended to it, is nearly $\frac{1}{40}$ of its whole length; that is, $3\frac{1}{2}$, or $3\frac{2}{3}$ lines in a foot. This circumſtance ſuggeſted the idea of a new hygrometer: And, in order to render thoſe ſmall variations perceptible and uſeful, the following apparatus was conſtructed.

Fig. 7. is a repreſentation of the whole inſtrument, with the hair and other appendages complete. The lower extremity of the hair *a b* is held by the chaps of the ſcrew pincers *b*. Theſe pincers are repreſented aſide at B: by a ſcrew at its end, it faſtens into the nut of the bottom plate C. This nut of the plate turns independently of the piece that ſupports it, and ſerves to raiſe or depreſs the pincers B at pleaſure.

The upper extremity *a* of the hair is held by the under chaps of the double pincers *a*, repreſented aſide at A. Theſe pincers faſten the hair below, and above faſtens a very fine narrow ſlip of ſilver, carefully annealed, which rolls round the arbor or cylinder *d*, a ſeparate figure of which is ſhown at DF. This arbor, which carries the needle or index *e e*, or E in the ſeparate figure, is cut in the ſhape of a ſcrew; and the intervals of the threads of this ſcrew have their baſis flat, and are cut ſquarely ſo as to receive the ſlip of ſilver that is faſtened to the pincers *a*, and joined in this manner with the hair. M. Sauſſure obſerves, that hair alone fixed immediately to the arbor would not do; for it curled upon it, and acquired a ſtiffneſs that the counterpoiſe was not able to ſurmount. The arbor was cut in a ſcrew form, in order that the ſlip of ſilver in winding upon it ſhould not increaſe the diameter of the arbor, and never take a ſituation too oblique and variable. The ſlip is fixed to the arbor by a ſmall pin F. The other extremity of the arbor D is ſhaped like a pulley, flat at the bottom ſo as to receive a fine ſupple ſilken ſtring, to which is ſuſpended the counterpoiſe *g* in the large figure, and G in the ſide one. This counterpoiſe is applied to diſtend the hair; and acts in a contrary direction to that of the hair, and the moveable pincers to which the hair is fixed. If then the hair ſhould be loaded with the weight of four grains, the counterpoiſe muſt weigh four grains more than the pincers. The arbor at one end paſſes through the centre of the dial, and turns therein, in a very fine hole, on a pivot made very cylindrical and well poliſhed: at the other end is alſo a ſimilar pivot, which turns in an hole made in the end of the arm *h* of the cock *h i*, H I. This cock is fixed behind the dial by means of the ſcrew I.

The dial *k e e k*, divided into 360 degrees, is ſupported by two arms *l l*; theſe are ſoldered to two tubes. which incloſe the cylindrical columns *m m m m*. The ſetting ſcrews *n n* move upon theſe tubes, and ſerve thereby to fix the dial and arbor to any height required. The two columns which ſupport the dial are firmly faſtened to the caſe of the hygrometer, which reſt upon the four ſcrews *o o o o*; by the aſſiſtance of theſe ſcrews, the inſtrument is adjuſted, and placed in a vertical ſituation.

The ſquare column *p p*, which reſts upon the baſe of the hygrometer, carries a box *q*, to which is fixed a kind of port crayon *r*, the aperture of which is equal to the diameter of the counterpoiſe *g*. When the hygrometer is to be moved from one place to another; to prevent a derangement of the inſtrument from the oſcillations of the counterpoiſe, the box *q*, and the port-crayon *r*, muſt be raiſed up ſo as the counterpoiſe may fall into and be fixed in it, by tightening the ſcrew *s* and the box and counterpoiſe together by the ſcrew *t*. When the hygrometer is intended for uſe, the counterpoiſe muſt be diſengaged by lowering the box, as may be conceived from the figure.

Laſtly, at the top of the inſtrument is a curved piece of metal *x*, *y*, *z*, which is faſtened to the three columns juſt deſcribed, and keeps them together. It has a ſquare hole at *y*, which ſerves to hang up the hygrometer by when required.

The variations of which this hygrometer is capable, are (all things beſides equal) as much greater as the arbor round which the ſlip of ſilver winds is than a ſmaller diameter, and as the inſtrument is capable of receiving a longer hair. M. Sauſſure has had hygrometers made with hairs 14 inches long, but he finds one foot ſufficient. The arbor is three-fourths of a line in diameter at the baſe between the threads of the ſcrew or the part on which the ſlip winds. The variations, when a hair properly prepared is applied to it, are more than an entire circumference, the index deſcribing about 400 degrees in moving from extreme dryneſs to extreme humidity. M. Sauſſure mentions an inconvenience attending this hygrometer, *viz.* its not returning to the ſame point when moved from one place to another; becauſe the weight of three grains that keeps the ſilver ſlip extended, cannot play ſo exactly as to act always with the ſame preciſion againſt the arbor round which it winds. But this weight cannot be ſenſibly increaſed without ſtill greater inconveniences: he therefore obſerves, that this hygrometer is well calculated for a fixed ſituation in an obſervatory, and for various hygrometrical experiments; ſince, inſtead of the hair, there may be ſubſtituted any other ſubſtance of which a trial may be wanted; and it may be kept extended by a counterpoiſe more or leſs heavy as they may require: but the inſtrument will not admit of being moved, nor ſerve even for experiments which may ſubject it to agitation.

Portable hygrometer by M. Sauſſure.

To obviate the objection abovementioned, M. Sauſſure has contrived another apparatus more portable and convenient, and which, if not ſo extenſive in its variations, is in fact very firm, and not in the leaſt liable to be deranged by carriage and agitation. Fig. 8. is a repreſentation of this hygrometer, which he calls the *portable hygrometer*, in diſtinction from the preceding, which he calls the *great hygrometer* or the *hygrometer with the arbor*. The material part of this inſtrument is its index *a b c e*; an horizontal view of which, and the arm that carries it, is ſeen in the ſeparate figure GBDEF. This index carries in its centre D a thin tube hollow throughout, and projects out on each ſide of the needle. The axis which paſſes through it, and round which the index turns, is made thin in the middle of its length and thick at the ends; ſo that the cylindrical tube which it paſſes through touches it only at two points, and acts upon it only at its extremities.

The part *d e* DE of the index ſerves to point out and mark on the dial the degrees of moiſture and dryneſs; the oppoſite part *d b* DB ſerves to fix both the hair and counterpoiſe. This part, which terminates in a portion of a circle, and is about a line in thickneſs, is cut on its edge in a double vertical groove, which makes this part ſimilar to the ſegment of a pulley with a double neck. Theſe two grooves, which are portions of a circle of two lines radius, and have the ſame centre with that of the index *d*, ſerve in one of them to contain the hair, and in the other the ſilk, to the end of which the counterpoſe is ſuſpended. The ſame index carries vertically above and below its centre two ſmall ſcrew-pincers, ſituated oppoſite to the two grooves: that above at *a*, oppoſite to the hindmoſt groove, ſerves to fix the ſilk to which the counterpoiſe is ſuſpended; and that below at *b*, oppoſite to the hithermoſt groove, ſerves to hold one of the ends of the hair. Each of theſe grooves has its partitions cut, as ſeen in the ſection B, and its bottom made flat, in order that the hair and ſilk may have the greateſt freedom poſſible. The axis of the needle DD goes thro' the arm *g f* GF, and it is fixed to this arm by the tightening ſcrew *f* F. All the parts of the index ſhould be in perfect equilibrium about its centre; ſo that when it is on its pivot without the counterpoiſe, it will reſt indifferently in any poſition it may be placed in.

It muſt be underſtood, that when the hair is fixed by one of its extremities in the pincers *e*, and by the other end on the pincers *y* at top of the inſtrument, it paſſes in one of the necks of the double pulley *b*, whilſt the counterpoiſe to which the ſilk is fixed in *a* paſſes in the other neck of the ſame pulley: the counterpoiſe ſerves to keep the hair extended, and acts always in the ſame direction and with the ſame force, whatever the ſituation of the index may be. When therefore the dryneſs contracts the hair, it overpowers the gravity of the counterpoiſe, and the index deſcends: when, on the contrary, the humidity relaxes the hair, it gives way to the counterpoiſe, and the index aſcends. The counterpoiſe ſhould weigh but three grains; ſo that the index ſhould be made very light and very eaſy in its motion, in order that the leaſt poſſible force may move it, and bring it back again to its point when drawn aſide.

The dial *h e h* is a circular arch, the centre of which is the ſame with that of the index. This arch is divided into degrees of the ſame circle, or into the hundredths of the interval which is found between the limits of extreme dryneſs and extreme humidity. The interior edge of the dial carries at the diſtance *hi* a kind of projecting bridle or ſtay *i i*, made of braſs wire, curved to the arch, and fixed in the points *i i*. This bridle retains and guards the index, at the ſame time leaving it to play with the requiſite freedom. The ſcrew-pincers *y*, in which is faſtened the upper extremity of the hair, is carried by a moveable arm, which aſcends and deſcends at pleaſure the length of the frame KK. This frame is cylindrical every where elſe, except its being here flattened at the hinder part to about half its thickneſs, in order that the piece with the ſcrew which carries the arm ſhould not project out underneath, and that the arm may not turn. The arm may be ſtopped at any deſired height by means of the preſſing ſcrew *x*. But as it is of uſe ſometimes to be able to give the inſtrument a very ſmall and accurate motion, ſo as to bring the index exactly to the part that may be wanted, the ſlide piece *l*, which carries the pincers *y*, to which the hair is fixed, is to be moved by the adjuſting ſcrew *m*.

At the baſe of the inſtrument is a great lever *n o p q*, which ſerves to fix the index and its counterpoiſe when the hygrometer is to be moved. The lever turns an axis *n*, terminated by a ſcrew which goes into the frame; in tightening this ſcrew, the lever is fixed in the deſired poſition. When the motion of the index is to be ſtopped, the intended poſition is given to this lever, as repreſented in the dotted lines of the figure. The long neck *p* of the lever lays hold of the double pulley *b* of the index, and the ſhort neck *o* of the counterpoiſe: the tightening ſcrew *q* faſtens the two necks at once. In confining the index, it muſt be ſo placed, that the hair be very ſlack; ſo that, if whilſt it is moved the hair ſhould get dry, it may have room to contract itſelf. Afterwards, when the inſtrument is placed for uſe, the firſt thing to be done is to relax the ſcrew *n*, and turn back the double lever with great care, taking equal caution at the ſame time not to ſtrain the hair. It is better to apply one hand to the index near its centre, whilſt the other hand is diſengaging the pulley and the counterpoiſe from the lever that holds them ſteady. The hook *r* ſerves to ſuſpend a thermometer upon; it ſhould be a mercurial one, with a very ſmall naked bulb or ball, ſo as to ſhow in the moſt ſenſible manner the changes of the air: it ſhould be mounted in metal, and guarded in ſuch a manner as not to vibrate ſo as to break the hair. Laſtly, a notch is made under the top of the frame *ſ*, to mark the point of ſuſpenſion, about which the inſtrument is in equilibrium, and keeps a vertical ſituation.

All the inſtruments ſhould be made of braſs: though the axis of the index and its tube work more pleaſantly together if made of bell metal.

The extent of this hygrometer's variations is not more than the fourth or fifth part of the hygrometer with the arbor. It may be augmented by making the ſegment of the pulley to which the hair is fixed of a ſmaller diameter; but then the hair, in moving about it, would fret and contract a ſtiffneſs, which would cauſe it to adhere to the bottom of the neck. M. Sauſſure is of opinion, that the radius of this pulley ſhould not be leſs than two lines, at leaſt that there ſhould be adapted a plate of ſilver or ſome other contrivance; but then the hygrometer would be too difficult to conſtruct, and it would require too much attention and care on the part of thoſe who uſe it: his object was, to make an inſtrument generally uſeful, and eaſy and convenient in its uſe. The hygrometer with the arbor may be uſed for obſervations which require an extreme ſenſibility.

The variations of this inſtrument may be augmented by making it higher, becauſe in that caſe longer hairs might be adapted: but it would be then leſs portable. Beſides, if the hair is too long when obſervations are made in the open air, the wind has too great an effect upon it, and thus communicates to the index inconvenient vibrations. It is not proper therefore to make it more than a foot in height. When it is of this dimenſion, an hair properly prepared can be applied to it, and its variations from extreme dryneſs to extreme humidity are 80 or even 100 degrees; which on a circle of 3 inches radius forms an extent ſufficient for obſervations of this kind. M. Sauſſure has even made ſmaller inſtruments that may be carried conveniently in the pocket, and to make experiments with under ſmall receivers: they were but ſeven inches high by two inches of breadth; which, notwithſtanding their variations, were very ſenſible.

Thus much for the conſtruction of the various parts of the inſtrument. The limits of this work will not admit of our inſerting the whole of M. Sauſſure's ſubſequent account of the preparation of the hair, the manner of determining the limits of extreme humidity and of extreme dryneſs, the hydrometrical variations of the hair, and the graduation of the hygrometer. The following abſtract muſt therefore ſuffice.

In the preparation of the hair, it was found neceſſary to free it of a certain unctuoſity it always has in its natural ſtate, which in a great meaſure deprives it of its hygrometrical ſenſibility. A number of hairs are boiled in a lye of vegetable alkali; and among theſe are to be choſen for uſe ſuch as are moſt tranſparent, bright, and ſoft: particular precautions are neceſſary for preventing the ſtraining of the hair, which renders it unfit for the intended purpoſe.

The two fixed points of the hygrometer are the extremes both of moiſture and dryneſs. The former is obtained by expoſing the inſtrument to air completely ſaturated with water: and this is effected by placing it in a glaſs receiver ſtanding in water, the ſides of which are kept continually moiſtened. The point on the dial, at which the hand after a certain interval remains ſtationary, is marked 100. The point of extreme dryneſs, not abſolute dryneſs, for that does not exiſt, but the greateſt degree of it that can be obtained, is produced by introducing repeatedly into the ſame receiver containing the inſtrument, and ſtanding now upon quickſilver, certain quantities of deliqueſcent alkaline ſalts, which abſorb the moiſture of the air. The higheſt point to which the hand can be brought by this operation, not only when it will riſe no higher, but when it becomes retrograde from the dilatation occaſioned by heat, is called 0; and the arch between theſe two points is divided into 100 equal parts, being degrees of the hygrometer. The arch *pp*, upon which the ſcale is marked in the inſtrument (repreſented in fig. 2.) being part of a circle of three inches diameter; hence every degree meaſures about $\frac{1}{3}$ of a line. In the ſtationary hygrometer, fig. 1. the ſcale upon the complete circular dial is ſo much larger, that every degree meaſures about five lines: but this M. Sauſſure conſiders as ſo far from being a perfection, that itis rather an inconvenience; ſince the inſtrument, becomes thereby ſo very ſuſceptible of the leaſt impreſſion, that there is even no approaching it without a ſenſible variation. The thermometer, adapted as before mentioned, ſerves to correct the changes of temperature: towards the extreme dryneſs, 1° of the thermometer produces on the hair an effect of $\frac{1}{4}$ deg. of the hygrometer; but towards the extreme of moiſture, the ſame difference of temperature cauſes an effect no leſs than 3° on the hygrometer. He conſtructed two tables, that gave the intermediate hygrometrical variations for ſingle degrees of the thermometer at different parts of the ſcale.

The whole range of the atmoſpherical variations takes in about 75° of this ſcale; a dryneſs of more than 25° being always the effect of art. The ſenſibility of this inſtrument is ſo very great, that being expoſed to the dew, he mentions that it varies above 40° in about 20 minutes of time. Being removed from a very moiſt into a very dry air, it varied in one inſtance no leſs than 35° in three minutes. He ſays that its variations were always found uniform in different inſtruments ſuſpended in different parts of the ſame atmoſphere. This hygrometer is conſidered by the author as poſſeſſed of all the properties requiſite in ſuch an inſtrument. Theſe are, 1. That the degrees in the ſcale be ſufficiently large, and to point out even the leaſt variation in the dryneſs or moiſture of the atmoſphere. 2. That it be quick in its indications. 3. That it be at all times conſiſtent with itſelf; *viz.* that in the ſame ſtate of the hair it always points to the ſame degree. 4. That ſeveral of them agree with one another. 5. That it be affected only by the aqueous vapours. 6. That its variations be ever proportionate to the changes in the air.

Not many of theſe hydrometers have yet been made in London. A conſiderable degree of trouble and delicacy is requiſite in the preparation of the hair, and it is very fragile; circumſtances which may prevent it from coming into general uſe among common obſervers, although probably it may be the beſt in principle of any yet made.

II. On the ſecond general principle, namely, that of the ſwelling of ſolid bodies by moiſture, and their contraction by dryneſs, M. De Luc's inſtrument is the beſt. He makes choice of ivory fort he conſtruction of his hygrometer, becauſe he finds, that, being once wetted, ivory regularly ſwells by moiſture, and returns exactly to the ſame dimenſions when the moiſture is evaporated, which other bodies do not. This hygrometer is repreſented in fig. 9. where *a a b* is an ivory tube open at the end *a a*, and cloſe at *b*. It is made of a piece of ivory taken at the diſtance of ſome inches from the top of a pretty large elephant's tooth, and likewiſe at the ſame diſtance from its ſurface, and from the canal which reaches to that point. (This particular direction is given, that the texture of the ivory in all different hygrometers may be the ſame, which is of great importance.) This piece is to be bored exactly in the direction of its fibres; the hole muſt be very ſtraight, its dimenſions $2\frac{1}{4}$ lines in diameter, and 2 inches 8 lines in depth from *a a* to *c*. Its bore is then to be exactly filled with a braſs cylinder, which, however, muſt project ſomewhat beyond the ivory tube; and thus it is to be turned on a proper machine, till the thickneſs of the ivory is exactly $\frac{1}{40}$ of a line, except at the two extremities. At the bottom *b* the tube ends in a point; and at the top *a a* it muſt for about two lines be left a little thicker, to enable it to bear the preſſure of another piece put into it. Thus the thin or hygrometrical part of the tube will be reduced to $2\frac{1}{4}$ French inches, including the concavity of the bottom. Before this piece is uſed, it muſt be put into water, ſo that the external part alone may be wetted by it; and here it is to remain till the water penetrates to the inſide; and appears in the form of dew, which will happen in a few hours. The reaſon of this is, that the ivory tube remains ſomewhat larger ever after it is wetted the firſt time.

For this hygrometer, a glaſs tube muſt be provided about 14 inches long, the lower end of which is ſhown in *d d e e*. Its internal diameter is about $\frac{1}{4}$ of a line. If now the ivory tube is exactly filled with mercury, and the glaſs one affixed to it, as the capacity of the former decreaſes by being dried, the mercury will be forced up into the glaſs one.

The piece *f f g g* is intended to join the ivory with the glaſs tube. It is of braſs, ſhaped as in the figure. A cylindrical hole is bored through it, which holds the glaſs tube as tight as poſſible without danger of breaking it; and its lower part is to enter with ſome degree of difficulty into the ivory pipe. To hinder that part of the tube which incloſes the braſs piece from being affected by the variations of the moiſture, it is covered with a braſs verrel repreſented in *h h i i*. The pieces muſt be united together with gum-lac or maſtic.

The introduction of the mercury is the next operation. For this purpoſe, a ſlip of paper three inches wide is firſt to be rolled over the glaſs tube, and tied faſt to the extremity neareſt the ivory pipe. A horſe-hair is then to be introduced into the tube long enough to enter the ivory pipe by an inch, and to reach three or four inches beyond the extremity of the glaſs one. The paper which has been ſhaped round the tube muſt now be raiſed, and uſed as a funnel to pour the mercury into the inſtrument, which is held upright. The pureſt quickſilver is to be uſed for this purpoſe, and it will therefore be proper to uſe that revived from cinnabar. It eaſily runs into the tube; and the air eſcapes by means of the horſe-hair, aſſiſted with ſome gentle ſhakes. Freſh mercury muſt from time to time be ſupplied, to prevent the mercurial tube from being totally emptied; in which caſe, the mercurial pellicle which always forms by the contact of the air would run in along with it.

Some air-bubbles generally remain in the tube; they may be ſeen through the ivory pipe, which is thin enough to have ſome tranſparency. Theſe being collected together by ſhaking, muſt be brought to the top of the tube, and expelled by means of the horſe-hair. To facilitate this operation, ſome part of the mercury muſt be taken out of the tube, in order that the air may be leſs obſtructed in getting out, and the horſe-hair have a free motion to aſſiſt it. Air, however, cannot be entirely driven out in this manner. It is the weight of the mercury with which the tube is for that reaſon to be filled, which in time completes its expulſion, by making it paſs through the pores of the ivory. To haſten this, the hygrometers are put into a proper box. This is fixed nearly in a vertical direction to the ſaddle of a horſe, which is ſet a trotting for a few hours. The ſhakes ſometimes divide the column of mercury in the glaſs tube, but it is eaſily re united with the horſe-hair. When, upon ſhaking the hygrometer vertically, no ſmall tremulous motion is any longer perceived in the upper part of the column, one may be ſure that all the air is gone out.

The ſcale of this hygrometer may be adjuſted, as ſoon as the air is gone out, in the following manner. The inſtrument is to be ſuſpended in a veſſel of water cooled with ice, freſh quantities of which are to be added as the former melts. Here it is to remain till it has ſunk as low as it will ſink by the enlargement of the capacity of the ivory tube, owing to the moiſture it has imbibed. This uſually happens in ſeven or eight hours, and is to be carefully noted. In two or three hours the mercury begins to aſcend, becauſe the moiſture paſſes into the cavity, and forces it up. The loweſt ſtation of the mercury is then to be marked 0; and for the more accurate marking the degrees on the ſcale, M. de Luc always choſe to have his hygrometrical tube made of one which had formerly belonged to a thermometer. The reaſon of this is, that in the thermometer the expanſion of the mercury by heat had been already determined. The diſtance between the thermometrical points of melting ice and boiling water at 27 French inches of the barometer was found to be 1937 parts. The bulb of this preparatory thermometer was broke in a baſon, in order to receive carefully all the mercury that it contained. This being weighed in nice ſcales amounted to 1428 grains. The hygrometer contained 460 grains of the ſame mercury. Now it is plain, that the extent of the degrees on the hygrometer, ought to be to that of the degrees on the preparatory thermometer as the different weights of the mercury contained in each; conſequently 1428 : 460 : 1937 : 624 nearly; and therefore the correſponding intervals ought to follow the ſame proportion: and thus the length of a ſcale was obtained, which might be divided into as many parts as he pleaſed.

Fig. 10. is a repreſentation of De Luc's hygrometer when fully conſtructed. In elegance it far exceeds Smeaton's or any other, and probably alſo in accuracy; for by means of a ſmall thermometer fixed on the board along with it, the expanſion of the mercury by heat may be known with great accuracy, and of conſequence how much of the height of the mercury in the hygrometer is owing to that cauſe, and how much to the mere moiſture of the atmoſphere.

M. De Luc having continued his inquiries further into the modifications of the atmoſphere, mentions in his *Idée ſur la Météorologie* another hygrometer, which he finds to be the beſt adapted to the *meaſure* of local humidity. Of all the hygroſcopic ſubſtances he tried for this purpoſe, that which anſwers beſt is a ſlip of whalebone cut tranſverſely to the direction of the fibres, and made extremely thin; for on this depends its ſenſibility. A ſlip of 12 inches in length and a line in breadth, he has made ſo thin as to weigh only half a grain; and it may be made ſtill thinner, but is then of too great ſenſibility, being affected even by the approach of the obſerver. This ſlip is kept extended by a ſmall ſpring, and the variations in its length are meaſured by a vernier diviſion, or by, which is perhaps better, an index on a dial plate: the whole variation from extreme dryneſs to extreme moiſture is about $\frac{1}{8}$ of its length.

Theſe hygrometers are made by Mr Adams, and Mr W. Jones, London. The ſlip of whalebone is mounted in a frame very ſimilar to that belonging to M. Sauſſure's hygrometer before deſcribed (ſee fig. 7.) The only material difference is, that a ſmall concentric wire ſpring is uſed, inſtead of a counterpoiſe, to keep the ſlip of whalebone extended. M. Sauſſure had tried ſuch a ſpring applied to his hairs; but the weakeſt ſpring he found too ſtrong for the hair; and he was further apprehenſive, that the variations which the cold, heat, and the weather infallibly make, would ſuffer from the force of the ſprings.

M. de Luc, in the hygrometers he formerly made, as before deſcribed (made of ivory), had graduated them from one fixed point only, that of extreme *moiſture*, which is obtained by ſoaking them in water. He has now very ingeniouſly contrived to fix the other extreme, that of *dryneſs*: but this being producible only by means of ſtrong fires, ſuch as hygrometers cannot ſupport, he uſes an intermediate body, quicklime; which after having been deprived, by force of fire, of all its own humidity, has the property of ſlowly imbibing humidity again from the bodies in its neighbourhood; and whoſe capacity is ſuch, that all the vapour that can be contained in a quantity of air equal to its own bulk, can give it no ſenſible humidity. Theſe hygrometers, incloſed with a large quantity of freſh burnt lime in lumps, acquire in three weeks the ſame degree of dryneſs with the lime, which cannot differ ſenſibly from *extreme dryneſs*.

M. de Sauſſure makes choice of hairs, prepared by maceration in alkaline lye. M. de Luc ſhows that hairs, and all other animal or vegetable ſubſtances, taken *lengthwiſe*, or in the direction of their fibres, undergo *contrary* changes from different variations of humidity; that, when immerſed in water, they lengthen at firſt, and afterwards ſhorten; that when they are near the greateſt degree of humidity, if the moiſture is increaſed, they ſhorten themſelves; if it is diminiſhed, they lengthen themſelves firſt before they contract again. Theſe irregularities, which obviouſly render them incapable of being true meaſures of humidity, he ſhows to be the neceſſary conſequence of their organic reticular ſtructure.

M. de Sauſſure takes his point of extreme moiſture from the vapours of water under a glaſs bell, keeping the ſides of the bell continually moiſtened: and affirms, that the humidity is there conſtantly the ſame in all temperatures; the vapours even of *boiling* water having no more effect than thoſe of cold. M. de Luc ſhows, on the contrary, that the differences of humidity under the bell are very great, though M. Sauſſure's hygrometer was incapable of diſcovering them; and that the real undecompoſed vapour of boiling water has the directly oppoſite effect to that of cold, the effect of *extreme dryneſs*: and on this point he mentions an intereſting fact, communicated to him by Mr Watt, viz. that wood cannot be employed in the ſteam engine for any of thoſe parts where the vapour of the boiling water is confined, becauſe it dries ſo as to crack, juſt as if expoſed to the fire. In M. de Luc's work abovementioned there are ſtriking inſtances related, in which the imperfection of M. Sauſſure's hygrometer led him into falſe concluſions reſpecting phænomena, and into erroneous theories to account for them.

III. On the third principle, namely, the alteration of the weight of certain ſubſtances by their attracting the moiſture of the air, few attempts have been made, nor do they ſeem to have been attended with much ſucceſs. Sponges dipped in a ſolution of alkaline ſalts, and ſome kinds of paper, have been tried. Theſe are ſuſpended to one end of a very accurate balance, and counterpoiſed by weights at the other, and ſhow the degrees of moiſture or dryneſs by the aſcent or deſcent of one of the ends. But, beſides that ſuch kinds of hygrometers are deſtitute of any fixed point from whence to begin their ſcale, they have another inconvenience (from which indeed Smeaton's is not free, and which has been found to render it erroneous), namely, that all ſaline ſubſtances are deſtroyed by long continued expoſure to the air in very ſmall quantities, and therefore can only imbibe the moiſture for a certain time. Oil of vitriol has therefore been recommended in preference to the alkaline or neutral ſalts (ſee CHEMISTRY, nº 614); and, indeed, for ſuch as do not chuſe to be at the trouble of conſtructing a hygrometer on the principles of Mr Smeaton or De Luc, this will probably be found the moſt eaſy and accurate, Fig. 11. repreſents an hygrometer of this kind. A is a ſmall glaſs cup containing a ſmall quantity of oil of vitriol, B an index counterpoiſing it, and C the ſcale; where it is plain, that as the oil of vitriol attracts the moiſture of the air, the ſcale will deſcend, which will raiſe the index and *vice verſa*. This liquid is exceedingly ſenſible of the increaſe or decreaſe of moiſture. A ſingle grain, after its full increaſe, has varied its equilibrium ſo ſenſibly, that the tongue of a balance, only an inch and a half long, has deſcribed an arch one third of an inch in compaſs (which arch would have been almoſt three inches if the tongue had been one foot), even with ſo ſmall a quantity of liquor; conſequently, if more liquor, expanded under a large ſurface, were uſed, a pair of ſcales might afford as nice an hygrometer as any kind yet invented.—A great inconvenience, however, is, that as the air muſt have full acceſs to the liquid, it is impoſſible to keep out the duſt, which, by continually adding its weight, muſt render the hygrometer falſe; add to this, that even oil of vitriol itſelf is by time deſtroyed, and changes its nature, if a ſmall quantity of it is continually expoſed to the air.

The beſt hygrometer upon this principle, and for aſcertaining the quantity as well as the degree of moiſture in the variation of the hygrometer, is of the contrivance of Mr Coventry, Southwark, London. The account he has favoured us with is as follows. "Take two ſheets of fine tiſſue paper, ſuch as is uſed by hatters; dry them carefully at about two feet diſtance from a tolerably good fire, till after repeatedly weighing them in a good pair of ſcales no moiſture remains. When the ſheets are in this perfectly dry ſtate, reduce them to exactly 50 grains; the hygrometer is then fit for uſe. The ſheets muſt be kept free from duſt, and expoſed a few minutes in the open air; after which it may be always known by weighing them the exact quantity of moiſture they have imbibed.

"For many years the hygrometer has (ſays Mr Coventry) engroſſed a conſiderable ſhare of my attention; and every advantage propoſed by others, either as it reſpected the ſubſtances of which the inſtrument was compoſed, or the manner in which its operations were to be diſcerned, has been impartially examined. But (adds he) I have never ſeen an hygrometer ſo ſimple in itſelf, or that would act with ſuch certainty or ſo equally alike, as the one I have now deſcribed. The materials of which it is compoſed being thin, are eaſily deprived wholly of their moiſture; which is a circumſtance eſſentially neceſſary in fixing a *datum* from which to reckon, and which, I think, cannot be ſaid of any ſubſtance hitherto employed in the conſtruction of hygrometers: with equal facility they imbibe or impart the humidity of the atmoſphere, and ſhow with the greateſt exactneſs when the leaſt alteration takes place."

When the paper is prepared, as already deſcribed, it will ſerve, without the trouble of drying, as a ſtandard for any number of ſheets intended for the ſame purpoſe. But then the ſheets muſt be kept together in the open air for a few hours; becauſe whatever alteration may take place by this expoſure, the paper already weighed muſt have undergone the ſame; being conſequently in the ſame ſtate, they muſt be cut to the ſame weight,

For eaſier weighing the paper, take a piece of round tin or braſs the ſize of a crown-piece, through the centre of which drill a hole, and alſo three others round it at equal diſtances: then cut about one hundred papers; and after putting them under tin or braſs, drive through each hole a ſtrong pin into a board, in order to round them to the ſhape of the plate: the papers muſt be then ſeparated and expoſed to the air a few hours with that already weighed, and ſo many of them taken as are equal to the weight already ſpecified. This done, threadle them together through thoſe holes made by the pins, putting between every paper on each thread a ſmall bead, in order to prevent the papers from touching each other, and alſo that the air may be more readily admitted. The top of the hygrometer is covered with a card cut to the ſame ſize; and which, by reaſon of its ſtiffneſs, ſupports all the papers, and keeps them in proper ſhape. Before the papers are threaded, the beads, ſilk, card, and a thin piece of braſs about the ſize of a ſixpence, which muſt be placed at the bottom, and through which the centre ſtring paſſes, muſt be weighed with the greateſt exactneſs, in order to bring them to a certain weight, ſuppoſe 50 grains; now the paper in its drieſt ſtate being of equal weight, they will weigh together 100 grains, conſequently what they weigh more at any time is moiſture.

To obviate the trouble and difficulty of trying experiments with weights and ſcales, Mr Coventry contrived a machine or ſcale by which to determine at one view the humidity or dryneſs of the atmoſphere. This, with its caſe, is repreſented by fig. 12. The front and back of the caſe are glaſs; the ſides fine gauze, which excludes the duſt and admits the air;

the caſe is about 10 inches high, 8 inches broad, and 4 inches deep. A, braſs bracket in front, behind which, at about $3\frac{1}{4}$ inches diſtance, is another; theſe ſupport the axis of the index E, alſo of the beam D, and another which ſupports the ſtep B, to which the ivory ſcale of diviſions C is fixed. G, a braſs ſcale ſuſpended in the uſual manner to the end of a beam D, and weighing exactly 100 grains. This ſcale is an exact counterpoiſe to the papers *I* and the different apparatus. The particular manner of ſuſpenſion in this balance is, from the conſtruction, as follows: The axis of the beam *g*, which is made of braſs, inſtead of hanging on pivots as in common ſcales, turns with two ſteel edges *k k*, fixed in the extremities of the braſs axis: theſe edges are ſhaped like the edge of a knife, and act on two ſteel concave edges *l l*, in order to render the friction as ſmall as poſſible. D is a fine ſcale beam fixed at right angles with the axis *g*. E, the ſteel index fixed to the under ſide of the ſame axis. F, a braſs ſliding weight: *h* is the axis that holds the ſtem B to which the ſcale of diviſions C is fixed. AA, the braſs brackets which ſupport the whole by four ſcrews, two of which are ſeen at *ii*, that ſcrew the brackets to the top of the caſe. The axis of the ſcale of diviſions is hung on pivots, one of which is ſeen at *m*, that, ſhould the caſe not ſtand level, the ſtem B may always be in a perpendicular ſituation.

The hygrometer, before uſe, ſhould be adjuſted as follows: To the end of the beam where the hygrometer is ſuſpended, hang a weight of 100 grains, which is equal to the weight of the ſcale; then move the ſliding weight F up or down the index E, till one grain will cauſe the index to traverſe neither more nor leſs than the whole ſcale of diviſions; then add half a grain to the ſcale, in order to bring the index to 0; and the inſtrument, after taking off the 100 grain weight and hanging on the papers, is fit for uſe; then put grain weights in the ſcale till the index is brought within compaſs of the ſcale of diviſions. Example: H is 3 grains on the braſs ſcale, and the Index points at 10; conſequently there is 3 grains and 10 hundredths of a grain of moiſture in the papers. If four grain-weights are kept, *viz.* 1, 2, 4, and 5, they will make any number from 1 to 9, which are as many as will be wanted. Sometimes the index will continue traverſing within the ſcale of diviſions for many days without ſhifting the weights; but if otherwiſe, they muſt be changed as occaſion may require.

"One great advantage of this hygrometer above all others that have attracted my notice is (ſays Mr Coventry), that it acts from a certain *datum*, namely, the dry-extreme; from which all the variations towards moiſt are calculated with certainty: and if conſtructed with that preciſion repreſented by the drawing, it will afford pleaſure to the curious in obſerving the almoſt perpetual alteration of the atmoſphere, even in the moſt ſettled weather. In winter it will be conſtantly traverſing from about eight in the morning till four or five in the afternoon, towards *dry*; and in ſummer, from about four in the morning till ſix or ſeven in the evening, when the weather is hot and gloomy, the hygrometer diſcovers a very great change towards moiſture; and when clear and froſty, that it contains a much greater quantity of moiſture than is generally imagined."

HYGROSCOPE. The ſame with HYGROMETER.

HYLA (anc. geog.), a river of Myſia Minor, famous for Hylas the favourite boy of Hercules, who was carried down the ſtream and drowned. It is ſaid to run by Pruſa; whence it ſeems to be the ſame with the *Rhyndacus*, which runs northweſt into the Propontis.

HYLAS, in fabulous hiſtory, ſon of Theodamus, was raviſhed by the nymphs of a fountain as he was taking out ſome water for Hercules, by whom he was beloved.

HYLOZOISTS, formed of *υλη matter ζωη life*, the name of a ſect of atheiſts among the ancient Greek philoſophers, who held matter to be animated; maintaining that matter had ſome natural perception, without animal ſenſation, or reflection in itſelf conſidered; but that this imperfect life occaſioned that organization whence ſenſation and reflection afterwards aroſe. Of theſe ſome held only one life, which they called a PLASTIC nature, preſiding regularly and invariably over the whole corporeal univerſe, which they repreſented as a kind of large plant or vegetable: theſe were called the comoplaſtic and ſtoical atheiſts, becauſe the Stoics held ſuch a nature, though many of them ſuppoſed it to be the inſtrument of the Deity. Others thought that every particle of matter was endued with life, and made the mundane ſyſtem to depend upon a certain mixture of chance and plaſtic or orderly nature united together. Theſe were called the Stratonici, from Strato Lampſacenus, a diſciple of Theophraſtus, called alſo Phyſicus, (Cicero, De Nat. Deor, lib. i. cap. 13.) who was firſt a celebrated Peripatetic, and afterwards formed this new ſyſtem of atheiſm for himſelf. Beſides theſe two forms of atheiſm, ſome of the ancient philoſophers were Hylopathians, or ANAXIMANDRIANS, deriving all things from dead and ſtupid matter, in the way of qualities and forms, generable and corruptible; and others again adopted the ATOMICAL or Democritical ſyſtem, who aſcribe the production of the univerſe to atoms and figures. See on this ſubject *Cudworth's Intellectual Syſtem*, book i. chap. 3.

HYMEN, or HYMENÆUS, a fabulous divinity, the ſon of Bacchus and Venus Urania, was ſuppoſed by the ancients to preſide over marriages; and accordingly was invoked in epithalamiums, and other matrimonial ceremonies, under the formula, *Hymen*, or *Hymenæe!*

The poets generally crown this deity with a chaplet of roſes; and repreſent him, as it were, diſſolved and enervated with pleaſures; dreſſed in a yellow robe, and ſhoes of the ſame colour; with a torch in his hand.—Catullus, in one of his epigrams, addreſſes him thus:

Cinge tempora floribus,
Suaveolentis amaraci.

It was for this reaſon, that the new-married couple bore garlands of flowers on the wedding-day: which cuſtom alſo obtained among the Hebrews, and even among Chriſtians, during the firſt ages of the church, as appears from Tertullian, *De corona militari*, where he ſays, *Coronant & nuptæ ſponſos.*—S. Chryſoſtom likewiſe mentions theſe crowns of flowers; and to this day the Greeks call marriage *στεφανωμα*, in reſpect of this crown or garland.

Fig. 4.

Fig. 3.

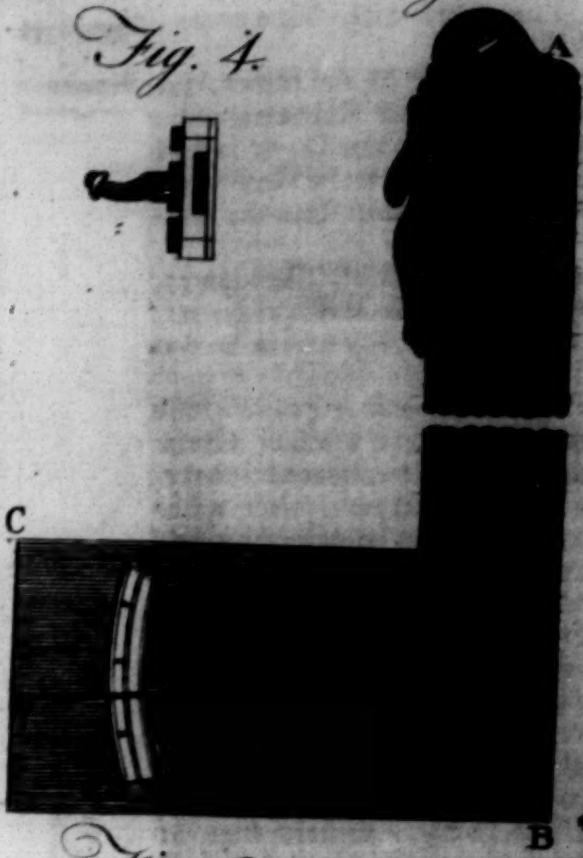

Fig. 1.

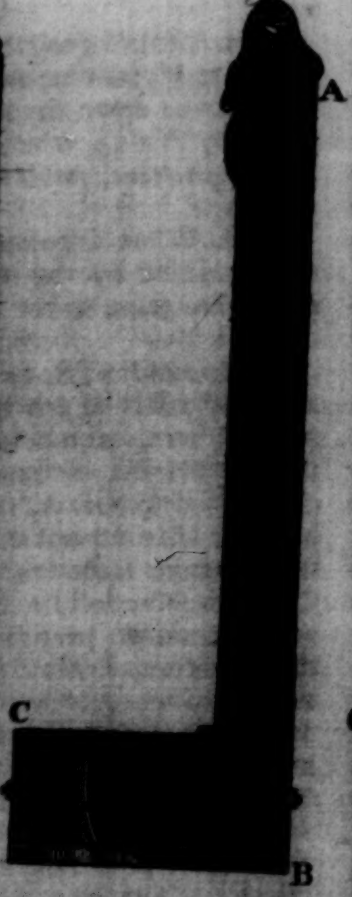

Fig. 2.

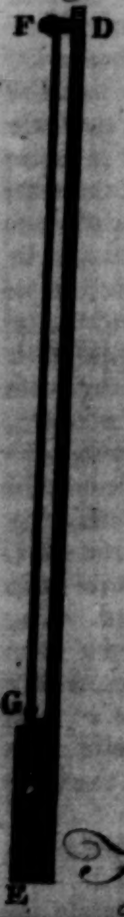

Fig. 9.

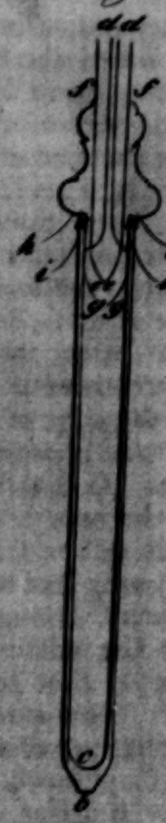
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Fig. 5.

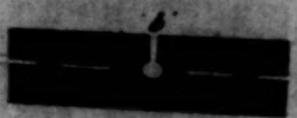


Fig. 11.

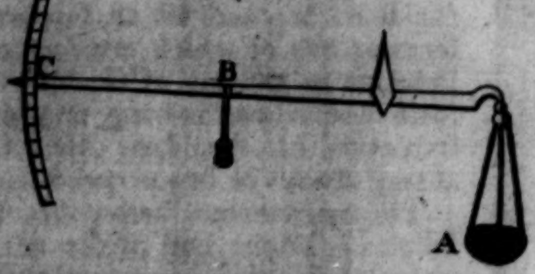


Fig. 6.

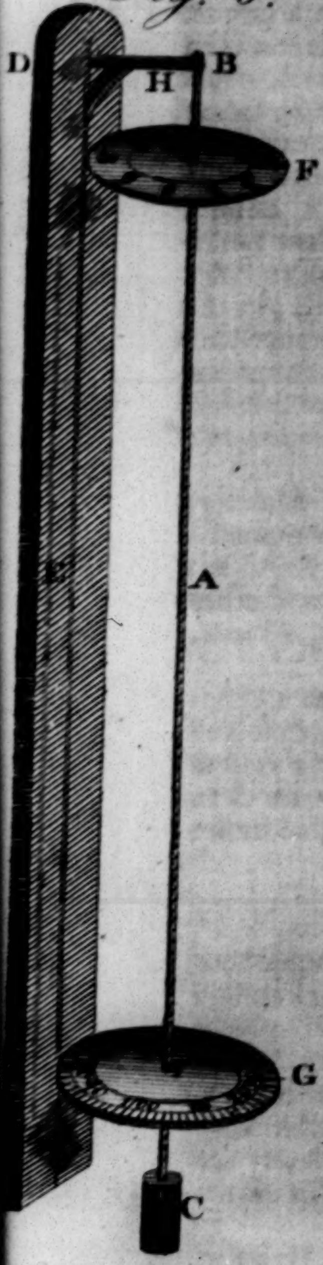
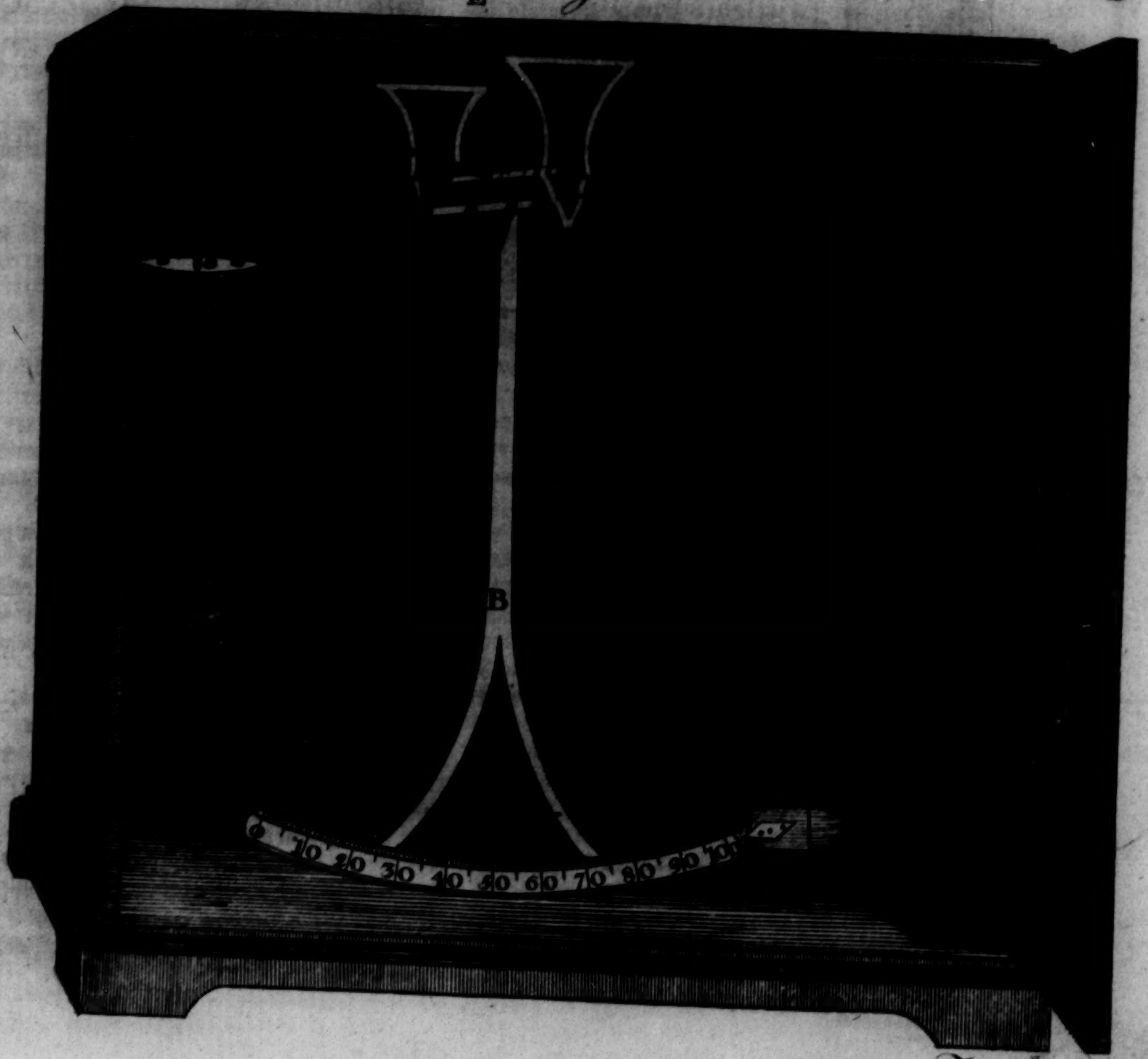


Fig. 12.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Trenchard Sculp.

BRITISH MUSEUM

HYGROMETER.

Plate CCXLVII.

Fig. 8.

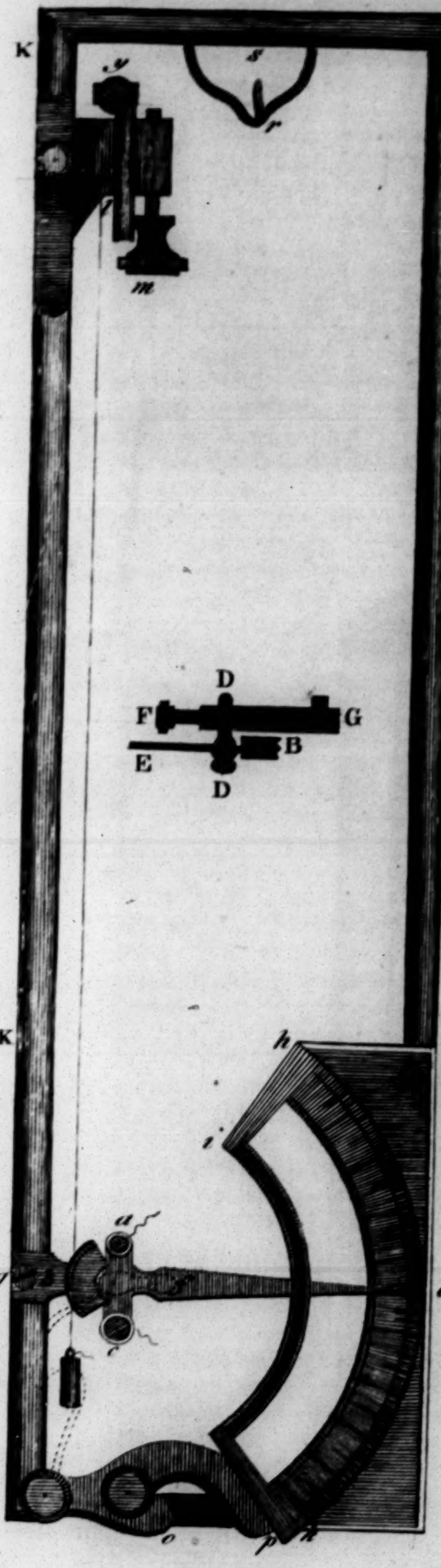
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Fig. 7.

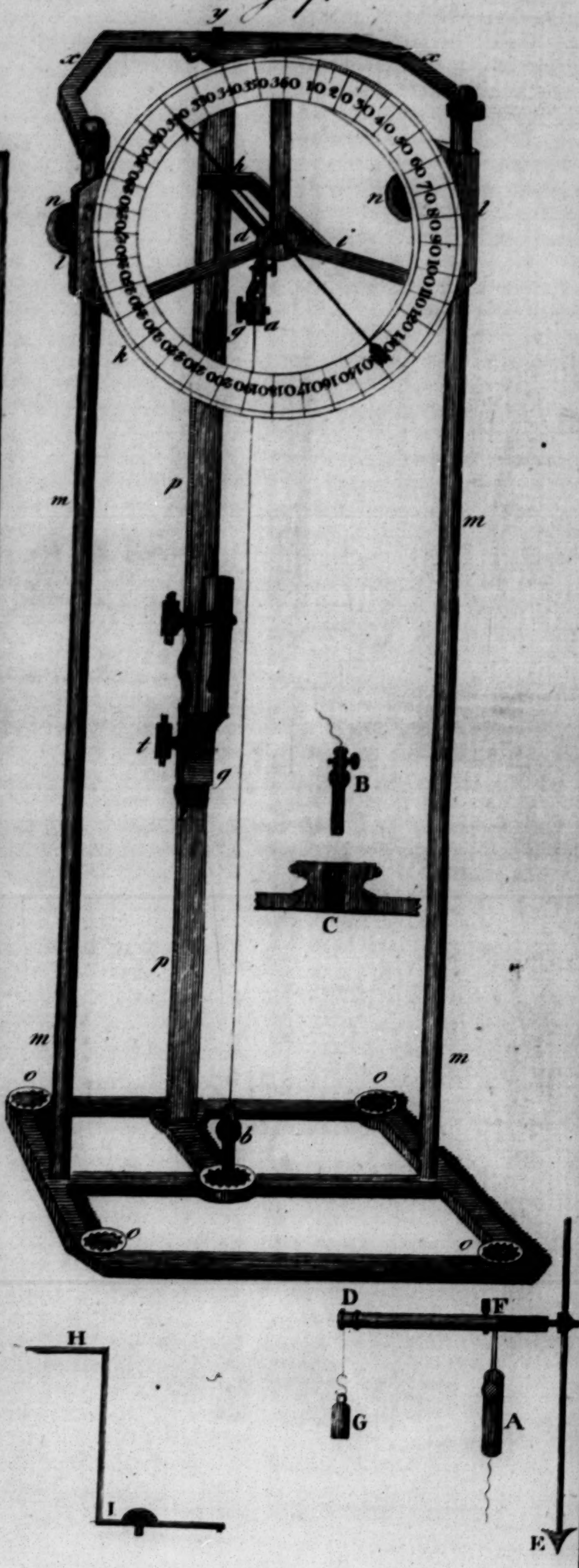
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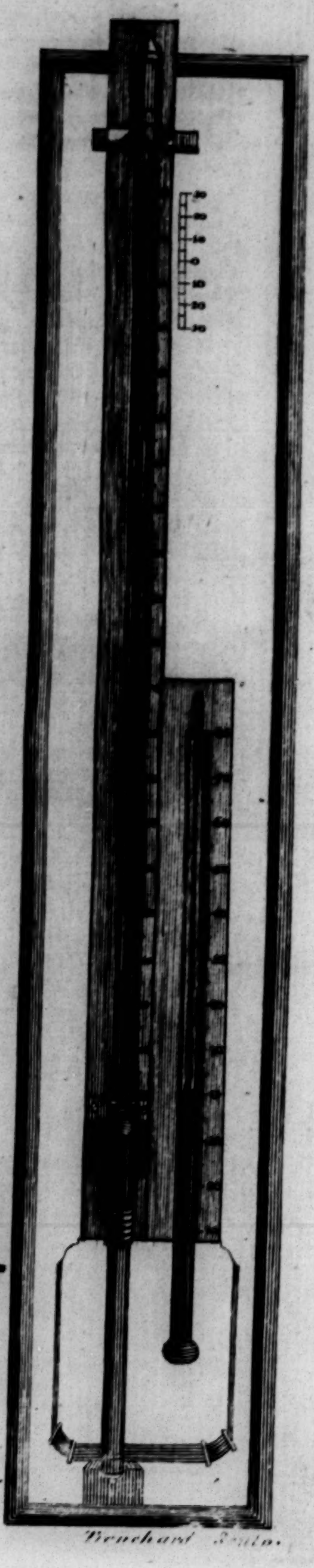
Fig. 10.



Benchart Sculp.

BRITISH MUSEUM

Hymen, Υμην, in anatomy, a thin membrane or ſkin, ſometimes circular, of different breadths, more or leſs ſmooth, and ſometimes ſemilunar, formed by the union of the internal membrane of the great canal with that on the inſide of the alæ, reſembling a piece of fine parchment. This membrane is ſuppoſed to be ſtretched in the neck of the womb of virgins, below the nymphæ, leaving in ſome ſubjects a very ſmall opening, in others a larger, and in all rendering the external orifice narrower than the reſt of the cavity, and to be broke when they are deflowered; an effuſion of blood following the breach.

This membranous circle may likewiſe ſuffer ſome diſorder by too great a flux of the menſes, by imprudence, levity, and other particular accidents.

The hymen is generally looked upon as the teſt of virginity; and when broke, or withdrawn, ſhows that the perſon is not in a ſtate of innocence. This notion is very ancient. Among the Hebrews, it was the cuſtom for the parents to ſave the blood ſhed on this occaſion as a token of the virginity of their daughter, and to ſend the ſheets the next day to the huſband's relations. And the like is ſaid to be ſtill practiſed in Portugal, and ſome other countries.

And yet authors are not agreed as to the exiſtence of ſuch a membrane. Nothing, Dr Drake obſerves, has employed the curioſity of anatomiſts, in diſſecting the organs of generation in women, more than this part: they have differed not only as to its figure, ſubſtance, place, and perforation, but even its reality; ſome poſitively affirming, and others flatly denying it.

De Graaf himſelf, the moſt accurate inquirer into the ſtructure of theſe organs, confeſſes he always ſought it in vain, though in the moſt unſuſpected ſubjects and ages: all he could find was, a different degree of ſtraitneſs or wideneſs, and different corrugations, which were greater or leſs according to the reſpective ages; the aperture being ſtill the leſs, and the rugoſities the greater, as the ſubject was younger and more untouched.

Dr Drake, on the other hand, declares, that in all the ſubjects he had opportunity to examine, he does not remember to have miſſed the hymen ſo much as once, where he had reaſon to depend on finding it. The faireſt view he ever had of it was in a maid who died at thirty years of age; in this he found it a membrane of ſome ſtrength, furniſhed with fleſhy fibres, in figure round, and perforated in the middle with a ſmall hole, capable of admitting the end of a woman's little finger, and ſituated a little above the orifice of the urinary paſſage, at the entrance of the vagina of the womb.

In infants, it is a fine thin membrane, not very conſpicuous, becauſe of the natural ſtraitneſs of the paſſage itſelf, which does not admit of any great expanſion in ſo little room; which might lead De Graaf into a notion of its being no more than a corrugation.

This membrane, like moſt others, does probably grow more diſtinct, as well as firm, by age. That it not only exiſts, but is ſometimes very ſtrong and impervious, may be collected from the hiſtory of a caſe reported by Mr Cowper. In a married woman, twenty years of age, whoſe hymen was found altogether impervious, ſo as to detain the menſes, and to be driven out by the preſſure thereof beyond the labia of the pudendum, not unlike a prolapſus of the uterus; on dividing it, at leaſt a gallon of grumous blood came forth. It ſeems the huſband, being denied a paſſage that way, had found another through the meatus urinarius; which was found very open, and its ſides extruded like the anus of a cock.

Upon a rupture of the hymen, after the conſummation of marriage, and eſpecially delivery, its parts, ſhrinking up, are ſuppoſed to form thoſe little fleſhy knots, called *carunculæ myrtiformes*.

HYMENÆA, the bastard locust tree: A genus of the monogynia order, belonging to the decandria claſs of plants; and in the natural method ranking under the 33d order, *Lomentaceæ*. The calyx is quinquepartite; there are five petals, nearly equal; the ſtyle is intorted; the legumen full of meally pulp. There is but one ſpecies, the courbaril, which is a large tree, growing naturally in the Spaniſh Weſt Indies. The trunk is covered with a light aſh coloured bark, is often more than 60 feet high and three in diameter. The branches are furniſhed with dark green leaves, which ſtand by pairs on one common footſtalk, diverging from their baſe in manner of a pair of ſhears when opened. The flowers come out in looſe ſpikes at the ends of the branches, and are yellow, ſtriped with purple. Each conſiſts of five petals, placed in a double calyx, the outer leaf of which is divided into five parts, and the inner one is cut into five teeth at its brim. In the centre are ten declining ſtamina, longer than the petals, ſurrounding an oblong germen, which becomes a thick, fleſhy, brown pod, four or five inches long and one broad, with a ſuture on both edges, and includes three or four purpliſh ſeeds, ſomewhat of the ſhape of Windſor beans, but ſmaller. The ſeeds are covered with a light brown ſugary ſubſtance, which the Indians ſcrape off and eat with great avidity, and which is very pleaſant and agreeable.—At the principal roots under ground, is found collected in large lumps a yellowiſh-red tranſparent gum, which diſſolved in rectified ſpirit of wine affords a moſt excellent varniſh, and is the gum anime of the ſhops.

HYMENÆAL, ſomething belonging to marriage; ſo called from Hymen,

HYMENOPTERA (derived from *υμην membrane*, and *πτερον wing*), in the Linnæan ſyſtem of natural hiſtory, is an order of inſects, having four membranaceous wings, and the tails of the females are furniſhed with ſtings, which in ſome are uſed for inſtilling poiſon, and in others for merely piercing the bark and leaves of trees, and the bodies of other animals, in which they depoſit their eggs.

HYMETTUS (anc. geog.), a mountain of Attica near Athens, famous for its marble quarries, and for its excellent honey. *Hymettius* the epithet. Pliny ſays that the orator Craſſus was the firſt who had marble columns from this place.

HYMN, a ſong or ode in honour of God; or a poem, proper to be ſung, compoſed in honour of ſome deity.—The word is Greek, *υμνος hymn*, formed of the verb *υδω celebro*, "I celebrate."—Iſiodore, on this word, remarks, that *hymn* is properly a ſong of joy, full of the praiſes of God: by which, according to him, it is diſtinguiſhed from *threna*, which is a mourning ſong, full of lamentation.

St Hilary, biſhop of Poictiers, is ſaid to have been the firſt that compoſed hymns to be ſung in churches, and was followed by St Ambroſe. Moſt of thoſe in the Roman Breviary were compoſed by Prudentius. They have been tranſlated into French verſe by Meſſieurs de Port Royal.—In the Greek Liturgy there are four kinds of hymns; but the word is not taken in the ſenſe of a praiſe offered in verſe, but ſimply of a laud or praiſe. The angelic hymn, or *Gloria in excelſis*, makes the firſt kind; the *triſagion* the ſecond; the *Cherubic hymn*, the third; and the hymn of *victory* and *triumph* called επινικιος, the laſt.

The hymns or odes of the ancients generally conſiſted of three ſorts of ſtanzas; one of which, called *ſtrophè*, was ſung by the band as they walked from eaſt to weſt; another, called *antiſtrophè*, was performed as they returned from weſt to eaſt; the third part, or *epode*, was ſung before the altar. The Jewiſh hymns were accompanied with trumpets, drums, and cymbals, to aſſiſt the voices of the Levites and people.

HYOBANCHE, in botany: A genus of the angioſpermia order, belonging to the didynamia claſs of plants The calyx is heptaphyllous; the corolla ringent, with no under lip. The capſule bilocular, and polyſpermous.

HYOIDES, in anatomy, a bone placed at the root of the tongue. See ANATOMY, n° 28.

HYOSCYAMUS, HENBANE: A genus of the monogynia order, belonging to the pentandria claſs of plants; and in the natural method ranking under the 28th order, *Luridæ*. The corolla is funnel-ſhaped and obtuſe; the ſtamina inclining to one ſide; the capſule covered and bilocular. There are ſeveral ſpecies, one of which, *viz.* the niger, or common henbane, is a native of Britain. It grows on road-ſides, and among rubbiſh. It is a biennial plant, with long fleſhy roots which ſtrike deep into the ground, ſending out ſeveral large ſoft leaves, deeply ſlaſhed on their edges; the following ſpring the ſtalks came up, which are about two feet high, garniſhed with flowers ſtanding on one ſide in a double row, ſitting cloſe to the ſtalks alternately. They are of a dark purpliſh colour, with a black bottom; and are ſucceeded by roundiſh capſules which open with a lid at the top, and have two cells filled with ſmall irregular ſeeds.—The ſeeds, leaves, and roots of this plant, as well as of all other ſpecies of this genus, are poiſonous: and many well atteſted inſtances of their bad effects are recorded; madneſs, convulſions, and death, being the common conſequence. In a ſmaller doſe, they occaſion giddineſs and ſtupor. It is ſaid that the leaves ſcattered about a houſe will drive away mice.—The juice of the plant evaporated to an extract is preſcribed in ſome caſes as a narcotic; in which reſpect undoubtedly it may be a powerful medicine if properly managed. The doſe is from half a ſcruple to half a dram. The roots are uſed for anodyne necklaces.—Goats are not fond of the plant; horſes, cows, ſheep, and ſwine, refuſe it.

HYOSERIS, in botany: A genus of the polygamia æqualis order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is naked, the calyx nearly equal; the pappus hairy, or ſcarce perceptible.

HYO-THYROIDES, in anatomy, one of the muſcles belonging to the os hyoides. See ANATOMY, *Table of the Muſcles*.

HYPALLAGE, among grammarians, a ſpecies of hyperbaton, conſiſting in a mutual permutation of one caſe for another. Thus Virgil ſays, *Dare claſſibus auſtros*, for *dare claſſes auſtris*; and again, *Necdum illis labra admovi*, for *necdum illa labris admovi*.

HYPANTE, or HYPERPANTE, a name given by the Greeks to the feaſt of the preſentation of Jeſus in the temple.—This word, which ſignifies *lowly* or *humble meeting*, was given to this feaſt from the meeting of old Simeon and Anna the propheteſs in the temple when Jeſus was brought thither.

HYPATIA, a learned and beautiful lady of antiquity, the daughter of Theon a celebrated philoſopher and mathematician, and preſident of the famous Alexandrian ſchool, was born at Alexandria about the end of the fourth century. Her father, encouraged by her extraordinary genius, had her not only educated in all the ordinary qualifications of her ſex, but inſtructed in the moſt abſtruſe ſciences. She made ſuch great progreſs in philoſophy, geometry, aſtronomy, and the mathematics, that ſhe paſſed for the moſt learned perſon of her time. At length ſhe was thought worthy to ſucceed her father in that diſtinguiſhed and important employment, the government of the ſchool of Alexandria; and to teach out of that chair where Ammonius, Hierocles, and many other great men, had taught before; and this at a time too when men of great learning abounded both at Alexandria and in many other parts of the Roman empire. Her fame was ſo extenſive, and her worth ſo univerſally acknowledged, that we cannot wonder if ſhe had a crowded auditory. "She explained to her hearers (ſays Socrates) the ſeveral ſciences that go under the general name of philoſophy; for which reaſon there was a confluence to her, from all parts, of thoſe who made philoſophy their delight and ſtudy." One cannot repreſent to himſelf without pleaſure, the flower of all the youth of Europe, Aſia, and Africa, ſitting at the feet of a very beautiful lady (for ſuch we are aſſured Hypatia was), all greedily ſwallowing inſtruction from her mouth, and many of them, doubtleſs, love from her eyes; though we are not ſure that ſhe ever liſtened to any ſolicitations, ſince Suidas, who talks of her marriage with Iſidorus, yet relates at the ſame time that ſhe died a maid.

Her ſcholars were as eminent as they were numerous; one of whom was the celebrated Syneſius, who was afterwards biſhop of Ptolemais. This ancient Chriſtian Platoniſt every where bears the ſtrongeſt, as well as the moſt grateful, teſtimony of the virtue of his tutoreſs; and never mentions her without the moſt profound reſpect, and ſometimes in terms of affection coming little ſhort of adoration. But it was not Syneſius only, and the diſciples of the Alexandrian ſchool, who admired Hypatia for her virtue and learning: never was woman more careſſed by the public, and yet never woman had a more unſpotted character. She was held as an oracle for her wiſdom, which made her conſulted by the magiſtrates in all important caſes; and this frequently drew her among the greateſt concourſe of men, without the leaſt cenſure of her manners. In a word, when Nicephorus intended to paſs the higheſt compliment on the princeſs Eudocia, he thought he could not do it better than by calling her another *Hypatia*.

While Hypatia thus reigned the brigheſt ornament of Alexandria, Oreſtes was governor of the ſame place for the emperor Theodoſius, and Cyril was biſhop or patriarch. Oreſtes having had a liberal education, could not but admire Hypatia; and as a wiſe governor frequently conſulted her. This, together with an averſion which Cyril had againſt Oreſtes, proved fatal to the lady. About 500 monks aſſembling, attacked the governor one day, and would have killed him, had he not been reſcued by the townſmen; and the reſpect which Oreſtes had for Hypatia cauſing her to be traduced among the Chriſtian multitude, they dragged her from her chair, tore her to pieces and burned her limbs. Cyril is not clear from a ſuſpicion of fomenting this tragedy. Cave indeed endeavours to remove the imputation of ſuch an horrid action from the patriarch; and lays it upon the Alexandrian mob in general, whom he calls *leviſſimum hominum genus*, "a very trifling inconſtant people." But though Cyril ſhould be allowed neither to have been the perpetrator, nor even the contriver of it, yet it is much to be ſuſpected that he did not diſcountenance it in the manner he ought to have done: which ſuſpicion muſt needs be greatly confirmed by reflecting, that he was ſo far from blaming the outrage committed by the monks upon Oreſtes, that he afterwards received the dead body of Ammonius, one of the moſt forward in that outrage, who had grievouſly wounded the governor, and who was juſtly puniſhed with death. Upon this riotous ruffian Cyril made a panegyric in the church where he was laid, in which he extolled his courage and conſtancy, as one that had contended for the truth; and changing his name to *Thaumaſius*, or the "Admirable," ordered him to be conſidered as a martyr. "However, (continues Socrates), the wiſeſt part of Chriſtians did not approve the zeal which Cyril ſhowed on this man's behalf, being convinced that Ammonius had juſtly ſuffered for his deſperate attempt."

HYPECOUM, WILD CUMIN: A genus of the digyia order, belonging to the tetrandria claſs of plants; and in the natural method ranking under the 24th order, *Corydales*. The calyx is diphyllous; the petals four; the exterior two larger and trifid: the fruit a pod. There are four ſpecies, all of them low herbaceous plants with yellow flowers. The juice of theſe plants is of a yellow colour, reſembling that of celandine, and is affirmed by ſome eminent phyſicians to be as narcotic as opium. From the nectarium of the bloſſom the bees collect great quantities of honey. All the ſpecies are eaſily propagated by ſeeds.

HYPER, a Greek prepoſition frequently uſed in compoſition, where it denotes exceſs; its literal ſignification being *above* or *beyond*.

HYPERBATON, in grammar, a figurative conſtruction inverting the natural and proper order of words and ſentences. The ſeveral ſpecies of the hyperbaton are, the anaſtrophe, the hyſteron-proteron, the hypallage, ſynchyſis, tmeſis, parentheſis, and the hyperbaton ſtrictly ſo called. See ANASTROPHE, &c.

HYPERBATON, ſtrictly ſo called, is a long retention of the verb which completes the ſentence, as in the following example from Virgil:

Interea Reges: ingenti mole Latinus
Quadrijugo vehitur curru, cui tempora circum
Aurati bis ſex radii fulgentia cingunt,
Solis avi ſpecimen: bigis it Turnus in albis,
Bina manu lato criſpans haſtilia ferro:
Hincpater Æneas, Romanæ ſtirpis origo,
Sidero flagrans clypeo et celeſtibus armis;
Et juxta Aſcanius, magnæ ſpes altera Romæ:
Procedunt caſtris. *Æneid.* xii. 160.

HYPERBOLA, a curve formed by cutting a cone in a direction parallel to its axis. See CONIC-*Sections*.

HYPERBOLE, in rhetoric, a figure, whereby the truth and reality of things are exceſſively either enlarged or diminiſhed. See ORATORY, nº 58.

Elements of Criticiſm.

An object uncommon with reſpect to ſize, either very great of its kind or very little, ſtrikes us with ſurpriſe; and this emotion forces upon the mind a momentary conviction that the object is greater or leſs than it is in reality: the ſame effect, preciſely, attends figurative grandeur or littleneſs; and hence the hyperbole, which expreſſes this momentary conviction. A writer, taking advantage of this natural deluſion, enriches his deſcription greatly by the hyperbole: and the reader, even in his cooleſt moments, reliſhes this figure, being ſenſible that it is the operation of nature upon a warm fancy.

It cannot have eſcaped obſervation that a writer is generally more ſucceſsful in magnifying by a hyperbole than in diminiſhing. The reaſon is, that a minute object contracts the mind, and fetters its powers of imagination; but that the mind, dilated and inflamed with a grand object, moulds objects for its gratification with great facility. Longinus, with reſpect to a diminiſhing hyperbole, cites the following ludicrous thought from a comic poet: "He was owner of a bit of ground not larger than a Lacedemonian letter.' But, for the reaſon now given, the hyperbole has by far the greater force in magnifying objects; of which take the following examples:

For all the land which thou ſeeſt, to thee will I give it, and to thy ſeed for ever. And I will make thy ſeed as the duſt of the earth: ſo that if a man can number the duſt of the earth, then ſhall thy ſeed alſo be numbered. *Gen.* xiii. 15. 16.

Illa vel intactæ ſegetis per ſumma volaret
Gramina: nec teneras curſu læſiſſet ariſtas.
Æneid. vii. 808.

———Atque imo barathri ter gurgite vaſtos
Sorbet in abruptum fluctus, rurſuſque ſub auras
Erigit alternos, et ſidera verberat unda.
Æneid. iii. 421.

———Horrificis juxta tonat Ætna ruinis,
Interdumque atram prorumpit ad æthera nubem,
Turbine fumantem piceo et candente favilla:
Attollitque globos flammarum, et ſidera lambit.'
Æneid. iii. 571.

Speaking of Polyphemus,

———Ipſe arduus, altaque pulſat
Sidera. *Æneid.* iii. 619.

Hyperbole.

——————When he ſpeaks,
The air, a charter'd libertine, is ſtill.
Henry V. *act* 1. *ſc.* 1.

Now ſhield with ſhield, with helmet helmet cloſ'd,
To armour armour; lance to lance oppoſ'd,
Hoſt againſt hoſt with ſhadowy ſquadrons drew,
The ſounding darts in iron tempeſts flew,
Victors and vanquiſh'd join promiſcuous cries,
And ſhrilling ſhouts and dying groans ariſe;
With ſtreaming blood the ſlipp'ry fields are dy'd,
And ſlaughter'd heroes ſwell the dreadful tide.
Iliad iv. 508.

Quintilian is ſenſible that this figure is natural; "For (ſays he), not contented with truth, we naturally incline to augment or diminiſh beyond it: and for that reaſon the hyperbole is familiar even among the vulgar and illiterate:" and he adds, very juſtly, "That the hyperbole is then proper, when the object of itſelf exceeds the common meaſure." From theſe premiſes, one would not expect the following inference, the only reaſon he can find for juſtifying this figure of ſpeech, "Conceditur enim amplius dicere, quia dici quantum eſt, non poteſt: meliuſque ultra quam citra ſtat oratio." (We are indulged to ſay more than enough, becauſe we cannot ſay enough; and it is better to be above than under.) In the name of wonder, why this ſlight and childiſh reaſoning, when immediately before he had obſerved, that the hyperbole is founded on human nature? We could not reſiſt this perſonal ſtroke of criticiſm; intended not againſt our author, for no human creature is exempt from error; but againſt the blind veneration that is paid to the ancient claſſic writers, without diſtinguiſhing their blemiſhes from their beauties.

Having examined the nature of this figure, and the principle on which it is erected; let us proceed to the rules by which it ought to be governed. And, in the firſt place, it is a capital fault to introduce an hyperbole in the deſcription of an ordinary object or event; for in ſuch a caſe, it is altogether unnatural, being deſtitute of ſurpriſe, its only foundation. Take the following inſtance, where the ſubject is extremely familiar, viz. ſwimming to gain the ſhore after a ſhipwreck.

I ſaw him beat the ſurges under him,
And ride upon their backs: he trod the water;
Whoſe enmity he flung aſide, and breaſted
The ſurge moſt ſwoln that met him: his bold head
'Bove the contentious waves he kept, and oar'd
Himſelf with his good arms, in luſty ſtrokes
To th' *ſhore*, that o'er his wave-born baſis bow'd,
As ſtooping to relieve him. *Tempeſt, act* 2. *ſc.* 1.

In the next place, it may be gathered from what is ſaid, that an hyperbole can never ſuit the tone of any diſpiriting paſſion: ſorrow in particular will never prompt ſuch a figure, and for that reaſon: the following hyperboles muſt be condemned as unnatural:

K. Rich. Aumerle, thou weep'ſt, my tender-hearted couſin!
We'll make foul weather with deſpiſed tears;
Our ſighs, and they, ſhall lodge the ſummer-corn,
And make a dearth in this revolving land.
Richard II. *act.* 3. *ſc.* 6.

Hyperbole.

Draw them to Tyber's bank, and weep your tears
Into the channel, till the loweſt ſtream
Do kiſs the moſt exalted ſhores of all.
Julius Cæſar, act. 1. *ſc.* 1.

Thirdly, A writer, if he wiſh to ſucceed, ought always to have the reader in his eye: he ought, in particular, never to venture a bold thought or expreſſion, till the reader be warmed and prepared. For this reaſon, an hyperbole in the beginning of a work can never be in its place. Example:

Jam pauca aratro jugera regiæ
Moles relinquent. *Horat. Carm. lib* 2. *ode* 15.

In the fourth place, The niceſt point of all, is to aſcertain the natural limits of an hyperbole; beyond which, being overſtrained, it has a bad effect. Longinus (chap. iii.), with great propriety of thought, enters a caveat againſt an hyperbole of this kind: he compares it to a bow ſtring, which relaxes by overſtraining, and produceth an effect directly oppoſite to what is intended. To aſcertain any preciſe boundary, would be difficult, if not impracticable. We ſhall therefore only give a ſpecimen of what may be reckoned overſtrained hyperboles. No fault is more common among writers of inferior rank; and inſtances are found even among thoſe of the fineſt taſte; witneſs the following hyperbole, too bold even for an Hotſpur.

Hotſpur talking of Mortimer:
In ſingle oppoſition hand to hand,
He did confound the beſt part of an hour
In changing hardiment with great Glendower.
Three times they breath'd, and three times did they drink,
Upon agreement, of ſwift Severn's flood;
Who then affrighted with their bloody looks,
Ran fearfully among the trembling reeds,
And hid his criſp'd head in the hollow bank,
Blood-ſtained with theſe valiant combatants.
Firſt Part Henry IV. *act* 1. *ſc.* 4.

Speaking of Henry V.
England ne'er had a king until his time.
Virtue he had, deſerving to command:
His brandiſh'd ſword did blind men with its beams:
His arms ſpread wider than a dragon's wings:
His ſparkling eyes, replete with awful fire,
More dazzled; and drove back his enemies,
Than mid-day ſun fierce bent againſt their faces.
What ſhould I ſay? his deeds exceed all ſpeech:
He never lifted up his hand, but conquer'd.
Firſt Part Henry VI. *act* 1. *ſc.* 1.

Laſtly, an hyperbole, after it is introduced with all advantages, ought to be comprehended within the feweſt words poſſible: as it cannot be reliſhed but in the hurry and ſwelling of the mind, a leiſurely view diſſolves the charm and diſcovers the deſcription to be extravagant at leaſt, and perhaps alſo ridiculous. This fault is palpable in a ſonnet which paſſeth for one of the moſt complete in the French language: Phillis, in a long and florid deſcription, is made as far to outſhine the ſun as he outſhines the ſtars:

Le ſilence regnoit ſur la terre et ſur l'onde,
L'air devenoit ſerain et l'Olimp vermeil,

Et l'amoureux Zephir affranchi du ſomeil,
Reſſuſcitoit les fleurs d'une haleine feconde.

L'Aurore deployoit l'or de ſa treſſe blonde,
Et ſemoit de rubis le chemin du ſoleil ;
Enfin ce Dieu venoit au plus grand appareil
Qu'il ſoit jamais venu pour eclairer le monde :

Quand la jeune Philis au viſage riant,
Sortant de ſon palais plus clair que l'orient,
Fit voir une lumiere et plus vive et plus belle.

Sacre Flambeau du jour, n'en ſoiez point jaloux,
Vous parutes alors auſſi peu devant elle,
Que les feux de la nuit avoient fait devant vous.

Malleville.

There is in Chaucer a thought expreſſed in a ſingle line, which ſets a young beauty in a more advantageous light than the whole of this much laboured poem:

Up roſe the ſun, and up roſe Emelie.

HYPERBOREAN, in the ancient geography. The ancients denominated thoſe people and places *Hyperborean* which were to the northward of the Scythians. They had but very little acquaintance with theſe Hyperborean regions; and all they tell us of them is very precarious, much of it falſe. Diodorus Siculus ſays, the Hyperboreans were thus called by reaſon they dwelt beyond the wind Boreas; υπερ ſignifying "above or beyond," and Βορεας, *Boreas*, the "north wind." This etymology is very natural and plauſible; notwithſtanding all that Rudbeck has ſaid againſt it, who would have the word to be Gothic, and to ſignify *nobility*. Herodotus doubts whether or no there were any ſuch nations as the Hyperborean. Strabo, who profeſſes that he believes there are, does not take *hyperborean* to ſignify *beyond Boreas* or the north, as Herodotus underſtood it: the prepoſition υπερ, in this caſe, he ſupoſes only to help to form a ſuperlative; ſo that *hyperborean*, on his principle, means no more than *moſt northern*: by which it appears the ancients ſcarce knew themſelves what the name meant.—Moſt of our northern geographers, as Hoffman, Cellarius, &c. have placed the Hyperboreans in the northern parts of the European continent, among the Siberians and Samoieds; according to them, the Hyperboreans of the ancients were thoſe in general who lived fartheſt to the north. The Hyperboreans of our days are thoſe Ruſſians who inhabit between the Volga and the White. According to Cluvier, the name Celtes was ſynonymous with that of Hyperboreans.

HYPERCATALECTIC, in the Greek and Latin poetry, is applied to a verſe that has one or two ſyllables too much, or beyond the regular and juſt meaſure; as,

Muſæ ſorores ſunt Minervæ:
Alſo,
Muſæ ſorores Palladis lugent.

HYPERCRITIC, an over-rigid cenſor or critic: one who will let nothing paſs, but animadverts ſeverely on the ſlighteſt fault. See CRITICISM. The word is compounded of υπερ *ſuper*, "over, above, beyond;" and κριτικος of κριτης, *judex*, of κρινω, *judico*, "I judge."

HYPERDULIA, in the Romiſh theology, is the worſhip rendered to the holy virgin. The word is Greek, υπερδουλεια, compoſed of υπερ, *above*, and δουλια, *worſhip, ſervice*. The worſhip offered to ſaints is called *dulia*; and that to the mother of God, *hyperdulia*, as being ſuperior to the former.

HYPERIA (anc. geog.) the ſeat of the Phæacians near the Cyclops, (Homer): ſome commentators take it to be Camarina in Sicily; but, according to others, it is ſuppoſed to be an adjoining iſland, which they take to be Melita, lying in ſight of Sicily. And this ſeems to be confirmed by Apollonius Rhodius. Whence the Phæacians afterwards removed to Corcyra, called *Scheria Phæacia*, and *Macris*; having been expelled by the Phœnicians, who ſettled in Melita for commerce, and for commodious harbours, before the war of Troy. (Diodorus Siculus).

HYPERICUM, ST JOHN'S WORT: A genus of the polyandria order, belonging to the polyadelphia claſs of plants; and in the natural method ranking under the 20th order, *Rotaceæ*. The calyx is quinquepartite; the petals five; the filaments many, and coalited at the baſe into five pencils; the ſeed-veſſel is a pencil.

Species. Of this genus there are 29 ſpecies, moſt of them hardy deciduous ſhrubs, and under-ſhrubby plants, adorned with oblong and oval ſimple foliage, and pentapetalous yellow flowers in cluſters. The moſt remarkable are, 1. The *hircinum*, or ſtinking St John's-wort. This riſes three or four feet high, with ſeveral ſhrubby two-edged ſtalks from the root, branching by pairs oppoſite at every joint; oblong, oval, cloſe-ſitting oppoſite leaves; and at the ends of all the young ſhoots, cluſters of yellow flowers. Of this there are three varieties; one with ſtrong ſtalks, ſix or eight feet high, broad leaves, and large flowers; the other with ſtrong ſtalks, broad leaves, and without any diſagreeable odour; the third hath variegated leaves. All theſe varieties are ſhrubby; and flower in June and July in ſuch numerous cluſters, that the ſhrubs appear covered with them; and produce abundance of ſeed in autumn. 2. The *canarienſis* hath ſhrubby ſtalks, dividing and branching ſix or ſeven feet high; oblong, cloſe-ſitting leaves by pairs; and at the ends of the branches, cluſters of yellow flowers appearing in June and July. 3. The *aſcyron*, or dwarf American St John's-wort, hath ſpreading roots, ſending up numerous, ſlender, ſquare ſtalks, a foot long; oval, ſpear-ſhaped, cloſe-ſitting, ſmooth leaves by pairs oppoſite: and, at the end of the ſtalks, large yellow flowers. 4. The *androſæmum*, commonly called *tutſan*, or *park-leaves*, hath an upright under-ſhrubby ſtalk, two feet high, branching by pairs oppoſite; and at the ends of the ſtalks, cluſters of ſmall yellow flowers appearing in July and Auguſt, and ſucceeded by roundiſh berries like black capſules. This grows naturally in many parts of Britain. 5. The *balearicum*, or wart-leaved St John's-wort, is a native of Majorca; and hath a ſhrubby ſtalk, branching two feet high, with reddiſh ſcarified branches, ſmall oval leaves warted underneath, and large yellow flowers appearing great part of the year. 6. The *monogynum*, or one-ſtyled *China hypericum*, hath a ſhrubby purpliſh ſtalk, about two feet high; oblong, ſmooth, ſtiff, cloſe-ſitting leaves, of a ſhining green above, and white underneath; cluſters of ſmall yellow flowers, with coloured cups, and only one ſtyle, flowering the greateſt part of the year.

Culture. The four firſt ſpecies are hardy, and will grow in any ſoil or ſituation; the three laſt muſt be potted, in order to have ſhelter in the green-houſe in winter. The two firſt ſpecies propagate very faſt by ſuckers, which are every year ſent up plentifully from the root; and in autumn or ſpring may be readily ſlipped off from the old plants with roots to each, or the whole plant may be taken up and divided into as many parts as there are ſuckers and ſlips with roots, planting the ſtrongeſt where they are to remain, and the weakeſt in nurſery-rows, where they are to remain a year in order to acquire ſtrength. They may alſo be propagated by ſeeds ſown in autumn, in a bed of common earth, in drills an inch deep. The other two hardy ſorts are alſo propagated by ſlipping the roots in autumn, or early in the ſpring; and may likewiſe be raiſed in great plenty from ſeeds. The three other ſpecies are propagated by layers and cuttings, planted in pots, and plunged in a hot-bed.

Properties. The tutſan hath long held a place in the medicinal catalogues; but its uſes are very much undetermined. The leaves given in ſubſtance are ſaid to deſtroy worms. By diſtillation they yield an eſſential oil. The flowers tinge ſpirits and oils of a fine purple colour. Cows, goats, and ſheep, eat the plant; horſes and ſwine refuſe it. The dried plant boiled in water with alum, dyes yarn of a yellow colour; and the Swedes give a fine purple tinge to their ſpirits with the flowers.

HYPERIDES, an orator of Greece, was the diſciple of Plato and Iſocrates, and governed the republic of Athens. He defended with great zeal and courage the liberties of Greece; but was put to death by Antipater's order, 322 B. C. He compoſed many orations, of which only one now remains. He was one of the ten celebrated Greek orators.

HYPERMNESTRA, in fabulous hiſtory, one of the 50 daughters of Danaus king of Argos. She alone refuſed to obey the cruel order Danaus had given to all his daughters, to murder their huſbands the firſt night of their marriage; and therefore ſaved the life of Lynceus, after ſhe had made him promiſe not to violate her virginity. Danaus, enraged at her diſobedience, confined her cloſely in priſon, whence Lynceus delivered her ſome time after.

HYPERSARCOSIS, in medicine and ſurgery, an exceſs of fleſh, or rather a fleſhy excreſcence, ſuch as thoſe generally riſing upon the lips of wounds, &c.

HYPHEN, an accent or character in grammar, implying that two words are to be joined, or connected into one compound word, and marked thus -; as *pre-eſtabliſhed, five-leaved, &c.* Hyphens alſo ſerve to connect the ſyllables of ſuch words as are divided by the end of the line.

HYPNOTIC, in the materia medica, ſuch medicines as any way produce ſleep, whether called *narcotics, hypnotics, opiates*, or *ſoporifics*.

HYPNOTICUS SERPENS, the *Sleep-ſnake*, in zoology, the name of an Eaſt-Indian ſpecies of ſerpent, called by the Ceyloneſe *nintipolong*, a word importing the ſame ſenſe. It is of a deep blackiſh brown, variegated with ſpots of white, and is a very fatal kind in its poiſon; its bite always bringing on a ſleep which ends in death.

HYPNUM, FEATHER-MOSS, in botany: A genus of the natural order of Muſci, belonging to the cryptogamia claſs of plants. The antheræ is operculated, or covered with a lid; the calyptra ſmooth; the filament lateral, and riſing out of a perichætium, or tuft of leaflets different from the other leaves of the plant. There are 46 ſpecies, all of them natives of Great Britain; none of them, however, have any remarkable property, except the proliferum and parietinum. The firſt is of a very ſingular ſtructure, one ſhoot growing out from the centre of another; the veil is yellow, and ſhining; the lid with a kind of long bill; the leaves not ſhining; ſometimes of a yellowiſh, and ſometimes of a deep green. This moſs covers the ſurface of the earth in the thickeſt ſhades, through which the ſun never ſhines, and where no other plant can grow. The ſecond hath ſhoots nearly flat and winged, undivided for a conſiderable length, and the leaves ſhining; but the old ſhoots do not branch into new ones as in the preceding ſpecies. It grows in woods and ſhady places; and, as well as the former, is uſed for filling up the chinks in wooden houſes.

HYPO, a Greek particle, retained in the compoſition of divers word borrowed from that language; literally denoting *under, beneath.*—In which ſenſe it ſtands oppoſed to υπερ *ſupra*, "above."

HYPOBOLE, or SUBJECTION, (from υπο, and βαλλω, *I caſt*), in rhetoric, a figure; ſo called, when ſeveral things are mentioned, that ſeem to make for the contrary ſide, and each of them refuted in order. This figure, when complete, conſiſts of three parts; a propoſition, an enumeration of particulars with their anſwer, and a concluſion. Thus Cicero, upon his return from baniſhment, vindicates his conduct in withdrawing ſo quietly, and not oppoſing the faction that ejected him. See ORATORY, n°81.

HYPOCATHARSIS (compounded of υπο *under*, and καθαιρω *I purge*), in medicine, a too faint or feeble purgation.

HYPOCAUSTUM, among the Greeks and Romands, a ſubterraneous place, where was a furnace to heat the baths. The word is Greek, formed of the prepoſition υπο *under*; and the verb καιω *to burn.*—Another ſort of hypocauſtum was a kind of kiln to heat their winter parlours. The remains of a Roman hypocauſtum, or ſweating-room, were diſcovered under ground at Lincoln in 1729. We have an account of theſe remains in the Philoſophical Traſactions, n° 461. § 29.—Among the moderns, the hypocauſtum is that place where the fire is kept which warms a ſtove or hot-houſe.

HYPOCHÆRIS, HAWK's-eye, in botany: A genus of the polygamia æqualis order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is paleaceous; the calyx a little imbricated; the pappus glumy. There are four ſpecies; none of which have any remarkable property, except the maculata or ſpotted hawk's-eye. It is a native of Britain, and grows on high grounds. The leaves are oblong, egg-ſhaped, and toothed; the ſtem almoſt naked, generally with a ſingle branch; the bloſſoms yellow, opening at

Hypochondria
‖
Hypoſcenium.

ſix in the morning, and cloſing at four in the afternoon. The leaves are boiled and eaten like cabbage. Horſes are fond of this plant when green, but not when dry. Cows, goats, and ſwine eat it; ſheep are not fond of it.

HYPOCHONDRIA, in anatomy, a ſpace on each ſide the epigaſtric region or upper part of the abdomen. See ANATOMY, n° 88.

HYPOCHONDRIAC PASSION, a diſeaſe in men, ſimilar to the hyſteric affection in women. See (the *Index* ſubjoined to) MEDICINE.

HYPOCISTIS, in the materia medica, an inſpiſſated juice obtained from the ſeſſile aſarum, much reſembling the true Egyptian acacia. They gather the fruit while unripe, and expreſs the juice, which they evaporate over a very gentle fire, to the conſiſtence of an extract, and then form into cakes, and expoſe them to the ſun to dry. It is an aſtringent of conſiderable power; is good againſt diarrhœas and hæmorrhages of all kinds; and may be uſed in repellent gargariſms in the manner of the true acacia; but it is very rarely met with genuine in our ſhops, the German acacia being uſually ſold under its name.

HYPOCRISY, υποκρισις, in ethics, denotes diſſimulation with regard to the moral or religious character. In other words, it ſignifies one who feigns to be what he is not; and is generally applied to thoſe who aſſume the appearances of virtue or religion, without having any thing of reality in either.

HYPOGÆUM, υπογειον, formed of υπο *under*, and γαια *earth*, in the ancient architecture, is a name common to all the parts of a building that are under ground; as the cellar, butteries, and the like places. The term *hypogæum* was uſed by the Greeks and Romans for ſubterraneous tombs in which they buried their dead.

HYPOGEUM, Υπογαιον, in aſtrology, is a name given to the celeſtial houſes which are below the horizon: and eſpecially the *imum cœli*, or bottom of heaven.

HYPOGASTRIC, an appellation given to the internal branch of the iliac artery.

HYPOGASTRIUM, in anatomy, the middle part of the lower regions of the belly. See ANATOMY, n° 18.

HYPOGLOSSI, EXTERNI, or MAJORES, in anatomy, the ninth pair of nerves, called alſo *linguales & guſtatorii*. See ANATOMY, p. 760. col. 1.

HYPOGLOTTIS, or HYPOGLOSSIS, (compoſed of υπο *under*, and γλωττα *tongue*), in anatomy, is a name given to two glands of the tongue. There are four large glands of the tongue, two of them called *hypoglottides*, ſituated under it, near the venæ ranulares; one on each ſide of the tongue. They ſerve to filtrate a kind of ſerous matter of the nature of ſaliva, which they diſcharge into the mouth by little ducts near the gums.

HYPOGLOTTIS, or *Hypogloſſis*, in medicine, denotes an inflammation or ulceration under the tongue, called alſo *ranula*.

HYPOPYON, in medicine, a collection of purulent matter under the corner of the eye.

HYPOSCENIUM. in antiquity, a partition under the pulpit or logeum of the Greek theatre, appointed for the muſic.

Hypoſtaſis
‖
Hypotheca.

HYPOSTASIS, a Greek term, literally ſignifying *ſubſtance*, or *ſubſiſtence*; uſed in theology for *perſon*. The word is Greek υποϛασις; compounded of υπο *ſub*, "under;" and ιϛημι, *ſto, exiſto*; "I ſtand, I exiſt;" q. d. *ſub ſiſtentia*. Thus Trinitarians hold, that there is but one nature or eſſence in God, but three *hypoſtaſes* or perſons.

The term *hypoſtaſis* is of a very ancient ſtanding in the church. St Cyril repeats it ſeveral times, as alſo the phraſe *union according to hypoſtaſis*. The firſt time it occurs is in a letter from that father to Neſtorius, where he uſes it inſtead of προσωπον the word we commonly render *perſon*, which did not ſeem expreſſive enough. "The philoſophers (ſays St Cyril) have allowed three *hypoſtaſes*; They have extended the Divinity to three *hypoſtaſes*: They have even ſometimes uſed the word *trinity*: And nothing was wanting but to have admitted the conſubſtantiality of the three *hypoſtaſes*, to ſhow the unity of the divine nature, excluſive of all triplicity in reſpect of diſtinction of nature, and not to hold it neceſſary to conceive any reſpective inferiority of *hypoſtaſes*."

This term occaſioned great diſſentions in the ancient church; firſt among the Greeks, and afterwards alſo among the Latins. In the council of Nice, *hypoſtaſis* was defined to denote the ſame with *eſſence* or *ſubſtance*; ſo that it was hereſy to ſay that Jeſus Chriſt was of a different *hypoſtaſis* from the Father, but cuſtom altered its meaning. In the neceſſity they were under of expreſſing themſelves ſtrongly againſt the Sabellians, the Greeks made choice of the word *hypoſtaſis*, and the Latins of *perſona*; which change proved the occaſion of endleſs diſagreement. The phraſe τρεις υποϛασεις, uſed by the Greeks, ſcandalized by the Latins, whoſe uſual way of rendering υποϛασις in the language was by *ſubſtantia*. The barrenneſs of the Latin tongue in theological phraſes, allowed them but one word for the two Greek ones ουσια and υποϛασις; and thus diſabled them from diſtinguiſhing *eſſence* from *hypoſtaſis*. For which reaſon they choſe rather to uſe the term *tres perſonæ*, and *tres hypoſtaſes*.—An end was put to logomachias, in a ſynod held at Alexandria about the year 362, at which St Athanaſius aſſiſted; from which time the Latins made no great ſcruple of ſaying *tres hypoſtaſes*, nor the Greeks of *three perſons*.

HYPOTHECA, in the civil law, an obligation, whereby the effects of a debtor are made over to his creditor to ſecure his debt. The word comes from the Greek υποθηκη, *a thing ſubject to ſome obligation*; of the verb υποτιθημαι, *ſubponor*, "I am ſubjected;" of υπο *under*, and τιθημι, *pono*, "I put."

As the hypotheca is an engagement procured on purpoſe for the ſecurity of the creditor, various means have been made uſe of, to ſecure to him the benefit of the convention. The uſe of the pawn or pledge is the moſt ancient, which is almoſt the ſame thing with the hypotheca; all the difference conſiſting in this that the pledge is put into the creditor's hands; whereas in a ſimple hypotheca, the thing remained in the poſſeſſion of the debtor. It was found more eaſy and commodious to engage an eſtate by a civil covenant than by an actual delivery: accordingly the expedient was firſt practiſed among the Greeks; and from them the Romans borrowed both the name and the thing: only the Greeks, the better to prevent frauds, uſed to fix ſome viſible mark on the thing, that the public might know it was hypothecate or mortgaged by the proprietor; but the Romans looking on ſuch advertiſements as injurious to the debtor, forbad the uſe of them.

The Roman lawyers diſtinguiſhed four kinds of hypothecas: the conventional, which was with the will and conſent of both parties; the legal, which was appointed by law, and for that reaſon called *tacit;* the prætor's pledge, when by the flight or non-appearing of the debtor, the creditor was put in poſſeſſion of his effects; and the judiciary, when the creditor was put in poſſeſſion by virtue of a ſentence of the court.

The conventional hypotheca is ſubdivided into general and ſpecial. The hypotheca is general, when all the debtor's effects, both preſent and future, are engaged to the creditor. It is ſpecial, when limited to one or more particular things.

For the tacit hypotheca the civilians reckon no leſs than twenty-ſix different ſpecies thereof.

HYPOTHENUSE, in geometry, the longeſt ſide of a right-angled triangle, or that which ſubtends the right angle.

HYPOTHESIS, (formed of υπο "under," and θεσις *poſitio*, of τιθημι *pono*, "I put), is a propoſition or principle which we ſuppoſe, or take for granted, in order to draw concluſions for the proof of a point in queſtion.

In diſputation, they frequently make falſe hypotheſes, in order to draw their antagoniſts into abſurdities; and even in geometry truths are often deducible from ſuch falſe hypotheſes.

Every conditional or hypothetical propoſition may be diſtinguiſhed into hypotheſis and theſis: the firſt rehearſes the conditions under which any thing is affirmed or denied; and the latter is the thing itſelf affirmed or denied. Thus, in the propoſition, a triangle is half of a parallelogram, if the baſes and altitudes of the two be equal; the latter part is the hypotheſis, "if the baſes," &c. and the former the theſis, "a triangle is half a parallelogram."

In ſtrict logic, we are never to paſs from the hypotheſis to the theſis; that is, the principle ſuppoſed muſt be proved to be true, before we require the conſequence to be allowed.

Hypothesis, in phyſics, &c. denotes a kind of ſyſtem laid down from our own imagination, whereby to account for ſome phenomenon or appearance of nature. Thus we have hypotheſes to account for the tides, for gravity, for magnetiſm, for the deluge, &c.

The real and ſcientific cauſes of natural things generally lie very deep: obſervation and experiment, the proper means of arriving at them, are in moſt caſes extremely ſlow; and the human mind is very impatient: hence we are frequently driven to feign or invent ſomething that may ſeem like the cauſe, and which is calculated to anſwer the ſeveral phenomena, ſo that it may poſſibly be the true cauſe.

Philoſophers are divided as to the uſe of ſuch fictions or hypotheſes, which are much leſs current now than they were formerly. The lateſt and beſt writers are for excluding hypotheſes, and ſtanding wholly on obſervation and experiment. Whatever is not deduced from phenomena, ſays Sir Iſaac Newton, is an hypotheſis; and hypotheſes, whether metaphyſical, or phyſical, or mechanical, or of occult qualities, have no place in experimental philoſophy.

The Carteſians take upon them to ſuppoſe what affections in the primary particles of matter they pleaſe; juſt what figures, what magnitudes, what motions, and what ſituations, they find for their purpoſe. They alſo feign certain unſeen, unknown fluids, and endue them with the moſt arbitrary properties; give them a ſubtilty which enables them to pervade the pores of all bodies, and make them agitated with the moſt unaccountable motions. But is not this to ſet aſide the real conſtitution of things, and to ſubſtitute dreams in their place? Truth is ſcarce attainable even by the ſureſt obſervations; and will fanciful conjectures ever come at it? They who found their ſpeculations on hyhotheſes, even though they argue from them regularly, according to the ſtricteſt laws of mechanics, may be ſaid to compoſe an elegant and artful fable; but it is ſtill only a fable.

Hypothesis is more particularly applied in aſtronomy to the ſeveral ſyſtems of the heavens; or the different ways in which different aſtronomers have ſuppoſed the heavenly bodies to be ranged, moved, &c.

The principal hypotheſes are the Ptolemaic, Copernican, and Tychonic. The Copernican is now become ſo current, and is ſo well warranted by obſervation, that the retainers thereto hold it injurious to call it an *hypotheſis*. See Astronomy.

HYPOTIPOSIS. See Oratory, n° 91.

HYPOXIS, in botany: A genus of the monogynia order, belonging to the hexandria claſs of plants; and in the natural method ranking under the 10th order, *Coronariæ*. The corolla is divided into ſix parts, and perſiſting, ſuperior; the capſule narrowing at the baſe; the calyx a bivalved glume.

HYPSISTARII, (formed from υψισος "higheſt,") a ſect of heretics in the fourth century; thus called from the profeſſion they made of worſhipping the moſt high God.

The doctrine of the Hypſiſtarians was an aſſemblage of Paganiſm, Judaiſm, and Chriſtianity. They adored the moſt high God with the Chriſtians; but they alſo revered fire and lamps with the heathens; and obſerved the Sabbath, and the diſtinction of clean and unclean things with the Jews.

The Hypſiſtarii bore a near reſemblance to the Euchites, or Maſſalians.

HYRCANIA (anc. geog), a country of the farther Aſia, lying to the ſouth-eaſt of the *Mare Hyrcanum* or *Caſpium*: with Media on the weſt, Parthia on the ſouth, and Margiana on the weſt. Famous for its tygers (Virgil); for its vines, figs, and olives, (Strabo).

Hyrcania (anc. geog.), a town of Lydia, in the *campus Hyrcanus*, near Thyatira; ſo called from coloniſts brought from Hyrcania, a country lying to the ſouth of the Caſpian ſea. The people called *Hyrcani Macedones*, becauſe a mixed people (Pliny).—Another Hyrcania, the metropolis of the country called *Hyrcania*. Thought to be the Tape of Strabo, the Syrinx of Polybius, the Zeudracarta of Arrian, and the Aſaac of Iſidorus Characenus.—A third, a ſtrong place of Judea, built by Hyrcanus.

HYSSOP. See Hyssopus.

Hedge-Hrssop. See Gratiola.

HYSSOPUS, hyssop: A genus of the gymnoſpermia order, belonging to the didynamia claſs of plants. There are three ſpecies; but only one of them, viz. the *officinalis*, or common hyſſop, is cultivated for uſe. This hath under-ſhrubby, low, buſhy ſtalks, growing a foot and an half high; ſmall, ſpear-ſhaped, cloſe ſitting, oppoſite leaves; with ſeveral ſmaller ones riſing from the ſame joint; and all the ſtalks and branches terminated by erect whorled ſpikes of flowers, of different colours in the varieties. They are very hardy plants; and may be propagated either by ſlips or cuttings, or by ſeeds. The leaves have an aromatic ſmell, and a warm pungent taſte. Beſides the general virtues of aromatics, they are particularly recommended in humoural aſthmas, coughs, and other diſorders of the breaſt and lungs; and are ſaid notably to promote expectoration.

Hyſſop was generally made uſe of in purifications amongſt the Jews by way of a ſprinkler. Sometimes they added a little wool to it of a ſcarlet colour; for example, they dipped a bunch of hyſſop, ſome branches of cedar and red wool, in water mingled with the blood of a bird, in the purification of lepers. Hyſſop, it is probable, grew to a conſiderable height in Judæa, ſince the goſpel informs us that the ſoldiers filled a ſponge with vinegar, put it upon a reed (or long ſtem) of hyſſop, and preſented it to our Saviour upon the croſs.

HYSTERIC AFFECTION, or *Paſſion*, (formed of υστερα "womb"); a diſeaſe in women, called alſo *ſuffocation of the womb*, and vulgarly *fits of the mother*. It is a ſpaſmodico-convulſive affection of the nervous ſyſtem, proceeding from the womb; for the ſymptoms and cure of which, ſee MEDICINE.

HYSTERON PROTERON, in grammar and rhetoric, a ſpecies of hyperbaton, wherein the proper order of conſtruction is ſo inverted, that the part of any ſentence which ſhould naturally come firſt is placed laſt; as in this of Terence, *Valet et vivit*, for *vivit et valet*; and in the following of Virgil, *Moriamur, & in media arma ruamus*, for *In media arma ruamus & moriamur*.

Plate CCXLVIII

HYSTRIX, in zoology, a genus of quadrupeds belonging to the order of glires, the characters of which are theſe: They have two fore-teeth, obliquely divided both in the upper and under jaw, beſides eight grinders; and the body is covered with quills or prickles. There are four ſpecies, viz.

1. The *criſtata*, or creſted porcupine, has four toes on the fore-feet, five toes on the hind-feet, a creſted head, a ſhort tail, and the upper lip is divided like that of a hare. The length of the body is about two feet, and the height about two feet and an half. The porcupine is covered with prickles, ſome of them nine or ten inches long, and about ¼th of an inch thick. Like the hedge-hog, he rolls himſelf up in a globular form, in which poſition he is proof againſt the attacks of the moſt rapacious animals. The prickles are exceedingly ſharp, and each of them has five large black and as many white rings, which ſucceed one another alternately from the root to the point. Theſe quills the animal can erect or let down at pleaſure; when irritated, he beats the ground with his hind-feet, erects his quills, ſhakes his tail, and makes a conſiderable rattling noiſe with his quills —Moſt authors have aſſerted that the porcupine, when irritated, darts his quills to a conſiderable diſtance againſt the enemy, and that he will kill very large animals by this means. But M. Buffon and ſome other late naturaliſts aſſure us, that the animal poſſeſſes no ſuch power. M. Buffon frequently irritated the porcupine, but never ſaw any thing like this darting of his quills. He ſays indeed, that when the creature was much agitated with paſſion, ſome of the quills which adhered but ſlightly to the ſkin would fall off, particularly from the tail; and this circumſtance, he imagines, has given riſe to the miſtake. The porcupine, though originally a native of Africa and the Indies, can live and multiply in the more temperate climates of Spain and Italy. Pliny, and every other natural hiſtorian ſince the days of Ariſtotle, tells us, that the porcupine, like the bear, conceals itſelf during the winter, and that it brings forth its young in 80 days. But theſe circumſtances remain to this day uncertain. It is remarkable, that although this animal be very common in Italy, no perſon has ever given us a tolerable hiſtory of it. We only know in general, that the porcupine, in a domeſtic ſtate, is not a fierce or ill-natured animal; that with his foreteeth, which are ſtrong and ſharp, he can cut through a ſtrong board; that he eats bread, fruits, roots, &c.; that he does conſiderable damage when he gets into a garden; that he grows fat, like moſt animals, about the end of ſummer; and that his fleſh is not bad food.

2. The *prehenſilis*, or *Braſilian porcupine*, has four toes on the fore-feet, five on the hind-feet, and a long tail. It is conſiderably leſs than the former ſpecies; being only 17 inches long from the point of the muzzle to the origin of the tail, which is nine inches long; the legs and feet are covered with long browniſh hair; the reſt of the body is covered with quills interſperſed with long hairs; the quills are about five inches long, and about $\frac{1}{12}$th of an inch in diameter. He feeds upon birds and ſmall animals. He ſleeps in the day like the hedge-hog, and ſearches for his food in the night. He climbs trees, and ſupports himſelf by twiſting his tail round the branches. He is generally found in the high grounds of America from Braſil to Louiſiana, and the ſouthern parts of Canada. His fleſh is eſteemed very good eating.

A variety of this ſpecies is the *Hoitzlacuatzin*, or Mexican porcupine, (*le Coendou* de Buffon) It is of a duſky colour, with very long briſtles intermixed with the down: the ſpines three inches long, ſlender, and varied with white and yellow; ſcarcely apparent except on the tail, which is, according to Herandez, thicker and ſhorter than that of the preceding ſpecies. He adds, that the tail from the middle to the end is free from ſpines; and that it grows to the bulk of a middle-ſized dog. M. de Buffon ſays, its length is 16 or 17 inches from the noſe to the tail; the tail 9 French meaſure, but taken from a mutilated ſkin. It inhabits the mountains of Mexico, where it lives on the ſummer fruits, and may be eaſily made tame. The Indians pulveriſe the quills, and ſay they are very efficacious in gravelly caſes; and applied whole to the forehead, will relieve the moſt violent headach. They adhere till filled with blood, and then drop off.

3. The *dorſata*, or Canada porcupine (*l'Urſon* de Buffon), has four toes on the fore-feet, five on the hind-feet; and has quills only on the back, which are ſhort, and almoſt hid among the long hair. He is about two feet long. This ſpecies inhabits North

Hyſtrix. America as high as Hudſon's Bay; and makes its neſt under the roots of the great trees. It will alſo climb among the boughs, which the Indians cut down when one is in them, and kill the animal by ſtriking it over the noſe. They are very plentiful near Hudſon's Bay; and many of the trading Indians depend on them for food, eſteeming them both wholeſome and pleaſant. Theſe animals feed on wild fruits and bark of trees, eſpecially juniper: eat ſnow in winter, and drink water in ſummer; but avoid going into it. When they cannot avoid their purſuer, they will ſidle towards him, in order to touch him with the quills, which ſeem but weak weapons of offence: for on ſtroaking the hair, they will come out of the ſkin, ſticking to the hand. The Indians ſtick them in their noſes and ears, to make holes for the placing their ear-rings and other finery: they alſo trim the edges of their deer-ſkin habits with fringes made of the quills, or cover with them their bark-boxes.

4. The *macroura*, has five toes both on the hind and fore feet; his tail is very long, and the prickles are elevated. He inhabits the iſles of the Indian Archipelago, and lives in the foreſts.

I

I or *i*, the ninth letter and third vowel of the alphabet, is pronounced by throwing the breath ſuddenly againſt the palate, as it comes out of the larynx, with a ſmall hollowing of the tongue, and nearly the ſame opening of the lips and talk as in pronouncing *a* or *e*. Its ſound varies: in ſome words it is long, as *high*, *mind*, &c.; in others ſhort, as *bid*, *hid*, *ſin*, &c.; in others, again, it is pronounced like *y*, as in *collier*, *onion*, &c.; and in a few, it ſounds like *ee*, as in *machine*, *magazine*, &c. No Engliſh word ends in *i*, *e* being either added to it, or elſe the *i*, turned into *y*.

But beſides the vowel, there is the *jod* conſonant; which, becauſe of its different pronunciation, has likewiſe a different form, thus J, j. In Engliſh it has the ſoft ſound of *g*; nor it is uſed, but when *g* ſoft is required before vowels, where *g* is uſually hard: thus we ſay *jack*, *jet*, *join*, &c. inſtead of *gack*, *get*, *goin*, &c. which would be contrary to the genius of the Engliſh language.

I, uſed as a numeral, ſignifies *one*, and ſtands for ſo many units as it is repeated times: thus I, one; II, two; III, three, &c.; and when put before a higher numeral, it ſubtracts itſelf, as IV, four; IX, nine, &c. But when ſet after it, ſo many are added to the higher numeral as there are I's added: thus VI is $5+1$, or ſix; VII, $5+2$, or ſeven; VIII, $5+3$, or eight. The ancient Romans likewiſe uſed Iↄ for 500, CIↄ for 1000, Iↄↄ for 5000, CCIↄↄ for 10,000, Iↄↄↄ for 50,000, and CCCIↄↄↄ for 100,000. Farther than this, as Pliny obſerves, they did not go in their notation; but, when neceſſary, repeated the laſt number, as CCCIↄↄↄ, CCCIↄↄↄ, for 200,000; CCCIↄↄↄ, CCCIↄↄↄ, CCCIↄↄↄ, for 300,000; and ſo on.

The ancients ſometimes changed *i* into *u*; as *decumus* for *decimus*; *maxumus* for *maximus*, &c.

According to Plato, the vowel *i* is proper to expreſs delicate, but humble things, as in this verſe in Virgil which abounds in *i*'s, and is generally admired:

Accipiunt inimicum imbrem, rimiſque fatiſcunt.

I, uſed as an abbreviature, is often ſubſtituted for the whole word JESUS, of which it is the firſt letter.

JABBOK, a brook on the other ſide of the Jordan, the ſpring whereof is in the mountains of Gilead. It falls into Jordan pretty near the ſea of Tiberias, to the ſouth of this ſea. Near this brook the patriarch Jacob wreſtled with the angel (Gen. xxxii. 22). The Jabbok ſeparated the land of the Ammonites from the Gaulonites, and the territories of Og king of Baſhan.

JABESH, or **JABESH-GILEAD**, was the name of a city, in the half tribe of Manaſſeh, beyond Jordan. The ſcripture calls it generally Jabeſh-Gilead, becauſe it lay in Gilead, at the foot of the mountains which go by this name. Euſebius places it ſix miles from Pella, towards Geraſa; and conſequently it muſt be eaſtward of the ſea of Tiberias.

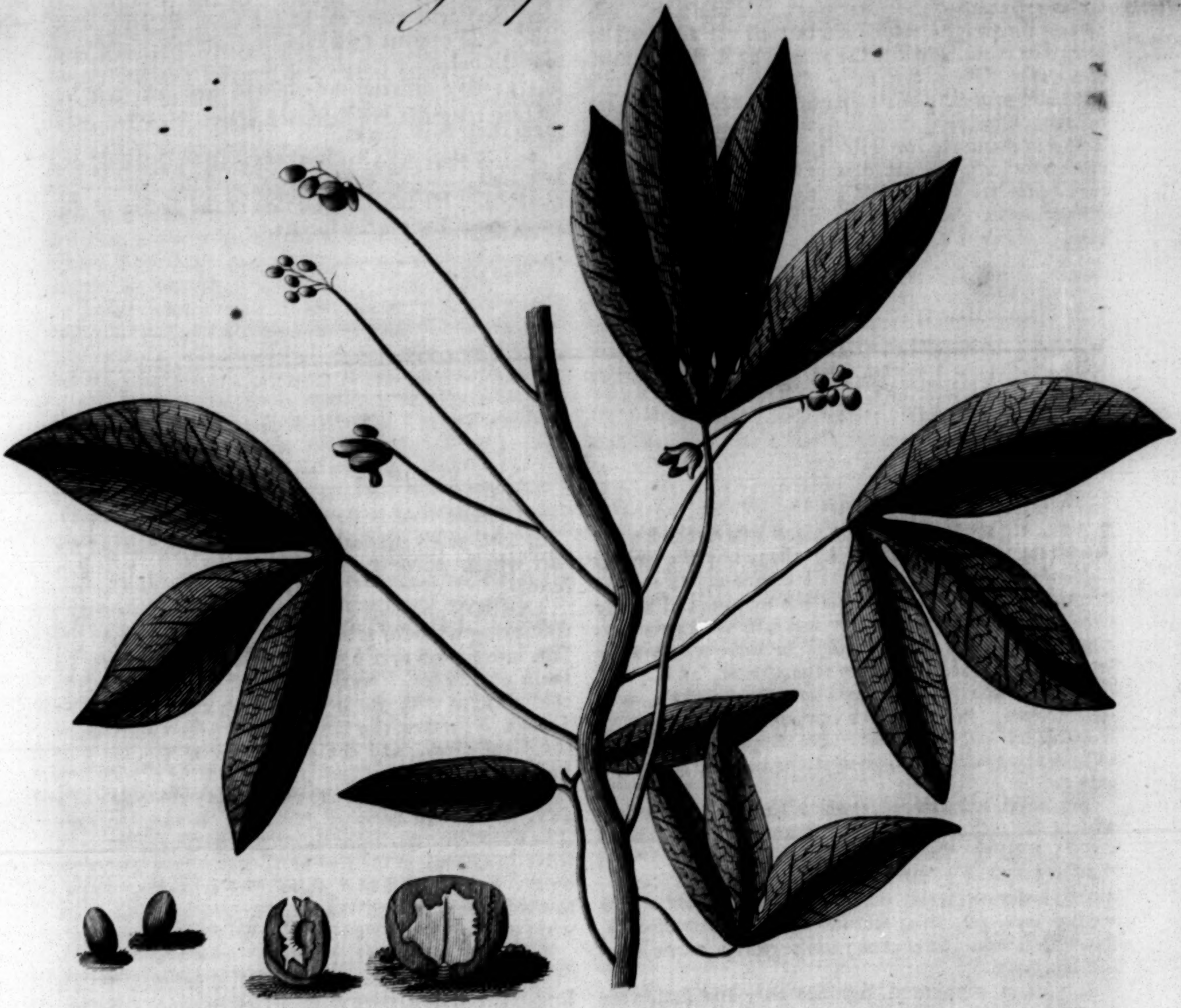
JABIRU. See MYCTERIA.

JABLONSKI (Daniel Erneſt), a learned Poliſh Proteſtant divine, born at Dantzick in 1660. He became ſucceſſively miniſter of Magdeburg, Liſſa, Koningſberg, and Berlin; and was at length eccleſiaſtical counſellor, and preſident of the academy of ſciences at the latter. He took great pains to effect an union between the Lutherans and Calviniſts; and wrote ſome works which are in good eſteem, particularly Meditations on the origin of the Scriptures, &c. He died in 1741.

JABLONSKI (Theodore), counſellor of the court of Pruſſia, and ſecretary of the royal academy of ſciences at Berlin, was alſo a man of diſtinguiſhed merit. He loved the ſciences, and did them honour, without that ambition which is generally ſeen in men of learning: it was owing to this modeſty that the greateſt part of his works were publiſhed without his name. He publiſhed, in 1711, a French and German Dictionary; a Courſe of Morality, in 1713; a Dictionary of Arts and Sciences, in 1721; and tranſlated *Tacitus de moribus Germanorum* into High Dutch, in 1724.

Plate CCXLVIII

Jatropha Manihot



Hystrix

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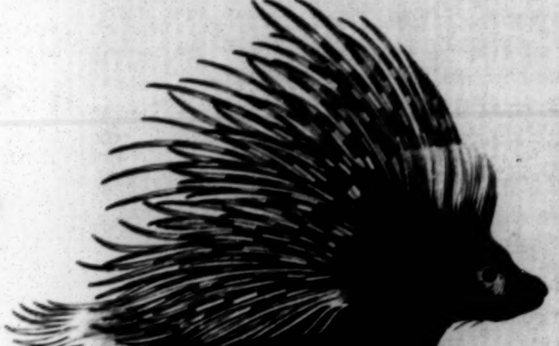

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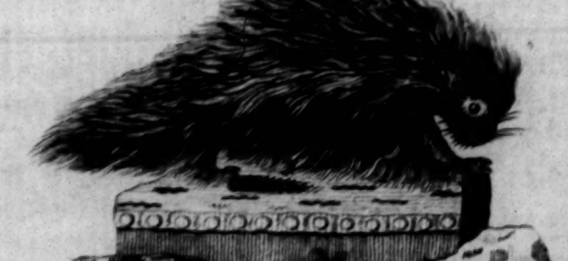

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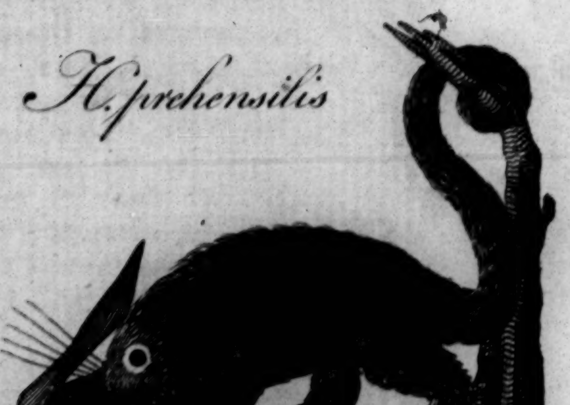

Scot Philada

BRITISH MUSEUM

JABNE (anc. geog.), a town of Paleſtine, near Joppa; called *Jamnia* or *Jamnial*, by the Greeks and Romans. In Joſhua xv. it ſeems to be called *Jabneel*; but in 2 Chron. xxvi. *Jabne*. It was taken from the Philiſtines by Uzziah, who demoliſhed its fortifications. Its port, called *Jamnitarum portus*, lay between Joppa and Azotus.

JACAMAR, in ornithology. See ALCEDO.

JACCA, an ancient town of Spain, in the kingdom of Arragon, with a biſhop's ſee, and a fort; ſeated on a river of the ſame name, among the mountains of Jacca, which are part of the Pyrenees. W. Long. 0. 19. N. Lat. 44. 22.

JACK, in mechanics, a well-known inſtrument of common uſe for raiſing great weights of any kind.

The common kitchen-jack is a compound engine, where the weight is the power applied to overcome the friction of the parts and the weight with which the ſpit is charged; and a ſteady and uniform motion is obtained by means of the fly.

JACK, in the ſea-language, a ſort of flag or colours, diſplayed from a maſt erected on the outer end of a ſhip's bowſprit. In the Britiſh navy the jack is nothing more than a ſmall union flag, compoſed of the interſection of the red and white croſſes; but in merchant-ſhips this union is bordered with a red field. See the article UNION.

JACK is uſed alſo for a horſe or wooden frame to ſaw timber upon; for an inſtrument to pull off a pair of boots; for a great leathern pitcher to carry drink in; for a ſmall bowl that ſerves as a mark at the exerciſe of bowling; and for a young pike.

JACK-Flag, in a ſhip, that hoiſted up at the ſpritſail top-maſt head.

JACK-Daw, the Engliſh name of a ſpecies of corvus. See CORVUS.

This bird is very miſchievous to the farmer and gardener; and is of ſuch a thieviſh diſpoſition, that he will carry away much more than he can make uſe of. There is a method of deſtroying them by a kind of ſprings much uſed in England; and is ſo uſeful, that it ought to be made univerſal.—A ſtake of about five feet long is to be driven firmly into the ground, and made ſo faſt that it cannot move, and ſo ſharp in the point that the bird cannot ſettle upon it. Within a foot of the top there muſt be a hole bored through it, of three quarters of an inch diameter; through this hole is to be put a ſtick of about eight inches long; then a horſe-hair ſpringe or nooſe is to be made faſt to a thin hazel-wand, and this brought up to the place where the ſhort ſtick is placed, and carried with it through the hole, the remainder being left open under that ſtick. The other end of the hazel rod is to be put through a hole in the ſtake near the ground, and faſtened there. The ſtake is to be planted among the jack-daw's food, and he will naturally be led to ſettle on it; but finding the point too ſharp, he will deſcend to the little croſs ſtick. This will ſink with his weight, and the ſpringe will receive his leg, and hold him faſt.

JACKALL, in zoology. See CANIS.

JACKSON (Thomas), an eminent Engliſh divine, was born at Witton in the biſhopric of Durham in 1579, of a good family. He commenced doctor of divinity at Oxford in 1622; and at laſt was made chaplain in ordinary, prebendary of Wincheſter, and dean of Peterborough. He was a very great ſcholar; and died in 1640. His performance upon the Creed is a learned and valuable piece; which, with his other works, was publiſhed in 1673.

JACOB, the ſon of Iſaac and Rebekah, was born in the year of the world 2168, before Jeſus Chriſt 1836. The hiſtory of this patriarch is given at large in the book of Geneſis. He died in Egypt in the 147th year of his age. Joſeph directed that his body ſhould be embalmed, after the manner of the Egyptians; and there was a general mourning for him throughout Egypt for ſeventy days. After this, Joſeph and his brethren, accompanied with the principal men of Egypt, carried him, with the king of Egypt's permiſſion, to the burying-place of his fathers near Hebron, where his wife Leah had been interred. When they were come into the land of Canaan, they mourned for him again for ſeven days; upon which occaſion the place where they ſtaid was called Abelmiſraim, or the mourning of the Egyptians.

JACOB (Ben Hajim), a rabbi famous for the collection of the Maſorah in 1525; together with the text of the Bible, the Chaldaic paraphraſe, and Rabbinical commentaries.

JACOB (Ben Naphthali), a famous rabbi of the 5th century: he was one of the principal maſſorets, and bred at the ſchool of Tiberias in Paleſtine with Ben Aſer, another principal maſſoret. The invention of points in Hebrew to ſerve for vowels, and of accents to facilitate the reading of that language, are aſcribed to theſe two rabbis; and ſaid to be done in an aſſembly of the Jews held at Tiberias, A. D. 476.

JACOB (Giles), an eminent law-writer, born at Romſey in the county of Southampton, in 1686. He was bred under a conſiderable attorney; and is principally known for his Law Dictionary in one vol. folio, which has been often printed; a new and improved edition having been lately given by counſellors Ruffhead and Morgan. Mr Jacob alſo wrote two dramatic pieces; and a Poetical Regiſter, containing the lives and characters of Engliſh dramatic poets. The time of his death is not known.

JACOBÆUS (Oliger), a celebrated profeſſor of phyſic and philoſophy at Copenhagen, was born in 1651 at Arhuſen in the peninſula of Jutland, where his father was biſhop. Chriſtian V. intruſted him with the management of his grand cabinet of curioſities; and Frederic IV. in 1698, made him counſellor of his court of juſtice. He wrote many medical works, and ſome excellent poems.

JACOBINE MONKS, the ſame with DOMINICANS.

JACOBITES, a term of reproach beſtowed on the perſons who, vindicating the doctrines of paſſive obedience and non-reſiſtance with reſpect to the arbitrary proceedings of princes, diſavow the revolution in 1688, and aſſert the ſuppoſed rights and adhere to the intereſts of the late abdicated King James and his family.

JACOBITES, in church hiſtory, a ſect of Chriſtians in Syria and Meſopotamia; ſo called, either from Jacob a Syrian who lived in the reign of the emperor

Mauritius, or from one Jacob a monk who flouriſhed in the year 550.

The Jacobites are of two ſects, ſome following the rites of the Latin church, and others continuing ſeparated from the church of Rome. There is alſo a diviſion among the latter, who have two rival patriarchs. As to their belief, they hold but one nature in Jeſus Chriſt; with reſpect to purgatory and prayers for the dead, they are of the ſame opinion with the Greeks and other eaſtern Chriſtians: they conſecrate unleavened bread at the euchariſt, and are againſt confeſſion, believing that it is not of divine inſtitution.

JACOBUS, a gold coin, worth 25 ſhillings; ſo called from King James I. of England, in whoſe reign it was ſtruck. See COIN.

We uſually diſtinguiſh two kinds of *Jacobus*, the *old* and the *new*; the former valued at 25 ſhillings, weighing ſix pennyweight ten grains; the latter, called alſo *Carolus*, valued at 23 ſhillings, in weight five pennyweight twenty grains.

JACQUINIA, in botany: A genus of the monogynia order, belonging to the hexandria claſs of plants: and in the natural method ranking with thoſe of which the order is doubtful. The corolla is decemfid; the ſtamina inſerted into the receptacle; the berry monoſpermous.

JACULATOR, or SHOOTING-FISH. See CHÆTODON.

JADDESSES is the name of an inferior order of prieſts in Ceylon, who have the care of the chapels appropriated to the genii, who form a third order of gods among theſe idolaters. Theſe prieſts are applied to by the people in a time of diſeaſe or calamity, who offer a cock on their behalf to appeaſe the anger of the dæmons.

JADE-STONE, LAPIS NEPHRITICUS, or *Jaſpachates*, a genus of ſiliceous earths. It gives fire with ſteel, and is ſemitranſparent like flint. It does not harden in the fire, but melts in the focus of a burning glaſs into a tranſparent green glaſs with ſome bubbles. A kind brought from the river of the Amazons in America, and called *circonciſion ſtone*, melts more eaſily in the focus into a brown opaque glaſs, far leſs hard than the ſtone itſelf. The jade-ſtone is unctuous to the touch; whence Mr Kirwan ſeems to ſuſpect, that it contains a portion of argillaceous earth, or rather magneſia. The ſpecific gravity is from 2.970 to 3.389; the texture granular, with a greaſy look, but exceedingly hard, being ſuperior in this reſpect even to quartz itſelf. It is infuſible in the fire, nor can it be diſſolved in acids without a particular management; though M. Sauſſure ſeems to have extracted iron from it. Sometimes it is met with of a whitiſh milky colour from China; but moſtly of a deep or pale-green from America. The common lapis nephriticus is of a grey, yellowiſh, or olive colour. It has its name from a ſuppoſition of its being capable of giving eaſe in nephritic pains, by being applied externally to the loins. It may be diſtinguiſhed from all other ſtones by its hardneſs, ſemipellucidity, and ſpecific gravity.

JAFFA, the modern name of the city of JOPPA in Judea.

JAFFATEEN ISLANDS, the name of four iſlands in the Red Sea, viſited by Mr Bruce in his late travels. They are joined together by ſhoals or ſunk rocks; are crooked or bent like half a bow; and are dangerous for ſhips in the night-time, becauſe there ſeems to be a paſſage between them, to which while the pilots are paying attention, they neglect 2 ſmall ſunk rocks which lie almoſt in the middle of the entrance in deep water.

JAFNAPATAN, a ſea port town, ſeated at the north-eaſt end of the iſland of Ceylon in the Eaſt Indies. The Dutch took it from the Portugueſe in 1658, and have continued in the poſſeſſion of it ſince that time. They export from thence great quantities of tobacco, and ſome elephants, which are accounted the moſt docile of any in the whole world. E. Long. 80. 25. N. Lat. 9. 30.

JAGENDORF, a town and caſtle of Sileſia, capital of a province of the ſame name, ſeated on the river Oppa. E. Long. 17. 47. N. Lat. 50. 4.

JAGGERNAUT, a black pyramidal ſtone worſhipped by the Gentoos, who pretend that it fell from heaven or was miraculouſly preſented on the place where their temple ſtands. There are many other idols of this figure in India; which, however, are all but accounted copies from the Jaggernaut. According to the beſt information Mr Groſe could obtain, this ſtone is meant to repreſent the power preſiding over univerſal generation, which they attribute to the general heat and influence of the ſun acting in ſubordination to it. Domeſtic idols of the form of the Jaggernaut, and diſtinguiſhed by the ſame name, are made by the Gentoos. Theſe are niched up in a kind of triumphal car, decorated with gilding and tinſel; which for ſome days they keep in the beſt apartment in their houſe. During this time their devotion conſiſts in exhibiting the moſt obſcene poſtures, and acting all manner of laſciviouſneſs, in ſight as it were of the idol, and as the moſt acceptable mode of worſhip to that deity it repreſents; after which they carry it in its gilded car in proceſſion to the Ganges, and throw in all together as an acknowledgment to that river of its congenial fertilization with that of the ſun. Formerly this machine was decorated with jewels and other expenſive ornaments; but the Indians are now become leſs extravagant, as they found that the Moors and Chriſtians, watching the places where they threw in their idols, dived for them for the ſake of the jewels with which they were adorned.

Our author conjectures, that this pyramidal form of the Gentoo idol was originally taken from that of flame, which always inclines to point upwards. From this Indian deity he ſuppoſes the ſhape of the Paphian Venus to have been derived, for which Tacitus could not account. This image had nothing of the human form in it, but roſe orbicularly from a broad baſis, and in the nature of a race goal tapering to a narrow convex a-top; which is exactly the figure of the idol in India, conſecrated to ſuch an office as that heathen deity was ſuppoſed to preſide over, and to which, on the borders of the Ganges eſpecially, the Gentoo virgins are brought to undergo a kind of ſuperficial defloration before they are preſented to their huſbands.

JAGO (Richard), an ingenious poet, was vicar of Snitterfield in Warwickſhire, and rector of Kimcote in Leiceſterſhire. He was the intimate friend and correſpondent of Mr Shenſtone, contemporary with him at Oxford, and, it is believed, his ſchoolfellow; was of Univerſity

niverſity College; took the degree of M. A. July 9. 1739; was author of ſeveral poems in the 4th and 5th volumes of Dodſley's Poems; publiſhed a ſermon, in 1755, on the Cauſes of Impenitence conſidered, preached May 4. 1755, at Harbury in Warwickſhire, where he was vicar, on occaſion of a converſation ſaid to have paſſed between one of the inhabitants and an apparition in the church-yard there; wrote "Edge-hill," a poem, for which he obtained a large ſubſcription in 1767; and was alſo author of "Labour and Genius," 1768, 4to; of "The Blackbirds," a beautiful elegy in the Adventurer; and of many other ingenious performances. He died May 28, 1781.

St Jago, a large river of South America, which riſes in the audience of Quito and Peru. It is navigable; and falls into the South Sea, after having watered a fertile country abounding in cotton-trees, and inhabited by wild Americans.

St Jago, the largeſt, moſt populous and fertile of the Cape Verd iſlands, on the coaſt of Africa, and the reſidence of the Portugueſe viceroy. It lies about 13 miles eaſtward from the iſland of Mayo, and abounds with high barren mountains; but the air, in the rainy ſeaſon, is very unwholeſome to ſtrangers. Its produce is ſugar, cotton, wine, and ſome excellent fruits. The animals are black cattle, horſes, aſſes, deer, goats, hogs, civet-cats, and ſome very pretty green monkeys with black faces.

St Jago, a handſome and conſiderable town of South America, the capital of Chili, with a good harbour, a biſhop's ſee, and a royal audience. It is ſeated in a large and beautiful plain, abounding with all the neceſſaries of life, at the foot of the Cordilleras, on the river Mapocho, which runs acroſs it from eaſt to weſt. Here are ſeveral canals and a dyke, by means of which they water the gardens and cool the ſtreets.—It is very much ſubject to earthquakes. W. Long. 69. 35. S. Lat. 33. 40.

St Jago de Cuba, a town in North America, ſituated on the ſouthern coaſt of the iſland of Cuba, in the bottom of a bay, with a good harbour, and on a river of the ſame name. W. Long. 76. 44. N. Lat. 20. 0.

Jago de los Cavalleros, a town of America, and one of the principal of the iſland of Hiſpaniola. It is ſeated on the river Yague, in a fertile ſoil, but bad air. W. Long. 70. 5. N. Lat. 19. 40.

St Jago del Entero, a town of South America, one of the moſt conſiderable of Tucuman, and the uſual reſidence of the inquiſitor of the province. It is ſeated on a large river, in a flat country, where there is game, tygers, guanacos, commonly called *camel-ſheep*, &c.

Jago de la Vega, otherwiſe called *Spaniſh town*, is the capital of the iſland of Jamaica, in the Weſt Indies; and ſtands in 18° 1′ north latitude, and 76° 45′ weſt longitude. It is about a mile in length, and little more than a quarter of a mile in breadth; and contains between 500 and 600 houſes, with about 4000 inhabitants of all colours and denominations. This town is ſituated in a delightful plain, on the banks of the Rio Cobre, 13 miles from Kingſton, and 10 from Port Royal. It is the reſidence of the commander in chief; and here the ſupreme court of judicature is held, four times in the year, *viz*. on the laſt Tueſdays of February, May, Auguſt, and November, and ſits three weeks.—St Jago de la Vega is the county-town of Middleſex, and belongs to the pariſh of St Catharine; in which pariſh there are 11 ſugar-plantations, 108 pens, and other ſettlements, and about 10,000 ſlaves.

JAGUAR, or Jaquar, a name given to the Braſilian ounce, a ſpecies of Felis. See Felis, ſpec. vi.

JAGUEER, in Eaſt India affairs, any penſion from the Grand Mogul, or king of Delhi; generally ſuch as are aſſigned for military ſervices.

JAGUEERDAR, the holder or poſſeſſor of a jagueer. It comes from three Perſian words, "*Ja*" a place;" *gueriſtun* "to take;" and *daſhtun* "to hold;" *quaſi* "a place-holder or penſioner." In the times of the Mogul empire, all the great officers of the court, called *omrahs*, were allowed jagueers, either in lands of which they collected the revenues, or aſſignments upon the revenues for ſpecified ſums, payable by the lord lieutenant of a province: which ſums were for their maintenance, and the ſupport of ſuch troops as they were neceſſitated to bring into the field when demanded by the emperor, as the condition of their jagueers, which were always revokable at pleaſure.

JAIL-fever, a very dangerous diſtemper of the contagious kind, ariſing from the putreſcent diſpoſition of the blood and juices. See (the *Index* ſubjoined to) Medicine.

JALAP, in botany and the materia medica, the root of a ſpecies of convolvulus or bind-weed. See Convolvulus.

This root is brought to us in thin tranſverſe ſlices from Xalapa, a province of New Spain. Such pieces ſhould be choſen as are moſt compact, hard, weighty, dark-coloured, and abound moſt with black circular ſtriæ. Slices of bryony root are ſaid to be ſometimes mixed with thoſe of jalap: theſe may be eaſily diſtinguiſhed by their whiter colour and leſs compact texture. This root has no ſmell, and very little taſte upon the tongue; but when ſwallowed, it affects the throat with a ſenſe of heat, and occaſions a plentiful diſcharge of ſaliva. Jalap in ſubſtance, taken in a doſe of about half a dram (leſs or more, according to the circumſtances of the patient) in plethoric, or cold phlegmatic habits, proves an effectual, and in general a ſafe purgative, performing its office mildly, ſeldom occaſioning nauſea or gripes, which too frequently accompany the other ſtrong cathartics. In hypochondriacal diſorders, and hot bilious temperaments, it gripes violently if the jalap be good; but rarely takes due effect as a purge. An extract made by water purges almoſt univerſally, but weakly; and at the ſame time has a conſiderable effect by urine. The root remaining after this proceſs gripes violently. The pure reſin, prepared by ſpirit of wine, occaſions moſt violent gripings, and other diſtreſſing ſymptoms, but ſcarce proves at all cathartic: triturated with ſugar, or with almonds into the form of an emulſion or diſſolved in ſpirit, and mixed with ſyrups, it purges plentifully in a ſmall doſe, without occaſioning much diſorder: the part of the jalap remaining after the ſeparation of the reſin, yields to water an extract, which has no effect as a cathartic, but operates powerfully by urine. Its officinal preparations are an extract made with water and ſpirit, a ſimple tincture, and a compound powder.—Frederick Hoffman particularly

cularly cautious againſt giving this medicine to children; and aſſures us, that it will deſtroy appetite, weaken the body, and perhaps occaſion even death. In this point, this celebrated practitioner was probably deceived: children, whoſe veſſels are lax, and the food ſoft and lubricating, bear theſe kinds of medicines, as Geoffroy obſerves, better than adults; and accordingly inoculators make much uſe of the tincture mixed with ſimple ſyrup. The compound powder is employed in dropſy, as a hydragogue purge; and where ſtimulus is not contra-indicated, jalap is conſidered as a ſafe cathartic.

JALEMUS, in antiquity, a kind of mournful ſong, uſed upon occaſion of death, or any other affecting accident. Hence the Greek proverbs had their original ιαλεμου οικροτερος, or ψυχροτερος, i. e. *more ſad or colder than a jalemus*, εις τους ιαμελους εγγραπτεος, *worthy to be ranked among the jalemuſes.*

JAMADAR: An officer of horſe or foot, in Hindoſtan. Alſo the head or ſuperintendant of the Peons in the Sewaury, or train of any great man.

JAMAICA, an iſland of the Weſt Indies, the largeſt of the Antilles, lying between 17° and 19° N. Lat. and between 76° and 79° W. Long.; in length near 170 miles, and about 60 in breadth. It approaches in its figure to an oval. The windward paſſage right before it hath the iſland of Cuba on the weſt, and Hiſpaniola on the eaſt, and is about 20 leagues in breadth.

This iſland was diſcovered by admiral Chriſtopher Columbus in his ſecond voyage, who landed upon it May 5. 1494; and was ſo much charmed with it, as always to prefer it to the reſt of the iſlands: in conſequence of which, his ſon choſe it for his dukedom. It was ſettled by Juan d'Eſquivel A. D. 1509, who built the town, which, from the place of his birth, he called *Seville*, and 11 leagues farther to the eaſt ſtood Melilla. Oriſton was on the ſouth ſide of the iſland, ſeated on what is now called *Blue Fields River*. All theſe are gone to decay; but St Jago, now Spaniſh Town, is ſtill the capital. The Spaniards held this country 160 years, and in their time the principal commodity was cacao; they had an immenſe ſtock of horſes, aſſes, and mules, and prodigious quantities of cattle. The Engliſh landed here under Penn and Venables, May 11. 1654, and quickly reduced the iſland. Cacao was alſo their principal commodity till the old trees decayed, and the new ones did not thrive; and then the planters from Barbadoes introduced ſugar-canes, which hath been the great ſtaple ever ſince.

The proſpect of this iſland from the ſea, by reaſon of its conſtant verdure, and many fair and ſafe bays, is wonderfully pleaſant. The coaſt, and for ſome miles within, the land is low; but removing father, it riſes and becomes hilly. The whole iſle is divided by a ridge of mountains running eaſt and weſt, ſome riſing to a great height: and theſe are compoſed of rock and a very hard clay; through which, however, the rains that fall inceſſantly upon them have worn long and deep cavities, which they call *gullies*. Theſe mountains, however, are far from being unpleaſant, as they are crowned even to their ſummits by a variety of fine trees. There are alſo about a hundred rivers that iſſue from them on both ſides; and, though none of them are navigable for any thing but canoes, are both pleaſing and profitable in many other reſpects. The climate, like that of all countries between the tropics, is very warm towards the ſea, and in marſhy places unhealthy; but in more elevated ſituations, cooler; and where people live temperately, to the full as wholeſome as in any part of the Weſt Indies. The rains fall heavy for about a fortnight in the months of May and October; and, as they are the cauſe of fertility, are ſtyled ſeaſons. Thunder is pretty frequent, and ſometimes ſhowers of hail: but ice or ſnow, except on the tops of the mountains, are never ſeen; but on them, and at no very great height, the air is exceedingly cold.

The moſt eaſtern parts of this ridge are famous under the name of the *Blue Mountains*. This great chain of rugged rocks defends the ſouth ſide of the iſland from thoſe boiſterous north-weſt winds, which might be fatal to their produce. Their ſtreams, though ſmall, ſupply the inhabitants with good water, which is a great bleſſing, as their wells are generally brackiſh. The Spaniards were perſuaded that theſe hills abounded with metals: but we do not find that they wrought any mines: or if they did, it was only copper, of which they ſaid the bells in the church of St Jago were made. They have ſeveral hot ſprings, which have done great cures. The climate was certainly more temperate before the great earthquake; and the iſland was ſuppoſed to be out of the reach of hurricanes, which ſince then it hath ſeverely felt. The heat, however, is very much tempered by land and ſea breezes; and it is aſſerted, that the hotteſt time of the day is about eight in the morning. In the night the wind blows from the land on all ſides, ſo that no ſhips can then enter their ports.

In an iſland ſo large as this, which contains above five millions of acres, it may be very reaſonably conceived that there are great variety of ſoils. Some of theſe are deep, black, and rich, and mixed with a kind of potter's earth; others ſhallow and ſandy; and ſome of a middle nature. There are many ſavannahs, or wide plains, without ſtones, in which the native Indians had luxuriant crops of maize, which the Spaniards turned into meadows, and kept in them prodigious herds of cattle. Some of theſe ſavannahs are to be met with even amongſt the mountains. All theſe different ſoils may be juſtly pronounced fertile, as they would certainly be found, if tolerably cultivated, and applied to proper purpoſes. A ſufficient proof of this will ariſe from a very curſory review of the natural and artificial produce of this ſpacious country.

It abounds in maize, pulſe, vegetables of all kinds, meadows of fine graſs, a variety of beautiful flowers, and as great a variety of oranges, lemons, citrons, and other rich fruits. Uſeful animals there are of all ſorts, horſes, aſſes, mules, black cattle of a large ſize, and ſheep, the fleſh of which is well taſted, though their wool is hairy and bad. Here are alſo goats and hogs in great plenty; ſea and river fiſh; wild, tame, and water fowl. Amongſt other commodities of great value, they have the ſugar-cane, cacao, indigo, pimento, cotton, ginger, and coffee; trees for timber and other uſes, ſuch as mahogany, manchineel, white wood, which no worm will touch, cedar, olives, and many more. Beſides theſe, they have fuſtick, red wood, and various other materials for dyeing. To theſe we may add a multitude of valuable drugs, ſuch as guaiacum, china, ſarſaparilla, caſſia, tamarinds, vanellas, and the prickle-pear or opuntia, which produces the cochineal; with no inconſiderable number of odoriferous gums. Near the coaſt they have ſalt-ponds, with which they ſupply their own conſumption, and might make any quantity they pleaſed.

As this iſland abounds in rich commodities, it is happy likewiſe in having a number of fine and ſafe ports. Point Morant, the eaſtern extremity of the iſland, hath a fair and commodious bay. Paſſing on to the ſouth, there is Port Royal: on a neck of land which forms one ſide of it, there ſtood once the faireſt town in the iſland; and the harbour is as fine a one as can be wiſhed, capable of holding a thouſand large veſſels, and ſtill the ſtation of the Britiſh ſquadron. Old Harbour is alſo a convenient port, ſo is Maccary Bay; and there are at leaſt twelve more between this and the weſtern extremity, which is point Negrillo, where the ſhips of war lie when there is a war with Spain. On the north ſide there is Orange Bay, Cold Harbour, Rio Novo, Montego-Bay, Port Antonio, one of the fineſt in the iſland, and ſeveral others. The north-weſt winds, which ſometimes blow furiouſly on this coaſt, render the country on that ſide leſs fit for canes, but pimento thrives wonderfully; and certainly many other ſtaples might be raiſed in ſmall plantations, which are frequent in Barbadoes, and might be very advantageous here in many reſpects.

The town of Port Royal ſtood on a point of land running far out into the ſea, narrow, ſandy, and incapable of producing any thing. Yet the excellence of the port, the convenience of having ſhips of ſeven hundred tons coming cloſe up to their wharves, and other advantages, gradually attracted inhabitants in ſuch a manner, that though many of their habitations were built on piles, there were near two thouſand houſes in the town in its moſt flouriſhing ſtate, and which let at high rents. The earthquake by which it was overthrown happened on the 7th of June 1692, and numbers of people periſhed in it. This earthquake was followed by an epidemic diſeaſe, of which upwards of three thouſand died: yet the place was rebuilt; but the greateſt part was reduced to aſhes by a fire that happened on the 9th of January 1703, and then the inhabitants removed moſtly to Kingſton. It was, however, rebuilt for the third time; and was riſing towards its former grandeur, when it was overwhelmed by the ſea, Auguſt 28, 1722. There is, notwithſtanding, a ſmall town there at this day. Hurricanes ſince that time have often happened, and occaſioned terrible devaſtations.

The iſland is divided into three counties, Middleſex, Surry, and Cornwall; containing 20 pariſhes, over each of which preſides a magiſtrate ſtyled a *cuſtos*; but theſe pariſhes in point of ſize are a kind of hundreds. The whole contains 36 towns and villages, 18 churches and chapels, and about 23,000 white inhabitants.

The adminiſtration of public affairs is by a governor and council of royal appointment, and the repreſentatives of the people in the lower houſe of aſſembly. They meet at Spaniſh Town, and things are conducted with great order and dignity. The lieutenant-governor and commander in chief has L.5000 currency, or L.3375 Sterl. beſides which, he has a houſe in Spaniſh Town, a pen or a farm adjoining, and a polink or mountain for proviſions: a ſecretary, an under ſecretary, and a domeſtic chaplain.

The honourable the council conſiſts of a preſident and 10 members; with a clerk, at L. 270, chaplain L.100, uſher of the black rod and meſſenger L. 250.

The honourable the aſſembly conſiſts of 43 members, one of whom is choſen ſpeaker. To this aſſembly belong a clerk, with L.1000 ſalary; a chaplain L.150; meſſenger, L.700; deputy, L.140; and printer, L.200.

The number of members returned by each pariſh and county are, for *Middleſex* 17, viz. St. Catharine 3, St Dorothy 2, St John 2, St Thomas in the Vale 2, Clarendon 2, Vere 2, St Mary 2, St Ann 2: For *Surry* 16, viz Kingſton 3, Port Royal 3, St Andrew 2, St David 2, St Thomas in the Eaſt 2, Portland 2, St George 2: For *Cornwall* 10, viz. St Eliſabeth 2, Weſtmoreland 2, Hanover 2, St James 2, Trelawney 2.

The high court of chancery conſiſts of the chancellor (governor for the time being), 25 maſters in ordinary, and 20 maſters extraordinary; a regiſter, and clerk of the patents; ſerjeant at arms, and mace-bearer. The court of vice admiralty has a ſole judge, judge ſurrogate, and commiſſary, King's advocate, principal regiſter, marſhal, and a deputy-marſhal. The court of ordinary, conſiſts of the ordinary (governor for the time being), and a clerk. The ſupreme court of judicature, has a chief juſtice, L.120, and 16 aſſiſtant judges; attorney-general, L.400; clerk of the courts, L.100: clerk of the crown, L.350; ſolicitor for the crown; 33 commiſſioners for taking affidavits; a provoſt-marſhal-general and eight deputies; 18 barriſters, beſides the attorney-general and advocate-general; and upwards of 120 practiſing attornies at law.

The commerce of Jamaica is very conſiderable, not only with all parts of Great Britain and Ireland, but with Africa, North and South America, the Weſt India iſlands, and the Spaniſh main. The ſhips annually employed are upwards of 500 ſail.

The following account of the exports of this iſland in 1770, as given by Abbe Raynal, but which in ſeveral particulars appears to be under rated, will contribute more than all that hath been ſaid, to ſhow the importance of Jamaica. They conſiſted in 2249 bales of cotton, which at 10 pounds per bale, the price in the iſland, amounts to 22,490l.; 1783 hundred weight of coffee, at three pounds five ſhillings per hundred, 60881.; 2753 bags of ginger, at two pounds five ſhillings per bag, 6194l.; 2211 hides, at ſeven ſhillings per hide, 773l.; 16,475 puncheons of rum, at 10l. per puncheon, 164,750l. Mahogany, 15,282 pieces and 8500 feet, 50,000l. Of pimento, 2,089,734 pounds weight, 52,243l. Sugar, 57,675 hogſheads, 6425 tierces, 52 barrels, at ſeventeen pounds ten ſhillings per hogſhead, twelve pounds per tierce, and four pounds per barrel, amounting in the whole to 1,086,620l. Sarſaparilla, 205 bags, at ten pounds per bag, 2250l. Exports to Great Britain and Ireland, 1,391,210l. To North-America, 146,324l. To the other iſlands, 595l. Total of the exports, 1,538,730l.

The following is a general view of the property and chief produce of the whole iſland in 1786, as prefixed by Mr. Beckford to his deſcriptive account of Jamaica †.

Counties.

† *Introd.* p. 29.

Counties.	Sugar Eſtates.	Other Settlements.	Slaves.	Produce. Hhds. of Sugar.	Cattle.
Middleſex	323	917	87100	31500	75000
Surry	350	540	75600	34900	80000
Cornwall	388	561	90000	39000	69500
Total	1061	2018	255700	105400	224500

A comparative view between the years 1768 and 1786.

	Middleſex in		Surry in		Cornwall in		Total in		Amount of Increaſe.
	1768	1786	1768	1786	1768	1786	1768	1786	
Sugar Eſtates	239	323	146	350	266	388	651	1061	410
Sugar Hhds.	24050	31500	15010	34900	29100	39000	68160	105400	37240
Negroes.	66744	87100	39542	75600	60614	93000	166900	255700	88800
Cattle	59510	75000	21465	80000	54775	69500	135750	224500	88750

From the above ſcheme it appears, how conſiderable has been the increaſe of ſugar eſtates, and conſequently of produce of negroes and cattle in eighteen years: and in the ſame portion of time (it is ſaid), if proper encouragement were given, they might be augmented in a threefold proportion.

The common valuation of an eſtate in Jamaica is as follows:

	Sterling.	
Cane land (the canes upon it valued ſeparately) at - -	£.22	per acre.
Plants - - -	22	ditto.
Cane land, in ratoons and young plants	15	ditto.
Paſture land - - -	8	ditto.
Wood land - - -	4	ditto.
Proviſions - - - -	14	ditto.
Negroes - - - -	57	ditto.
Mules - - - -	22	ditto.
Steers - - - -	10	ditto.
Breeding cattle, &c. - - -	5	ditto.
Works, water, carts, &c. -	from 7 to 10,000	

If a planter would wiſh to leaſe his eſtate for a number of years, his income would be large if he could get only 10d. ſterling a day for his negroes (the loſs made good), without requiring any thing for his land or works.

It ſhould be here obſerved, that where two hogſheads of ſugar are made, there is at leaſt one puncheon of rum; but the proportion has been of late years more conſiderable: the quantity of the latter will therefore be 52,700 puncheons.

JAMBI, or **Jambis**, a ſea-port town and and ſmall kingdom of Aſia, on the eaſtern coaſt of the iſland of Sumatra. It is a trading place. The Dutch have a fort here; and export pepper from thence, with the beſt ſort of canes. E. Long. 103. 55. S. Lat. 0. 30.

JAMBIA Vicus. See Yambo.

IAMBIC, in ancient poetry, a ſort of verſe, ſo called from its conſiſting either wholly, or in great part, of iambuſes. See Iambus.

Ruddiman makes two kinds of iambic, viz. dimeter and trimeter; the former containg four feet, and the latter ſix. And as to the variety of their feet, they conſiſt wholely of iambuſes, as in the two following verſes of Horace:

1 2 3 4 5 6
Dim. *Inar|ſit æ|ſtuo|ſius*
Trim. *Suis| & i |pſa Ro |ma vi|ribus |ruit..*

Or, a Dactylus, ſpondeus, anapeſtus, and ſometimes tribrachys, obtain in the odd places; and the tribrachys alſo in the even places, excepting the laſt. Examples of all which may be ſeen in Horace; as,

Dimeter.

1 2 3 4 5 6
Canidi|a tra|ctavit|dapes|
Vide|re prope|rantes domum|

Trimeter..

Quò quò| ſcele|ſti rui|tis|aut|cur dex|teris.
Prius|que cœ|lum ſi|det in|ferius|mari.
Aliti|bus at|que cani|bus homi|cid' He|ctorem.
Pavidum|que lepo|r' aut ad|venam laqueo|gruem.

JAMBLICUS, the name of two celebrated Platonic philoſophers, one of whom was of Colchis, and the other of Apamea in Syria. The firſt, whom Julian equals to Plato, was the diſciple of Anatolius and Porphyry, and died under the reign of the emperor Conſtantine.—The ſecond alſo enjoyed great reputation. Julian wrote ſeveral letters to him, and it is ſaid he was poiſoned under the reign of Valens. It is not known to which of the two we ought to attribute the works we have in Greek under the name of *Jamblicus*, viz. 1. The hiſtory of the life of Pythagoras, and the ſect of the Pythagoreans. 2. An exhortation to the ſtudy of philoſophy. 3. A piece againſt Porphyry's letter on the myſteries of the Egyptians.

JAMBOLIFERA, in botany: A genus of the monogynia order, belonging to the octandria claſs of plants; and in the natural method ranking with thoſe of which the order is doubtful. The calyx is quadridented; the corolla tetrapetalous, and funnel-ſhaped; the filaments a little plane; the ſtigma ſimple.

IAMBUS, in the Greek and Latin proſody, a poetical foot, conſiſting of a ſhort ſyllable followed by a long one; as in

v- v- v- v-
Θεȣ λογω, *Dei*, *meas*.

Syllaba longa brevi ſubjecta vocatur iambus, as Horace expreſſes it; who alſo calls the iambus a ſwift, rapid foot, *pes citus*.

The word, according to ſome, took its riſe from Iambus, the ſon of Pan and Echo, who invented this foot; or, perhaps, who only uſed ſharp-biting expreſſions to Ceres, when afflicted for the death of Proſerpine. Others rather derive it from the Greek ιος, *venenum* "poiſon;" or from ιαμβιζω, *maledico* "I rail, or revile;" becauſe the verſes compoſed of iambuſes were at firſt only uſed in ſatire.

JAMES (St.) called *the Greater*, the ſon of Zebedee, and the brother of John the evangeliſt, was born at Bethſaida, in Galilee. He was called to be an apoſtle, together with St John, as they were mending their nets with their father Zebedee, who was a fiſherman; when Chriſt gave them the name of *Boanerges* or *Sons of Thunder*. They then followed Chriſt, were witneſſes with St Peter of the transfiguration on mount Tabor, and accompanied our Lord in the garden of olives. It is believed that St James firſt preached the goſpel to the diſperſed Jews; and afterwards returned to Judea, where he preached at Jeruſalem, when the Jews raiſed up Herod Agrippa againſt him, who put him to a cruel death about the year 44. Thus St James was the firſt of the apoſtles who ſuffered martyrdom. St Clement of Alexandria relates, that his accuſer was ſo ſtruck with his conſtancy, that he became converted and ſuffered with him. There is a magnificent church at Jeruſalem which bears the name of *St James*, and belongs to the Armenians. The Spaniards pretend, that they had St James for their apoſtle, and boaſt of poſſeſſing his body; but Baronius, in his Annals, refutes their pretenſions.

James (St.), called *the Leſs*, an apoſtle, the brother of Jude, and the ſon of Cleophas and Mary the ſiſter of the mother of our Lord, is called in Scripture the *Juſt*, and the *brother* of Jeſus, who appeared to him in particular after his reſurrection. He was the firſt biſhop of Jeruſalem, when Ananias II. high prieſt of the Jews, cauſed him to be condemned, and delivered him into the hands of the people and the Phariſees, who threw him down from the ſteps of the temple, when a fuller daſhed out his brains with a club, about the year 62. His life was ſo holy, that Joſephus conſiders the ruin of Jeruſalem as a puniſhment inflicted on that city for his death. He was the author of the epiſtle which bears his name.

St James of the Sword, (San Jago del Eſpada), a military order in Spain, inſtituted in 1170, under the reign of Ferdinand II. king of Leon and Gallicia. Its end was to put a ſtop to the incurſions of the Moors; the knights obliging themſelves by a vow to ſecure the roads. An union was propoſed and agreed to in 1170 between theſe and the canons of St Floy; and the order was confirmed by the pope in 1175. The higheſt dignity in that order is that of grand maſter, which has been united to the crown of Spain. The knights are obliged to make proof of their deſcent from families that have been noble for four generations on both ſides; they muſt alſo make it appear that their ſaid anceſtors have neither been Jews, Saracens, nor heretics; nor even to have been called in queſtion by the inquiſition. The novices are obliged to ſerve ſix months in the galleys, and to live a month in a monaſtry. Heretofore they were truly religious, and took a vow of celibacy; but Alexander III. gave them a permiſſion to marry. They now make no vows but of poverty, obedience, and conjugal fidelity; to which, ſince the year 1652, they have added that of defending the immaculate conception of the holy Vigin. Their habit is a white cloak, with a red croſs on the breaſt. This is eſteemed the moſt conſiderable of all the military orders in Spain: the king carefully preſerves the office of grand maſter in his own family, on account of the rich revenues and offices, whereof it gives him the diſpoſal. The number of knights is much greater now than formerly, all the grandees chuſing rather to be received into this than into the order of the golden fleece; inaſmuch as this puts them in a fair way of attaining to commands, and gives them many conſiderable privileges in all the provinces of Spain, but eſpecially in Catalonia.

James, the name of ſeveral kings of Scotland and of Great Britain. See (*Hiſtories of*) SCOTLAND and BRITAIN.

James I. king of Scotland in 1423, the firſt of the houſe of Stuart, was not only the moſt learned king, but the moſt learned man of the age in which he flouriſhed. This ingenious and amiable prince fell into the hands of the enemies of his country in his tender youth, when he was flying from the ſnares of his unnatural ambitious uncle, who governed his dominions, and was ſuſpected of deſigns againſt his life. Having ſecretly embarked for France, the ſhip was taken by an Engliſh privateer off Flamborough-head; and the prince and his attendants (among whom was the earl of Orkney) were confined in a neighbouring caſtle until they were ſent to London. See (*Hiſtory of*) SCOTLAND.

The king of England knew the value of the prize he had obtained, and kept it with the moſt anxious care. The prince was conducted to the Tower of London immediately after he was ſeized, April 12. A. D. 1405, in the 13th year of his age; and there kept a cloſe priſoner till June 10. A. D. 1407, when he was removed to the caſtle of Nottingham, from whence he was brought back to the Tower, March 1. A. D. 1414, and there confined till Auguſt 3. in the ſame year, when he was conveyed to the caſtle of Windſor, where he was detained till the ſummer of A. D. 1417; when Henry V. for political reaſons, carried him with him into France in his ſecond expedition. In all theſe fortreſſes, his confinement, from his own account of it, was ſo ſevere and ſtrict, that he was not ſo much as permitted to take the air. In this melancholy ſituation, ſo unſuitable to his age and rank, books were his chief companions, and ſtudy his greateſt pleaſure. He roſe early in the morning, immediately applied to reading, to divert him from painful reflections on his misfortunes, and continued his ſtudies, with little interruption, till late at night. James being naturally ſenſible, ingenious, and fond of knowledge, and having received a good education in his early youth, under the direction of Walter Wardlaw biſhop of St Andrew's, by this cloſe application to ſtudy, became an univerſal ſcholar, an excellent poet, and exquiſite muſician. That he wrote as well as read much, we have his own teſtimony, and that of all the hiſtorians who lived near his time. Bowmaker, the continuator of Fordun, who was his contemporary, and perſonally acquainted with him, ſpends ten chapters in his praiſes, and in lamentations on his death; and amongſt other things ſays, that his knowledge of the ſcriptures, of law, and philoſophy, was incredible. Hector Boyſe tells us, that Henry IV. and V. furniſhed their royal priſoner with the beſt teachers in all the arts and ſciences; and that, by their aſſiſtance, he made great proficiency in every part of learning and the fine arts; that he became a perfect maſter in grammar, rhetoric, poetry, muſic, and all the ſecrets of natural philoſophy, and was inferior to none in divinity and law. He obſerves further, that the poems he compoſed in his native tongue were ſo beautiful, that you might eaſily perceive he was born a poet; but that his Latin poems were not ſo faultleſs; for though they abounded in the moſt ſublime ſentiments, their language was not ſo pure, owing to the rudeneſs of the times in which he lived. This prince's ſkill in muſic was remarkable. Walter Bower abbot of Inch-colm, who was intimately acquainted with that prince, aſſures us that he excelled all mankind in that art both vocal and inſtrumental; and that he played on eight different inments (which he names), and eſpecially on the harp, with ſuch exquiſite ſkill, that he ſeemed to be inſpired *. King James was not only an excellent performer, but alſo a capital compoſer, both of ſacred and ſecular muſic; his fame on that account was extenſive, and of long duration. Above a century after his death, he was celebrated in Italy as the inventer of a new and pleaſing kind of melody, which had been admired and imitated in that country. This appears from the following teſtimony of Aleſſandro Taſſoni, a writer who was well informed, and of undoubted credit. "We may reckon among us moderns, James king of Scotland, who not only compoſed many ſacred pieces of vocal muſic, but alſo of himſelf invented a new kind of muſic, plaintive and melancholy, different from all other; in which he hath been imitated by Carlo Geſualdo prince of Venoſa, who, in our age hath improved muſic with new and admirable inventions." † As the prince of Venoſa imitated king James, the other muſicians of Italy imitated the prince of Venoſa. "The moſt noble Carlo Geſualdo, the prince of muſicians of our age, introduced ſuch a ſtyle of modulation, that other muſicians yielded the preference to him; and all ſingers and players on ſtringed inſtruments, laying aſide that of others, every where embraced his ‡. All the lovers, therefore, of Italian or of Scotch muſic, are much, indebted to the admirable genius of king James I. who, in the gloom and ſolitude of a priſon invented a new kind of muſic, plaintive indeed, and ſuited to his ſituation, but at the ſame time ſo ſweet and ſoothing, that it hath given pleaſure to millions in every ſucceeding age.

As James I. of Scotland was one of the moſt accompliſhed princes that ever filled a throne, he was alſo one of the moſt unfortunate. After ſpending almoſt 20 years in captivity, and encountering many difficulties, on his return into his native kingdom, he was murdered by barbarous aſſaſſins in the prime of life. In the monuments of his genius, he hath been almoſt equally unfortunate. No veſtiges are now remaining of his ſkill in architecture, gardening, and painting; though we are aſſured by one who was well acquainted with him, that he excelled in all theſe arts*. Many of the productions of his pen having alſo periſhed; for he tells us himſelf that he wrote much †; and we know of only three of his poems that are now extant, viz. Chriſt's Kirk on the Green—Peebles at the Play—and the King's Quair, which was lately diſcovered by Mr Warton, and hath been publiſhed by another gentleman ‡. But ſlender as theſe remains are, they afford ſufficient evidence, that the genius of this royal poet was not inferior to that of any of his contemporaries; and that it was equally fitted for the gayeſt or the graveſt ſtrains.

James II. king of Scotland, 1437, ſucceeded his father, being then not ſeven years of age: and was killed at the ſiege of Roxburgh in 1460, aged 29.

James III. king of Scotland, ſucceeded his father, in 1460, in the 7th year of his age. The moſt ſtriking feature in the character of this prince, unjuſtly repreſented as tyrannical by ſeveral hiſtorians, was his fondneſs for the fine arts, and for thoſe who excelled in them, on whom he beſtowed more of his company, confidence, and favour, than became a king in his circumſtances. This excited in his fierce and haughty nobles a diſlike and contempt of their ſovereign, and indignation againſt the objects of his favour; which produced the moſt pernicious conſequences, and ended in a rebellion that proved fatal to James, who was ſlain in 1488, aged 36.

James IV. king of Scotland, ſucceeded his father in 1488. He was a pious and valiant prince; ſubdued his rebellious ſubjects; and afterwards, taking part with Louis XII. againſt Henry VIII. of England, he was ſlain in the battle of Flouden-Field in 1513, aged 41.—This king is acknowledged to have had great accompliſhments both of mind and body. His Latin epiſtles are claſſical, compared with the barbarous ſtyle of the foreign princes with whom he correſſponded. Like his father, he had a taſte for the fine arts, particularly that of Sculpture. The attention he paid to the civilization of his people, and his diſtribution of juſtice, merit the higheſt praiſe. After all, the virtues of James appear to have been more ſhining than ſolid; and his character was that of a fine gentleman and a brave knight, rather than a wiſe or a great monarch. At the time of his death, he was only in his forty-firſt year. Like all the princes of his family (to his great grandſon James VI.) his perſon was handſome, vigorous, and active. From their coins it does not appear, that either he, or any of his predeceſſors of the Stuart race, wore their beards, as did all his ſucceſſors, to the reign of Charles II.

James V. king of Scotland, in 1513, was but 18 months old when his father loſt his life. When of age, he aſſiſted Francis I. king of France againſt the emperor Charles le Quint; for which ſervice Francis gave him his eldeſt daughter in marriage, in 1535. This princeſs died in two years; and James married Mary of Lorraine, daughter of Claud duke of Guiſe, and widow of Louis d'Orleans, by whom he had only one child, the unfortunate Mary queen of Scots, born only eight days before his death, which happened December 13. 1542, in the 35th year of his age. This was the firſt prince of his family who died a natural death, ſince its elevation to the throne. He died, however, of a broken heart, occaſioned by differences with his barons. He was formed by nature to be the ornament of a throne and a bleſſing to his people; but his excellent endowments were rendered in a great meaſure ineffectual by an improper education. Like moſt of his predeceſſors, he was born with a vigourous graceful perſon, which in the early part of his reign, was improved by all the manly exerciſes then in uſe. This prince was the author of a humourous compoſition in poetry, which goes by the name of the *Gaberlunzie Man*.

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* *Scoticron lib.* 16. ſ. 28.

† *Aleſſand Taſſ. Penſieri Diverſi,* lib 10. Sir John Hawkins, vol. 4 p. 5, 6.

‡ Id. vol. 3 p. 212.

* *Scoticron.* lib. 16. cap. 30.

† *King's Quair,* canto I. ſtan. 13.

‡ See *Poetical Remains of James I.* Edin. 1783 and Warton's Hiſt. Poet vol. ii. p. 125.

James VI. king of Scotland in 1567, and of England in 1603, was ſon of Mary queen of Scots, whom he ſucceeded in Scotland, as he did Elizabeth in England. Strongly attached to the Proteſtant religion, he ſignalized himſelf in its ſupport, which gave riſe to the horrid conſpiracy of the Papiſts to deſtroy him and all the Engliſh nobility by the Gunpowder Plot, diſcovered November 5. 1605. The following year, a political teſt of loyalty was required, which ſecured the king's perſon by clearing the kingdom of thoſe diſaffected Roman-Catholic ſubjects who would not ſubmit to it. The chief glory of this king's reign conſiſted in the eſtabliſhment of new colonies, and the introduction of ſome manufactures. The nation enjoyed peace, and commerce flouriſhed during his reign. Yet his adminiſtration was deſpiſed both at home and abroad for being the head of the Proteſtant cauſe in Europe, he did not ſupport it in that great criſis, the war of Bohemia; abandoning his ſon-in-law the elector Palatine; negotiating when he ſhould have fought, deceived at the ſame time by the courts of Vienna and Madrid; continually ſending illuſtrious ambaſſadors to foreign powers, but never making a ſingle ally. He valued himſelf much upon his polemical writings; and ſo fond was he of theological diſputations, that to keep them alive he founded, for this expreſs purpoſe, Chelſea-college; which was converted to a much better uſe by Charles II. His *Baſilicon Doron*, Commentary on the Revelation, writings again Bellarmine, and his *Dæmonologia*, or doctrine of witchcraft, are ſufficiently known. There is a collection of his writings and ſpeeches in one folio volume. Several other pieces of his are extant, ſome of them in the Caballa, others in manuſcript in the Britiſh muſeum, and others in Howards collection. He died in 1625, in the 59th year of his age, and 23d of his reign.

James II. king of England, Scotland, &c. 1685, grandſon of James I. ſucceeded his brother Char. II. It is remarkable, that this prince wanted neither courage nor political abilites whilſt he was duke of York; on the contrary he was eminent for both: but when he aſcended the throne, he was no longer the ſame man. A bigot from his infancy to the Romiſh religion and to its hierarchy, he ſacrificed every thing to eſtabliſh them in direct contradiction to the experience he had acquired, during the long reign of his brother, of the genius and character of the people he was to govern. Guided by the Jeſuit Peters his confeſſor, and the infamous chancellor Jeffries, he violated every law enacted for the ſecurity of the Proteſtant religion; and then unable to face the reſentment of his injured ſubjects, he fled like a coward, inſtead of diſarming their rage by a diſmiſſion of his popiſh miniſters and prieſts. He rather chooſe to live and die a bigot, or, as he believed, a ſaint, than to ſupport the dignity of his anceſtors, or periſh beneath the ruins of his throne. The conſequence was the revolution in 1689. James II. died in France in 1710, aged 61. He wrote Memoirs of his own life and campaigns to the reſtoration; the original of which is preſerved in the Scotch college at Paris. This piece is printed at the end of Ramſay's life of Marſhal Turenne. 2. Memoirs of the Engliſh affairs, chiefly naval, from the year 1660 to 1673. The royal ſufferer, king James II. conſiſting of meditations ſoliloquies, vows, &c. ſaid to be compoſed by his majeſty at St Germains. 4. Three letters; which were publiſhed by William Fuller gent. in 1702. with other papers relating to the court of St Germains, and are ſaid in the title page to be printed by command.

James (Thomas), a learned Engliſh critic and divine, born about the year 1571. He recommended himſelf to the office of keeper of the public library at Oxford, by the arduous undertaking of publiſhing a catalogue of the MSS in each college library at both univerſities. He was elected to this office in 1602, and held it 18 years, when he reſigned it to proſecute his ſtudies with more freedom. In the convocation held with the parliament at Oxford in 1625, of which he was a member, he moved to have proper commiſſioners appointed to collate the MSS of the fathers in all the libraries in England, with the Popiſh editions in order to detect the forgeries in the latter: but this propoſal not meeting with the deſired encouragement, he engaged in the laborious taſk himſelf which he continued until his death in 1629. He left behind, him a great number of learned works.

James (Richard), nephew of the former, entered into orders in 1615: but, being a man of humour, of three ſermons preached before the univerſity, one concerning the obſervation of Lent, was without a text, according to the moſt ancient manner; another againſt the text; and the third beſide it. About the year 1619, he travelled through Wales, Scotland, Shetland, into Greenland and Ruſſia, of which he wrote obſervations. He aſſiſted Seldon in compoſing his *Marmora Arundeliana*; and was very ſerviceable to Sir Robert Cotton, and his ſon Sr Thomas, in diſpoſing and ſettling their noble library. He died in 1638; and has an extraordinary character given him by Wood for learning and abilities.

James (Dr Robert), an Engliſh phyſician of great eminence, and particularly diſtinguiſhed by the preparation of a moſt excellent fever-powder, was born at Kinverſton in Stafordſhire, A. D. 1703; his father a major in the army, his mother a ſiſter of Sir Robert Clarke. He was of St John's college in Oxford, where he took the degree of A. B. and afterwards practiſed phyſic at Sheffield, Litchfield, and Birmingham ſucceſſively. Then he removed to London, and became a licentiate in the college of phyſicians; but in what year we cannot ſay. At London he applied himſelf to writing as well as practiſing phyſic; and in 1743, publiſhed a medicinal dictionary, 3 vols folio. Soon after he publiſhed an Engliſh tranſlation, with a Sapplement by himſelf, of *Ramazzini de morbis artifi-*

eum: to which he alſo prefixed a piece of Frederic Hoffman upon Endemial Diſtempers, 8vo. In 1746, The Practice of Phyſic, 2 vols 8vo; in 1760, On Canine Madneſs, 8vo: in 1764, A Diſpenſatory, 8vo. June 25. 1755, when the king was at Cambridge. James was admitted by mandamus to the doctorſhip of phyſic. In 1778, were publiſhed, A diſſertation upon Fevers, and A Vindication of the Fever-Powder, 8vo; with A ſhort Treatiſe on the Diſorders of Children, and a very good print of Dr James. This was the 8th edition of the Diſſertation, of which the firſt was printed in 1751: and the purpoſe of it was, to ſet forth the ſucceſs of this powder as well as to deſcribe more particularly the manner of adminiſtering it. The Vindication was poſthumous and unfiniſhed: for he died March 23. 1776, while he was employed upon it.—Dr James was married, and left ſeveral ſons and daughters.

Jame's Powder, a medicine prepared by the Late Dr Robert James, of which the baſis has been long known to chemiſts, though the particular receipt for making it lay concealed in Chancery till made public by Dr Monro, in his *Medical and Pharmaceutical Chemiſtry* †. The following (Dr Monro informs us) is a copy of the receipt, extracted from the Records of Chancery; the inventor, when he took out a patent for ſelling his powder, having ſworn, in the moſt ſolemn manner, that it was the true and genuine receipt for preparing it;

> ‘Take antimony, calcine it with a continued protracted heat, in a flat, unglazed, earthen veſſel, adding to it from time to time a ſufficient quantity of any animal oil and ſalt, well dephlegmated; then boil it in melted nitre for a conſiderable time, and ſeparate the powder from the nitre, by diſſolving it in water.’

This extract Dr Monro accompanies with the following obſervations. “When the Dr firſt adminiſtered his powder, he uſed to join one grain of the following mercurial preparation to thirty grains of his antimonial powder; but in the latter part of his life he often declared that he had long laid aſide the addition of the mercurial. His mercurial, which he called a pill, appears by the records of chancery to have been made in the following manner; ‘Purify quickſilver by diſtilling it nine times from an amalgam, made with martial regulus of antimony, and a proportional quantity of ſal ammoniac; diſſolve this purified quickſilver in ſpirit of nitre, evaporate to dryneſs, calcine the powder till it becomes of a gold colour; burn ſpirits of wine upon it, and keep it for uſe.’ Dr James, at the end of the receipt given into chancery, ſays, ‘The doſe of theſe medicines is uncertain; but in general thirty grains of the antimonial and one grain of the mercurial is a moderate doſe. Signed and ſworn to, by *Robert James*.’

“I have frequently directed this powder to be given, and have often ſeen Dr James himſelf as well as other practitioners adminiſter it, in fevers and in other complaints. Like other active preparations of antimony, it ſometimes operates with great violence, even when given in ſmall doſes; at other times a large doſe produces very little viſible effects. I have ſeen three grains operate briſkly, both upwards and downwards; and I was once called to a patient to whom Dr James had himſelf given five grains of it, and it purged and vomited the lady for twenty-four hours, and in that time gave her between twenty and thirty ſtools; at other times I have ſeen a ſcruple produce little or no viſible effect.

“So far as I have obſerved, I think that the doſe of this powder to an adult, is from five to twenty grains; and that when it is adminiſtered, one ought to begin by giving ſmall doſes.

“Where patients are ſtrong, and a free evacuation is wanted, this is a uſeful remedy; and it may be given in ſmall repeated doſes as an alterative in many caſes; but where patients are weakly and in low fevers, it often acts with too great violence; and I have myſelf ſeen inſtances, and have heard of others from other practitioners, where patients have been hurried to their graves by the uſe of this powder in a very ſhort time.

“It has been called Dr James's *Fever Powder*; and many have believed it to be a certain remedy for fevers, and that Dr James had cured moſt of the patients whom he attended, and who recovered, by the uſe of this powder. But the bark, and not the antimonial powder, was the remedy which Dr James almoſt always truſted to for the cure of fevers: he gave his powders only to clear the ſtomach and bowels; and after he had effected that, he poured in the bark as freely as the patient could ſwallow it. The Doctor believed all fevers to be more or leſs of the intermitting kind: and that if there was a poſſibility of curing a fever, the bark was the remedy to effectuate the cure; for if the fever did not yield to that, he was ſure that it would yield to no other remedy whatever, as he has more than once declared to me when I have attended patients in fevers along with him.”

James-Town, a borough and fair-town of Ireland, in the county of Leitrim, and province of Connaught: ſituated 5 miles northweſt of Carrick, on Shannon, and 73 north-weſt of Dublin, in north lat. 53. 44. weſt long. 8. 15. It has a barrack for a company of foot, and returns two members to parliament; patronage in the family of King.—It has three fairs.

St James Day, a feſtival of the Chriſtian church, obſerved on the 25th of July, in honour of St James the greater, ſon of Zebedee.

Epiſtle of St James, a canonical book of the New Teſtament, being the firſt of the *catholic* or *general* epiſtles; which are ſo called, as not being written to one but to ſeveral Chriſtian churches.

This general epiſtle is addreſſed partly to the believing and partly to the infidel Jews; and is deſigned to correct the errors, ſoften the ungoverned zeal, and reform the indecent behaviour of the latter; and to comfort the former under the great hardſhips they then did, or ſhortly were to ſuffer, for the ſake of Chriſtianity.

JAMESONE (George), an excellent painter, juſtly termed the *Vandyck of Scotland*, was the ſon of Andrew Jameſone, an architect; was born at Aberdeen, in 1586. He ſtudied under Rubens, at Antwerp; and, after his return, applied with indefatigable induſtry to portraits in oil, though he ſometimes practiſed in miniature, and alſo in hiſtory and landſcapes. His largeſt portraits were ſomewhat leſs than life. His earlieſt works are chiefly on board, afterwards on a fine linen cloth ſmoothly primmed with a proper tone to help the harmony of his ſhadows. His excellence is ſaid to conſiſt in delicacy and ſoftneſs, with a clear and beautiful colouring; his ſhades not charged, but helped by varniſh, with little appearance of the pencil. When king Charles I. viſited Scotland in 1633, the magiſtrates of Edinburgh, knowing his majeſty's taſte, employed this artiſt to make drawings of the Scottiſh monarchs; with which the king was ſo pleaſed, that, inquiring for the painter, he ſat to him, and rewarded him with a diamond-ring from his own finger. It is obſervable, that Jameſone always drew himſelf with his hat on, either in imitation of his maſter Rubens, or on having been indulged in that liberty by the king when he ſat to him. Many of Jameſone's works are in both the colleges of Aberdeen; and the Sybils there he is ſaid to have drawn from living beauties in that city. His beſt works are from the year 1630 to his death, which happened at Edinburgh in 1644.

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† Vol. I. p. 366.

JAMYN (Amadis), a celebrated French poet in the 16th century. He is eſteemed the rival of Ronſard, who was his cotemporary and friend. He was ſecretary and chamber-reader in ordinary to Char. IX. and died about 1585. He wrote, 1. Poetical works, 2 vols. 2. Philoſophical diſcourſes to Paſicharis and Rodanthe, with ſeven academical diſcourſes. 3. A tranſlation of the Iliad of Homer, begun by Hugh Sabel, and finiſhed by Jamyn; with a tranſlation into French verſe of the three firſt books of the Odyſſey.

JANE *of* FLANDERS, a remarkable lady, who ſeems to have poſſeſſed in her own perſon all the excellent qualities of both ſexes, was the wife of John de Mountfort, a competitor for the dukedom of Brittany upon the death of John III. This duke, dying without iſſue, left his dominions to his niece Jane, married to Charles de Blois nephew to the king of France; but John de Mountfort, brother to the late duke though by a ſecond marriage, claimed the duchy, and was received as ſucceſſor by the people of Nantes. The greateſt part of the nobility ſwore fealty to Charles de Blois, thinking him beſt ſupported. This diſpute occaſioned a civil war; in the courſe of which John was taken priſoner, and ſent to Paris. This misfortune would have entirely ruined his party, had not his intereſt been ſupported by the extraordinary abilities of his wife, Jane of Flanders. Bold, daring, and intrepid, ſhe fought like a warrior in the field; ſhrewd, ſenſible, and ſagacious, ſhe ſpoke like a politician in the council; and endowed with the moſt amiable manners, and winning addreſs, ſhe was able to move the minds of her ſubjects by the force of her eloquence, and mould them exactly according to her pleaſure. She happened to be at Rennes when ſhe received the news of her huſband's captivity; but that diſaſter, inſtead of depreſſing her ſpirits, ſerved only to rouſe her native courage and fortitude. She forthwith aſſembled the citizens; and, holding in her arms her infant ſon, recommended him to their care and protection in the moſt pathetic terms, as the male heir of their ancient dukes, who had always governed them with lenity and indulgence, and to whom they had ever profeſſed the moſt zealous attachment. She declared herſelf willing to run all hazards with them in ſo juſt a cauſe; pointed out the reſources that ſtill remained in the alliance of England; earneſtly beſeeching them to make one vigorous effort againſt an uſurper who being forced upon them by the intrigues of France, would, as a mark of his gratitude, ſacrifice the liberties of Brittany to his protector. The people, moved by the affecting appearance, and animated by the noble conduct of the princeſs, vowed to live and die with her in defending the rights of her family; and their example was followed by almoſt all the Britons. The counteſs went from place to place, encouraging the garriſons of the ſeveral fortreſſes, and providing them with every thing neceſſary for their ſubſiſtence; after which ſhe ſhut herſelf up with her ſon in Hennebon, where ſhe reſolved to wait for the ſuccours which the king of England (Edward III.) had promiſed to ſend to her aſſiſtance. Charles de Blois, accompanied by the Dukes of Burgundy and Bourbon, and many other noblemen, took the field with a numerous army, and having reduced Rennes, laid ſiege to Hennebon, which was defended by the counteſs in perſon. The heroine repulſed the aſſailants in all their attacks with the moſt undaunted courage; and obſerving one day that their whole army had left the camp to join in a general ſtorm, ſhe ruſhed forth at a poſtern-gate, with three hundred horſe, ſet fire to their tents and baggage, killed their ſutlers and ſervants, and raiſed ſuch a terror and conſternation through all their quarters, that the enemy gave over their aſſault, and getting betwixt her and the walls, endeavoured to cut off her retreat to the city. Thus intercepted, ſhe put the ſpurs to her horſe, and, without halting, galloped directly to Breſt, which lay at the diſtance of two-and-twenty miles from the ſcene of action. There being ſupplied with a body of five hundred horſe, ſhe immediately returned, and fighting her way through one part of the French camp, was received into Hennebon, amidſt the acclamations of the people. Soon after this the Engliſh ſuccours appeared, and obliged the enemy to raiſe the ſiege.

JANEIRO, a province of Braſil in ſouth America, ſeated between the tropic of Capricorn and 22° of S. Lat. It is bounded on the north by the province of Spirito Sancto, on the eaſt and ſouth by the Atlantic Ocean, and on the weſt by the mountains which ſeparate it from Guiana, in Spaniſh America. This is the moſt valuable province which the Portugueſe are maſters of; for they import from thence yearly great quantities of gold and precious ſtones, which they find in the mountains, to a prodigious value.

JANICULUM, or JANICULARIS, a hill of ancient Rome, added by Ancus Martius; the burial place of Numa, and of Statius Cæcilius the poet: to the eaſt and ſouth, having the Tiber; to the weſt, the fields; to the north, a part of the Vatican. So called either from an ancient city, (Virgil); or becauſe it was a *janua*, or gate from which to iſſue out and make incurſions on the Tuſcans, (Verrius Flaccus.) Now called *Mons Aureus* corruptly *Montorius*, from its ſparkling ſands. From this hill, on account of its height, is the moſt extenſive proſpect of Rome: but it is leſs inhabited, becauſe of its groſs air; neither is it reckoned among the ſeven hills. Hither the people retired, and were hence afterwards recalled by Q. Hortenſius the dictator, (Pliny.)

JANIZARIES, an order of infantry in the Turkiſh armies; reputed the grand ſignior's foot guards. Voſſius derives the word from *genizers*, which in the Turkiſh

Janizaries.

Turkiſh language ſignifies *novi homines* or *milites*. D'Herbelot tells us, that *jenitcheri* ſignifies a *new band, or troop*; and that the name was firſt given by Amurath I. called the *Conqueror*, who chooſing out one fifth part of the Chriſtian priſoners whom he had taken from the Greeks, and inſtructing them in the diſcipline of war and the doctrines of their religion, ſent them to Hagi Bektaſche (a perſon whoſe pretended piety rendered him extremely revered among the Turks), to the end that he might confer his bleſſing on them, and at the ſame time give them ſome mark to diſtinguiſh them from the reſt of the troops.—Bektaſche, after bleſſing them in his manner, cut off one of the ſleeves of the fur-gown which he had on, and put it on the head of the leader of this new militia; from which time, viz. the year of Chriſt 1361, they have ſtill retained the name *jenitcheri*, and the fur-cap.

As, in the Turkiſh army, the European troops are diſtinguiſhed from thoſe of Aſia; the janizaries are alſo diſtinguiſhed into *janizaries of Conſtantinople*, and *of Damaſcus*. Their pay is from two aſpers to twelve *per diem*; for when they have a child, or do any ſignal piece of ſervice, their pay is augmented.—Their dreſs conſiſts of a dolyman, or long gown, with ſhort ſleeves which is given them annually by the grand ſeignior on the firſt day of Ramazan. They wear no turban; but in lieu of that, a kind of cap, which they call *zarcola*, and a long hood of the ſame ſtuff hanging on their ſhoulders. On ſolemn days they are adorned with feathers, which are ſtuck in a little caſe on the fore-part of the bonnet.—Their arms, in Europe, in time of war, are a ſabre, a carabine or muſket, and a cartouch-box hanging on the left ſide. At Conſtantinople, in time of peace, they wear only a long ſtaff in their hand. In Aſia, where powder and fire-arms are more uncommon, they wear a bow and arrows, with a poignard, which they call *haniare*.—Though the janizaries are not prohibited marriage, yet they rarely marry, nor then but with the conſent of their officers; as imagining a married man to make a worſe ſoldier than a bachelor.—It was Oſman, or Ottoman, or, as others will have it, Amurath, who firſt inſtituted the order of janizaries. They were at firſt called *jaja*, that is, footmen to diſtinguiſh them from the other Turks, the troops whereof conſiſted moſtly of cavalry. The number of janizaries is generally above 40,000; divided into 162 companies or chambers called *odas*, in which they live together at Conſtantinople as in a convent. They are of a ſuperior rank to all other ſoldiers, and are alſo more arrogant and factious, and it is by them that the public tranquillity is moſtly diſturbed. The government may therefore be ſaid to be in the hands of the janizaries. They have, however, ſome good qualities: they are employed to eſcort travellers, and eſpecially ambaſſadors and perſons of high rank, on the road; in which caſe, they behave with the utmoſt zeal and fidelity.

JANIZARIES, at Rome, are officers or penſioners of the pope, called alſo *participantes*, on account of certain rites or duties which they enjoy in the annates, bulls, or expeditions, and the Roman chancery.—Moſt authors are miſtaken in the nature of their office: the truth is, they are officers of the third bench or college of the Roman chancery. The firſt bench conſiſts of writers, the ſecond of abbreviators, and the third of *janizaries*; who are a kind of correctors and reviſors of the pope's bulls.

Janſen, Janſeniſts.

JANSEN (Cornelius), biſhop of Ypres, one of the moſt learned divines of the 17th century, and principal of the ſect called from his name *Janſeniſts*. He was born in Holland of Catholic parents, and ſtudied at Louvain. Being ſent to tranſact ſome buſineſs of conſequence relating to the univerſity, into Spain, the Catholic king, viewing with a jealous eye the intriguing policy of France, engaged him to write a book to expoſe the French to the pope as no good Catholics, ſince they made no ſcruple of forming alliances with Proteſtant ſtates. Janſen performed this taſk in his *Mars Gallicus*; and was rewarded with a mitre, being promoted to the ſee of Ypres in 1635. He had, among other writings, before this, maintained a controverſy againſt the Proteſtants upon the points of grace and predeſtination; but his *Auguſtinus* was the principal labour of his life, on which he ſpent above 20 years. See the next article.

JANSENISTS, in church-hiſtory, a ſect of the Roman Catholics in France, who followed the opinions of Janſenius, biſhop of Ypres and doctor of divinity of the univerſities of Louvain and Douay, in relation to grace and predeſtination.

In the year 1640, the two univerſities juſt mentioned, and particularly father Molina and father Leonard Celſus, thought fit to condemn the opinions of the Jeſuits on grace and free-will. This having ſet the controverſy on foot, Janſenius oppoſed to the doctrine of the Jeſuits the ſentiments of St Auguſtine; and wrote a treatiſe on grace, which he intitled *Auguſtinus*. This treatiſe was attacked by the Jeſuits, who accuſed Janſenius of maintaining dangerous and heretical opinions; and afterwards, in 1642, obtained of pope Urban VIII. a formal condemnation of the treatiſe wrote by Janſenius; when the partiſans of Janſenius gave out that this bull was ſpurious, and compoſed by a perſon entirely devoted to the Jeſuits. After the death of Urban VIII. the affair of Janſeniſm began to be more warmly controverted, and gave birth to an infinite number of polemical writings concerning grace. And what occaſioned ſome mirth, was the titles which each party gave to their writings; one writer publiſhed *The torch of St Auguſtine*, another found *Snuffers for St Auguſtine's torch*, and father Veron formed *A gag for the Janſeniſts*, &c. In the year 1650, 68 biſhops of France ſubſcribed a letter to pope Innocent X. to obtain an inquiry into and condemnation of the five following propoſitions, extracted from Janſenius's Auguſtinus; 1. Some of God's commandments are impoſſible to be obſerved by the righteous, even though they endeavour with all their power to accompliſh them. 2. In the ſtate of corrupted nature, we are incapable of reſiſting inward grace. 3. Merit and demerit, in a ſtate of corrupted nature, does not depend on a liberty which excludes neceſſity, but on a liberty which excludes conſtraint. 4 The Semipelagians admitted the neceſſity of an inward preventing grace for the performance of each particular act, even for the beginning of faith; but they were heretics in maintaining that this grace was of ſuch a nature, that the will of a man was able either to reſiſt or obey it. It is Semipelagianiſm to ſay, that Jeſus Chriſt died, or ſhed his blood, for all mankind in general.

Janſſens.

In the year 1652, the pope appointed a congregation for examining into the diſpute in relation to grace. In this congregation Janſenius was condemned; and the bull of condemnation, publiſhed in May 1653, filled all the pulpits in Paris with violent outcries and alarms againſt the hereſy of the Janſeniſts. In the year 1656, pope Alexander VII. iſſued out another bull, in which he condemned the five propoſitions of Janſenius. However, the Janſeniſts affirm, that theſe propoſitions are not to be found in this book; but that ſome of his enemies having cauſed them to be printed on a ſheet, inſerted them in the book, and thereby deceived the pope. At laſt Clement XI. put an end to the diſpute by his conſtitution of July 17. 1705; in which, after having recited the conſtitutions of his predeceſſors in relation to this affair, he declares, "That in order to pay a proper obedience to the papal conſtitutions concerning the preſent queſtion, it is neceſſary to receive them with a reſpectful ſilence." The clergy of Paris, the ſame year, approved and accepted this bull, and none dared to oppoſe it.

This is the famous bull *Unigenitus*, ſo called from its beginning with the words *Unigenitus Dei Filius*, &c. which has occaſioned ſo much confuſion in France.

JANSSENS (Abraham), hiſtory-painter, was born at Antwerp in 1569. He was contemporary with Rubens, and alſo his competitor, and in many of the fineſt parts of the art was accounted not inferior to that celebrated maſter. It is reported, that having waſted his time and his ſubſtance by a life of diſſipation and pleaſure, and falling into neceſſitous circumſtances, which he imputed more to ill fortune than to his own neglect of his buſineſs, he grew envious at the grandeur in which Rubens appeared, and impatient at his merit and ſucceſs; and with peeviſh inſolence challenged him to paint a picture with him only for fame, which he was willing to ſubmit to impartial judges. But Rubens rejected the propoſal, anſwering with modeſty, that he freely ſubmitted to him, and the world would certainly do juſtice to them both.

Sandrart, who had ſeen ſeveral of his works, aſſures us, that he not only gave a fine roundneſs and relief to his figures, but alſo ſuch a warmth and clearneſs to the carnations, that they had all the look of real fleſh; and his colouring was as durable as it was beautiful, retaining its original luſtre for a number of years. His moſt capital performance is ſaid to be a reſurrection of Lazarus, which is in the cabinet of the elector Palatine, and is an object of admiration to all who behold it.

Janssens (Victor Honorius), hiſtory-painter, was born at Bruſſels in 1664, and was a diſciple of one Volders, under whoſe direction he continued for ſeven years; in which time he gave many proofs of a genius far ſuperior to thoſe who were inſtructed in the ſame ſchool. He afterwards went to Rome, where he attended particularly to the works of Raphael; he deſigned after the antiques, and ſketched the beautiful ſcenes around that city; and in a ſhort time his paintings roſe in eſteem, and the principal nobility of Rome were deſirous to employ him. He aſſociated with Tempeſta, the celebrated landſcape painter, for ſeveral years, and painted the figures in the works of that great maſter as long as they reſided together.

Janſſens,
Januarius.

Janſſens compoſed hiſtorical ſubjects, both in a ſmall and a large ſize; but he found the demand for his ſmall pictures ſo conſiderable, that he was induced to paint moſt frequently in that ſize. During 11 years he continued at Rome, which barely ſufficed for his finiſhing thoſe pictures for which he was engaged; nor could he have been even then at his liberty, had he not limited himſelf to a number, and determined not to undertake more.—Returning to Bruſſels, his performances were as much admired there as they had before been in Italy; but having married, and gradually become the father of 11 children, he was compelled to change his manner of painting in ſmall, and to undertake only thoſe of the large kind, as being more lucrative, more expeditious, and alſo more agreeable to his genius and inclination. He adorned moſt of the churches and palaces of his own country with his compoſitions.—The invention of this artiſt was fruitful; he deſigned correctly, his colouring is natural and pleaſing, his pencil free, and the airs of his heads have beauty and elegance. As to the difference between his large and ſmall paintings, it is obſerved, that in correctneſs and taſte they had an equal degree of merit; but the colouring of the former appears more raw and cold than the colouring of the latter; and it is agreed, that for ſmall hiſtorical pictures, he was preferable to all the painters of his time.

Janssen (Cornelius), called *Johnſon*, an eminent painter of portraits, was born at Amſterdam (though in the Chronological tables, and in Sandrart, it is improperly aſſerted, that he was born in London), and he reſided in England for ſeveral years; where he was engaged in the ſervice of king James I. and painted ſeveral excellent portraits of that monarch, as alſo of his children and of the principal nobility of his court. He had not the freedom of hand, nor the grace of Vandyck; but in other reſpects he was accounted his equal, and in the finiſhing his pictures ſuperior. His paintings are eaſily diſtinguiſhed by their ſmooth, clear, and delicate tints, and by that character of truth and nature with which they are ſtrongly marked. He generally painted on board; and, for the moſt part, his draperies are black; probably becauſe the oppoſition of that tint made his fleſh colours appear more beautifully bright, eſpecially in his female figures. It is ſaid that he uſed a quantity of ultra marine in the black colours, as well as in his carnations; which may be one great cauſe of their preſerving their original luſtre even to this day. Frequently he painted in a ſmall ſize in oil, and often copied his own works in that manner. His fame began to be ſomewhat obſcured, on the arrival of Vandyck in England; and the civil war breaking out ſome time after, induced him to return to his own country, where his paintings were in the higheſt eſteem. He died in 1685.

St JANUARIUS, the patron-ſaint of Naples, where his head is occaſionally carried in proceſſion, in order to ſtay the eruption of Veſuvius. The liquefaction of his blood is a famous miracle at Naples. The ſaint ſuffered martyrdom about the end of the third century. When he was beheaded, a pious lady of Naples caught about an ounce of his blood, which has been carefully preſerved in a bottle ever ſince, without having loſt a ſingle grain of its weight. This of itſelf, were it equally demonſtrable, might be conſidered as a greater miracle than the circumſtance on which the Neapolitans lay the whole ſtreſs, *viz.* that the blood which has congealed, and acquired a ſolid form by age, is no ſooner brought near the head of the ſaint, than, as a mark of veneration, it immediately liquefies. This experiment is made three different times every year, and is conſidered by the Neapolitans as a miracle of the firſt magnitude.

The ſubſtance in the bottle, which is exhibited for the blood of the ſaint, has been ſuppoſed to be ſomething naturally ſolid, but which melts with a ſmall degree of heat. When it is firſt brought out of the cold chapel, it is in its natural ſolid ſtate; but when brought before the ſaint by the prieſt, and rubbed between his warm hands, and breathed upon for ſome time, it melts; and this is the whole myſtery. But Dr Moore*, though he confeſſes himſelf unable to explain on what principle the liquefaction depends, is convinced that it muſt be ſomething different from this: "For he had it (he informs us) from the moſt ſatisfactory authority, from thoſe who had opportunities of knowing, and who believe no more in the miracle than the ſtauncheſt Proteſtant, that this congealed maſs has ſometimes been found in a liquid ſtate in cold weather, before it was touched by the prieſt, or brought near the head of the ſaint; and that on other occaſions, it has remained ſolid when brought before him, notwithſtanding all the efforts of the prieſt to melt it. When this happens, the ſuperſtitious, which, at a very moderate calculation, comprehends 99 in 100 of the inhabitants of this city, are thrown into the utmoſt conſternation, and are ſometimes wrought up by their fears into a ſtate of mind which is highly dangerous both to their civil and eccleſiaſtical governors. It is true, that this happens but ſeldom: for in general, the ſubſtance in the phial, whatever it may be, is in a ſolid form in the chapel, and becomes liquid when brought before the ſaint: but as this is not always the caſe, it affords reaſon to believe, that whatever may have been the caſe when this miracle or trick, call it which you pleaſe, was firſt exhibited, the principle on which it depends has ſomehow or other been loſt, and is not now underſtood fully even by the prieſts themſelves; or elſe they are not now ſo expert as formerly, in preparing the ſubſtance which repreſents the ſaint's blood, ſo as to make it remain ſolid when it ought, and liquefy the inſtant it is required." For the principle on which this pretended miracle is performed, or the compoſition by which it is or may be performed, ſee CHEMISTRY, n° 800.

The head and blood of the ſaint are kept in a kind of preſs, with folding doors of ſilver, in the chapel of St Januarius belonging to the cathedral church. The real head is probably not ſo freſh, and well preſerved, as the blood. On that account, it is not expoſed to the eyes of the public; but is incloſed in a large ſilver buſt, gilt and enriched with jewels of high value. This being what appears to the people, their idea of the ſaint's features and complexion are taken entirely from the buſt.—The blood is kept in a ſmall repoſitory by itſelf.

JANUARY, the name of the firſt month of the year, according to the computation now uſed in the weſt. The word is derived from the Latin *Januarius*, a name given to it by the Romans from Janus, one of their divinities, to whom they attributed two faces, becauſe on the one ſide the firſt day of January looked towards the new year, and on the other towards the old one. The word *Januarius* may alſo be derived from *janua* "gate;" in regard this month being the firſt, is, as it were, the gate of the year.

January and February were introduced into the year by Numa Pompilius; Romulus's year beginning in the month of March.—The kalends, or firſt day of this month, was under the protection of Juno, and in a peculiar manner conſecrated to Janus by an offering of a cake made of new meal and new ſalt, with new frankincenſe and new wine. On the firſt day of January a beginning was made of every intended work, the conſuls elect took poſſeſſion of their office, who, with the flamens, offered ſacrifices and prayers for the proſperity of the empire. On this day all animoſities were ſuſpended, and friends gave and received new year's gifts, called *Strenæ*. On this day too the Romans above all things took care to be merry and divert themſelves, and oftentimes ſuch a ſcene of drunkenneſs was exhibited, that they might with propriety enough have diſtinguiſhed it with the name of *All-fools day*.'

The Chriſtians heretofore faſted on the firſt day of January, by way of oppoſition to the ſuperſtitions and debaucheries of the heathens.

JANUS, in heathen worſhip, the firſt king of Italy, who, it is ſaid, received Saturn into his dominions, after his being driven from Arcadia by Jupiter. He tempered the manners of his ſubjects, and taught them civility; and from him they learned to improve the vine, to ſow corn, and to make bread. After his death, he was adored as a god.

This deity was thought to preſide over all new undertakings. Hence, in all ſacrifices, the firſt libations of wine and wheat were offered to Janus, all prayers prefaced with a ſhort addreſs to him; and the firſt month of the year was dedicated to and named from him. See JANUARY.

Janus was repreſented with two faces, either to denote his prudence, or that he views at once the paſt and approaching years: he had a ſceptre in his right hand, and a key in his left to ſignify his extenſive authority and his invention of locks.

Though this is properly a Roman deity, the abbé la Pluche repreſents it as derived from the Egyptians, who made known the riſing of the dog-ſtar, which opened their ſolar year, with an image with a key in its hand, and two faces, one old and the other young, to typify the old and new year.

Temple of JANUS, in ancient hiſtory, a ſquare building at Rome (as ſome ſay) of entire braſs, erected by Romulus, and ſo large as to contain a ſtatue of Janus five feet high, with brazen gates on each ſide, which were always kept open in time of war, and ſhut in time of peace. But the Romans were ſo much engaged in war, that this temple was ſhut only twice from the foundation of Rome till the reign of Auguſtus, and ſix times afterwards. It was firſt ſhut during the long reign of Numa who inſtituted this ceremony. 2. In the year of the city 519, after the end of the firſt Punic war. 3. By Auguſtus after the battle of Actium, in the year of Rome 725. 4. On Auguſtus's return from the war which he had againſt the Cantabrians in Spain, in the year of Rome 729. 5. Under the ſame emperor, in

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* *Travels in Italy*, vol. ii. p. 279.

744, about five years before the birth of Chriſt, when there was a general peace throughout the whole Roman empire, which laſted 12 years. 6. Under Nero, 811. 7. Under Veſpaſian, 824. 8. Under Conſtantius, when, upon Magnentius's death, he was left ſole poſſeſſor of the empire, 1105. Some diſpute the authority on which it is ſaid to have been ſhut by Conſtantius, and ſay that the laſt time of its being ſhut was under Gordian, about the year of Rome 994. Virgil gives us a noble deſcription of this cuſtom, Æn. lib. iii. ver. 607, &c. The origin of this cuſtom is not certainly known.

Janus was alſo the name of a ſtreet in Rome, inhabited for the moſt part by bankers and uſurers. It was ſo called from two ſtatues of Janus which were erected there, one at the top, the other at the bottom, of the ſtreet. The top of the ſtreet was therefore called *Janus Summus*, the bottom *Janus Imus*, and the middle *Janus Medius*. Hence Horace, lib. i. Epiſt. 1.

Hæc Janus ſummus ab imo perdocet.
and *Sat.* 3. *Lib.* 2.——*Poſtquam*
omnis res mea Janum
Ad mediam fracta eſt.——

JAPAN, a general name for a great number of iſlands lying between the eaſtern coaſt of Aſia and the weſtern coaſt of America, and which altogether form a large and potent empire. They extend from the 30th to the 41ſt degree of latitude, and from the 130th to the 147th of eaſt longitude.

Were South and North Britain divided by an arm of the ſea, Japan might be moſt aptly compared to England, Scotland, and Ireland, with their reſpective ſmaller iſlands, peninſulas, bays, channels, &c. all under the ſame monarch.

The Europeans call the empire *Japan*; but the inhabitants *Niphon*, from the greateſt iſland belonging to it; and the Chineſe *Ciphon*, probably on account of its eaſtern ſituation; theſe names ſignifying, in both languages, the *Baſis* or *Foundation of the Sun*. It was firſt diſcovered by the Portugueſe about the year of Chriſt 1542.

Moſt of the iſlands which compoſe it are ſurrounded with ſuch high craggy mountains, and ſuch ſhallow and boiſterous ſeas, that ſailing about them is extremely dangerous; and the creeks and bays are choaked up with ſuch rocks, ſhelves, and ſands, that it looks as if Providence had deſigned it to be a kind of little world by itſelf. Theſe ſeas have likewiſe many dangerous whirlpools, which are very difficult to paſs at low water, and will ſuck in and ſwallow up the largeſt veſſels, and all that comes within the reach of their vortex, daſhing them againſt the rocks at the bottom: inſomuch that ſome of them are never ſeen again, and others thrown upon the ſurface at ſome miles diſtance. Some of theſe whirlpools alſo make a noiſe terrible to hear.

The Chineſe pretend that the Japan iſlands were firſt peopled by themſelves: but it is more probable that the original inhabitants were a mixture of different nations, driven thither by thoſe tempeſtuous ſeas, and at different times.

As theſe iſlands lie in the fifth and ſixth climates, they would be much hotter in ſummer than England, were not the heats refreſhed by the winds which continually blow from the ſea around them, and to which they are much expoſed by the height of their ſituation: this circumſtance, however, not only renders their winters exceſſively cold, but the ſeaſons more inconſtant. They have great falls of ſnow in winter, which are commonly followed by hard froſts. The rains in ſummer are very violent, eſpecially in the months of June and July, which on that account are called *ſat-ſuki*, or *water-months*. The country is alſo much ſubject to dreadful thunders and lightnings, as well as ſtorms and hurricanes, which frequently do a great deal of damage.

The ſoil, though naturally barren and mountainous, by the induſtry of the inhabitants, not only ſupplies them with every neceſſary of life, but alſo furniſhes other countries with them; producing, beſides corn, the fineſt and whiteſt rice and other grains, with a great variety of fruits, and vaſt numbers of cattle of all ſorts. Beſides rice, and a ſort of wheat and barley, with two ſorts of beans, they have Indian wheat, millet, and ſeveral other kinds in great abundance. Their ſeas, lakes, and rivers, abound with fiſh; and their mountains, woods, and foreſts, are well ſtocked with horſes, elephants, deer, oxen, buffaloes, ſheep, hogs, and other uſeful animals. Some of their mountains alſo are enriched with mines of gold, ſilver, and copper exquiſitely fine, beſides tin, lead, iron, and various other minerals and foſſils; whilſt others abound with ſeveral ſorts of marble and precious ſtones. Of theſe mountains, ſome may be juſtly ranked among the natural rarities of this country; one, in particular, in the great iſland of Niphon, is of ſuch prodigious height as to be eaſily ſeen forty leagues off at ſea, though its diſtance from the ſhore is about eighteen. Some authors think it exceeds the famous Peak of Teneriffe; but it may rather be called a cluſter or group of mountains, among which are no leſs than eight dreadful volcanoes, burning with incredible fury, and often laying waſte the country round about them: but, to make ſome amends, they afford great variety of medicinal waters, of different degrees of heat; one of theſe, mentioned by Varenius, is ſaid to be as hot as burning oil, and to ſcorch and conſume every thing thrown into it.

The many brooks and rivers that have their ſources among the mountains, form a great number of delightful caſcades, as well as ſome dreadful cataracts. Among the great variety of trees in the foreſts here, the cedars exceed all of that kind through India, for ſtraightneſs, height, and beauty. They abound in moſt of the iſlands, eſpecially the largeſt.

Their ſeas, beſides fiſh, furniſh them with great quantities of red and white coral, and ſome pearls of great value, beſides a variety of ſea-plants and ſhells; which laſt are not inferior to thoſe that are brought from Amboyna, the Molucca and other eaſterly iſlands.

The vaſt quantity of ſulphur with which moſt of the Japan iſlands abound, makes them ſubject to frequent and dreadful earthquakes. The inhabitants are ſo accuſtomed to them, that they are ſcarcely alarmed at any, unleſs they chance to be very terrible indeed, and lay whole towns in ruins, which very often proves the caſe. On theſe occaſions, they have recourſe to extraordinary ſacrifices, and acts of worſhip, to their deities or demons, according to the different notions of each ſect, and ſometimes even proceed to offer human victims: but in this caſe they only take ſome of the vileſt and moſt abandoned fellows they can meet with, becauſe they are only ſacrificed to the malevolent deities.

The religion throughout Japan, it is well known, is Pagan, ſplit into ſeveral ſects, who live together in the greateſt harmony. Every ſect has its own temples and prieſts. The ſpiritual emperor the Dairo, is the chief of their religion. They acknowledge and honour a Supreme Being. The author of this relation (Dr Thunberg) ſaw two temples of the God of gods of a majeſtic height. The idol that repreſented this god was of gilded wood, and of ſo prodigious a ſize, that upon his hands ſix perſons might ſit in the Japaneſe faſhion; his ſhoulders were five toiſes broad. In the other temple, the infinite power of this god was repreſented by little gods to the number of 33,333, all ſtanding round the great idol that repreſented God. The prieſts, who are numerous in every temple, have nothing to do but to clean the pavement, light the lamps, and dreſs the idol with flowers. The temples are open to every body, even to the Hollanders; and in caſe they are in want of a lodging in the ſuburbs, when they go to the court of Jeddo, they are entertained with hoſpitality in theſe temples.

Chriſtianity, if Popery deſerves that name, had once made a conſiderable progreſs in this country, in conſequence of a miſſion conducted by the Portugueſe and Spaniſh Jeſuits; amongſt whom the famous ſaint Francis Xavier was employed, but ſoon relinquiſhed the ſervice. There were alſo ſome Franciſcan friars of Spain engaged at laſt. The Jeſuits and friars were ſupplied from Goa, Macao, and the Manilhas. At firſt the undertaking proceeded with the moſt rapid ſucceſs, but ended at laſt in the moſt tragical manner, all owing to the pride and haughtineſs, the miſconduct, rapacity, and ſenſeleſs extravagant conſpiracy of the fathers againſt the ſtate. This folly and madneſs produced a perſecution of 40 years duration, terminated by a moſt horrible and bloody maſſacre, not to be paralleled in hiſtory. After this the Portugueſe, as likewiſe the Chriſtian religion, were totally expelled the country, and the moſt effectual means taken for preventing their return. The natives are for this purpoſe prohibited from going out of the country; and all foreigners are excluded from an open and free trade; for as to the Dutch and Chineſe, under which laſt name ſome other eaſtern nations go thither, they are ſhut up whilſt they remain there, and a moſt ſtrict watch is ſet upon them, inſomuch that they are no better than priſoners; and the Dutch, it is ſaid, to obtain a privilege even ſo far, declared themſelves *to be no Chriſtians, but Dutchmen*. This calumny, however, Dr Kempfer has endeavoured to wipe off, but not altogether to ſatisfaction.

It was about the year of Chriſt 1549, or ſix years after the firſt diſcovery, that the fathers of the ſociety arrived there, being induced by the favourable repreſentations of a young Japaneſe who had fled to Goa. Till the year 1625, or near 1630, the Chriſtian religion ſpread thro' moſt of the provinces of the empire, many of the princes and lords openly embracing it; and "there was very good reaſon to hope, that within a ſhort compaſs of time the whole empire would have been converted to the faith of our Saviour, had not the ambitious views, and the impatient endeavours of the fathers to reap the temporal as well as the ſpiritual fruits of their care and labour, ſo provoked the ſupreme majeſty of the empire as to raiſe againſt themſelves and their converts a perſecution which hath not its parallel in hiſtory, whereby the religion they preached, and all thoſe that profeſſed it, were in a few years time entirely exterminated."—The fathers had made a progreſs ſo great, that the princes of Bungu, Arima, and Omura, who had been baptized, "ſent, in the year 1582, ſome of their neareſt relations, with letters and preſents, to pay homage to the then pope, Gregory XIII. and to aſſure his holineſs of their filial ſubmiſſion to the church; an account of which moſt celebrated embaſſy hath been given in the works of that incomparable hiſtorian Thaunus, and by many other Roman Catholic writers."

But notwithſtanding this pleaſing proſpect, the emperor, anno 1586, iſſued proclamations for the ſuppreſſion of the religion, and the perſecution began. This, however, at firſt had not that effect which the government expected; for tho', according to the letters of the Jeſuits, 20,570 perſons ſuffered death for the faith of Chriſt in the year 1590 only, yet in 1591 and 1592, when all the churches were actually ſhut up, they made 12,000 new converts. The buſineſs was finally concluded by the maſſacre at Simabara, about the year 1640. The reaſons of the emperor's proclamations, making it death to embrace the religion, were as follows: 1. The new religion occaſioned conſiderable alterations in the Japaneſe church, and was prejudicial in the higheſt degree to the heathen clergy. 2. It was feared the innovation in religion might be attended with fatal conſequences even in regard to the ſick; but what more immediately gave riſe to them was, as the Japaneſe of credit confeſſed to Dr Kempfer, pride and covetouſneſs; pride among the great ones, and covetouſneſs in people of leſs note; the ſpiritual fathers aiming not only at the ſalvation of their ſouls, but having an eye alſo to their money and lands, and the merchants diſpoſing of their goods in the moſt uſurious and unreaſonable manner. To confine ourſelves to the clergy here: they 'thought it beneath their dignity to walk on foot any longer; nothing would ſerve them but they muſt be carried about in ſtately chairs, mimicking the pomp of the pope and his cardinals at Rome. They not only put themſelves on an equal foot with the greateſt men of the empire, but ſwelled with eccleſiaſtical pride, fancied that even a ſuperior rank was nothing but their due. It one day happened, that a Portugueſe biſhop met upon the road one of the counſellors of ſtate on his way to court. The haughty prelate would not order his chaiſe to be ſtopped, in order to alight and to pay his reſpects to this great man, as is uſual in that country; but, without taking any notice of him, nay indeed without ſhowing him ſo much as common marks of civility, he very contemptuouſly bid his men carry him by. The great man, exaſperated at ſo ſignal an affront, thenceforward bore a mortal hatred to the Portugueſe, and in the height of his juſt reſentment, made his complaint to the emperor himſelf, with ſuch an odious picture of the inſolence, pride, and vanity of this nation, as he expected could not but raiſe the emperor's utmoſt indignation.' This happened in 1566. The next year the perſecution began anew, and 26 perſons, of the number whereof were 2 foreign Jeſuits, and ſeveral other fathers of the Franciſcan order, were executed on the croſs. The emperor Jiojas had uſurped the crown on his pupil Tidajori, who, as likewiſe the greater part of his court and party, had been either Chriſtians themſelves, or at leaſt very favourably inclined to that religion;

gion, ſo that reaſons of ſtate mightily co-operated to forward the perſecution.

Some Franciſcan friars, whom the governor of the Manilhas had ſent as his ambaſſadors to the emperor of Japan, were guilty at this time of a moſt imprudent ſtep: they, during the whole time of their abode in the country, preached openly in the ſtreets of Macao where they reſided; and of their own accord built a church, contrary to the imperial commands, and contrary to the advice and earneſt ſolicitations of the Jeſuits.

Some time after, a diſcovery of a dangerous conſpiracy, which the fathers, and the yet remaining adherents of their religion, entered into againſt the perſon of the emperor, as a heathen prince, put a finiſhing ſtroke to the affair, and haſtened the ſentence which was pronounced ſoon after, *that the Portugueſe ſhould for ever be baniſhed the emperor's dominions*; for till then the ſtate ſeemed deſirous to ſpare the merchants and ſecular perſons, for the purpoſe of continuing trade and commerce with then, which was looked upon as an affair independent of religion. The affair of the conſpiracy was as follows: the Dutch had had an eye to the trade of Japan before 1600, and in 1611 had liberty of a free commerce granted them by the imperial letters patent, and had actually a factory at Firando. The Dutch were then at war with Spain, which was then ſovereign of the Portugueſe dominions; ſo that it was natural for them to be trying to ſupplant them. The Portugueſe, on their part, made uſe of all malicious inventions to blacken their characters, calling them rebels and pirates, whence it was natural for the Dutch to endeavour to clear, and even to revenge themſelves. Now they "took an homeward-bound Portugueſe ſhip near the Cape of Good Hope, on board of which they found ſome traiterous letters to the king of Portugal, written by one captain Moro, who was chief of the Portugueſe in Japan, himſelf a Japaneſe by birth, and a great zealot for the chriſtian religion. The Dutch took ſpecial care to deliver the ſaid letters to their protector the prince of Firando, who communicated them without loſs of time to the governor of Nagaſaki, a great friend to the Portugueſe. Captain Moro having been taken up, boldly, and with great aſſurance, denied the fact, and ſo did all the Portugueſe then at Nagaſaki. However, neither the governor's favour, nor their conſtant denial, were able to clear them, and to keep off the cloud which was ready to break over their heads. Hand and ſeal convinced them; the letter was ſent up to court, and captain Moro ſentenced to be burnt alive on a pale, which was executed accordingly. This letter laid open the whole plot which the Japaneſe chriſtians, in conjunction with the Portugueſe, had laid againſt the emperor's life and throne; the want they ſtood in of ſhips and ſoldiers, which were promiſed them from Portugal; the names of the Japaneſe princes concerned in the conſpiracy; and laſtly, to crown all, the expectation of the papal bleſſing. This diſcovery made by the Dutch was afterwards confirmed by another letter written by the ſaid captain Moro to the Portugueſe government at Macao, which was intercepted and brought to Japan by a Japaneſe ſhip."

Conſidering this, and the ſuſpicions which the court had then already conceived againſt the Portugueſe, it was no difficult matter thoroughly to ruin the little credit and favour they had as yet been able to preſerve; and the rather, ſince the ſtrict imperial orders notwithſtanding, they did not leave off privately to bring over more eccleſiaſtics. Accordingly, in the year 1637, an imperial proclamation was ſent to the governors of Nagaſaki, with orders to ſee it put in execution. It was then the empire of Japan was ſhut for ever both to foreigners and natives.

Now, although the governors of Nagaſaki, on receipt of theſe commands, took care they ſhould be obeyed, yet the directors of the Portugueſe trade maintained themſelves in Japan two years longer, hoping to obtain leave to ſtay in the iſland of Deſima, and there to continue their trade. But they found themſelves at laſt wholly diſappointed; for the emperor was reſolved to get rid of them; and on aſſurance given him by the Dutch Eaſt-India company that they would ſupply for the future what commodities had been imported by the Portugueſe, he declared the Portugueſe and the Caſtilians, and whoever belonged to them, enemies of the empire, forbidding the importation of even the goods of their country, Spaniſh wines only excepted, for the uſe of the court. And thus the Portugueſe loſt their profitable trade and commerce with Japan, and were totally expelled the country before the latter end of the year 1639 or 1640; and thus ended the fruitleſs popiſh miſſion in this empire, for the Portugueſe have never been able to reſtore themſelves; and the Dutch have it not in their power to do any one thing in favour of religion, were they ſo inclined; but, as it appears, they are very indifferent as to that, and are in but little credit with the Japaneſe.

According to Dr Thunberg's reſearches, the Japaneſe have never been ſubdued by any foreign power, not even in the moſt remote periods; their chronicles contain ſuch accounts of their valour, as one would rather incline to conſider as fabulous inventions than actual occurrences, if later ages had not furniſhed equally ſtriking proofs of it. When the Tartars, for the firſt time in 799, had over-run part of Japan, and when, after a conſiderable time had elapſed, their fleet was deſtroyed by a violent ſtorm in the courſe of a ſingle night, the Japaneſe general attacked, and ſo totally defeated his numerous and brave enemies, that not a ſingle perſon ſurvived to return and carry the tidings of ſuch an unparalleled defeat. In like manner, when the Japaneſe were again, in 1281, invaded by the warlike Tarters, to the number of 240,000 fighting men, they gained a victory equally complete. The extirpation of the Portugueſe, and with them of the chriſtian religion, towards the beginning of the 17th century, as already mentioned, was ſo complete, that ſcarce a veſtige can now be diſcerned of its ever having exiſted there.

With reſpect to the government of theſe iſlands, it is and has been for a long time monarchical; though formerly it ſeems to have been ſplit into a great number of petty kingdoms, which were at length all ſwallowed by one. The imperial dignity had been enjoyed, for a conſiderable time before the year 1500, by a regular ſucceſſion of princes, under the title of *dairos*, a name ſuppoſed to have been derived from Dairo the head of that family. Soon after that epoch, ſuch a dreadful civil war broke out, and laſted ſo many years, that the empire was quite ruined. During theſe diſtractions and confuſions, a common ſoldier, by name Tayckoy, a perſon of obſcure birth, but of an enterpriſing genius, found means to raiſe himſelf to the imperial dignity; having in little more than three years time, by an uncommon ſhare of good fortune, ſubdued all his competitors and opponents, and reduced all their cities and caſtles. The dairo, not being in a condition to obſtruct or put a ſtop to his progreſs, was forced to ſubmit to his terms; and might perhaps have been condemned to much harder, had not Tayckoy been apprehenſive leſt his ſoldiers, who ſtill revered their ancient natural monarch, ſhould have revolted in his favour. To prevent this, he granted him the ſupreme power in all religious matters, with great privileges, honours, and revenues annexed to it; whilſt himſelf remained inveſted with the whole civil and military power, and was acknowledged and proclaimed king of Japan. This great revolution happened in 1517, and Tayckoy reigned ſeveral years with great wiſdom and tranquillity; during which he made many wholeſome laws and regulations, which ſtill ſubſiſt, and are much admired to this day. At his death, he left the crown to his ſon Tayckoſſama, then a minor; but the treacherous prince under whoſe guardianſhip he was left deprived him of his life before he came of age. By this murder, the crown paſſed to the family of Jejaſſama, in which it ſtill continues. Tayckoy and his ſucceſſors have contented themſelves with the title of *cubo*, which, under the dairos, was that of prime miniſter, whoſe office is now ſuppreſſed; ſo that the cubo, in all ſecular concerns, is quite as abſolute and deſpotic, and has as extenſive a power over the lives and fortunes of all his ſubjects, from the petty kings down to the loweſt perſons, as ever the dairos had. The dairo reſides conſtantly at Meaco, and the cubo at Jeddo.

The inhabitants of Japan are well-grown, agile, and active, and at the ſame time ſtout limbed, though they do not equal in ſtrength the northern inhabitants of Europe. The colour of the face is commonly yellow; which ſometimes varies to brown, and ſometimes to white. The inferior ſort, who during their work in ſummer have often the upper parts of the body naked, are ſun-burnt and browner; women of diſtinction, who never go uncovered into the open air, are perfectly white.

The national character conſiſts in intelligence and prudence, frankneſs, obedience, and politeneſs, good-nature and civility, curioſity, induſtry, and dexterity, economy and ſobriety, hardineſs, cleanlineſs, juſtice, and uprightneſs, honeſty and fidelity; in being alſo miſtruſtful, ſuperſtitious, haughty, reſentful, brave, and invincible.

In all its tranſactions, the nation ſhows great intelligence, and can by no means be numbered among the ſavage and uncivilized, but rather is to be placed among the poliſhed. Their preſent mode of government, admirable ſkill in agriculture, ſparing mode of life, way of trading with foreigners, manufactures, &c. afford convincing proofs of their cunning, firmneſs, and intrepid courage. Here there are no appearances of that vanity ſo common among the Aſiatics and Africans, of adorning themſelves with ſhells, glaſs-beads and poliſhed metal plates: neither are they fond of the uſeleſs European ornaments of gold and ſilver lace, jewels, &c. but are careful to provide themſelves from the productions of their own country with neat cloaths, well taſted food, and good weapons.

Their curioſity is exceſſive; nothing imported by the Europeans eſcapes it. They aſk for information concerning every article, and their queſtions continue till they become weariſome. It is the phyſician, among the traders, that is alone regarded as learned, and particularly during the journey to court and the reſidence at Jeddo, the capital of the empire, that he is regarded as the oracle, which they truſt can give reſponſes in all things, whether in mathematics, geography, phyſics, chemiſtry, pharmacy, zoolgoy, botany, medicine, &c.

Economy has its peculiar abode in Japan. It is a virtue admired as well in the emperor's palace as in the meaneſt cottage. It makes thoſe of ſmall poſſeſſions content with their little, and it prevents the abundance of the rich from overflowing in exceſs and voluptuouſneſs. Hence it happens, that what in other countries is called ſcarcity and famine, is unknown here; and that, in ſo very populous a ſtate, ſcarce a perſon in neceſſity, or a beggar, ſhould be found.

The names of families, and of ſingle perſons, are under very different regulations from ours. The family name is never changed, but is never uſed in ordinary converſation, and only when they ſign ſome writing; to which they alſo for the moſt part affix their ſeal. There is alſo this peculiarity, that the ſurname is always placed firſt; juſt as in botanical books the generic name is always placed before the ſpecific name. The prænomen is always uſed in addreſſing a perſon; and it is changed ſeveral times in the courſe of life. A child receives at birth from its parents a name, which is retained till it has itſelf a ſon arrived at maturity. A perſon again changes his name when he is inveſted with any office; as alſo when he is advanced to an higher truſt: ſome, as emperors and princes, acquire a new name after death. The names of women are leſs variable; they are in general borrowed from the moſt beautiful flowers.

After marriage, the wife is confined to her own apartment, from whence ſhe hardly ever ſtirs, except once a-year to the funeral rites of her family; nor is ſhe permitted to ſee any man, except perhaps ſome very near relation, and that as ſeldom as can be. The wives, as well as in China and other parts of the eaſt, bring no portion with them, but are rather bought by the huſband of their parents and relations. The bridegroom moſt commonly ſees his bride for the firſt time upon her being brought to his houſe from the place of the nuptial ceremony: for in the temple where it is performed ſhe is covered over with a veil, which reaches from the head to the feet. A huſband can put his wives to a more or leſs ſevere death, if they give him the leaſt cauſe of jealouſy, by being ſeen barely to converſe with another man, or ſuffering one to come into their apartment.

The dreſs of the Japaneſe deſerves, more than that of any other people, the name of national; ſince they are not only different from that of all other men, but are alſo of the ſame form in all ranks, from the monarch to his meaneſt ſubject, as well as in both ſexes; and what exceeds all credibility, they have not been altered for at leaſt 2444 years. They univerſally conſiſt of night-gowns, made long and wide, of which ſeveral are worn at once by all ranks and all ages. The more diſtinguiſhed and the rich have them of the fineſt fienſt ſilk; the poorer ſort of cotton. Thoſe of the women reach down to the ground, and ſometimes have a train; in the men, they reach down to the heels: travellers, ſoldiers, and labourers, either tuck them up, or wear them only down to the knees. The habit of the men is generally of one colour; the women have theirs variegated and frequently with flowers of gold interwoven. In ſummer, they are either without lining, or have but a thin one; in winter they are ſtuffed to a great thickneſs with cotton or ſilk. The men ſeldom wear a great number; but the women thirty, fifty, or more, all ſo thin, that they ſcarce together amount to five pounds. The undermoſt ſerves for a ſhirt, and is therefore either white or blue, and for the moſt part thin and tranſparent. All theſe gowns are faſtened round the waiſt with a belt, which in the men are about a hand's breadth, in the women about a foot; of ſuch a length that they go twice round the waiſt, and afterwards are tied in a knot with many ends and bows. The knot, particularly among the fair ſex, is very conſpicuous, and immediately informs the ſpectator whether they are married or not. The unmarried have it behind, on their back; the married before. In this belt the men fix their ſabres, fans, pipe, tobacco, and medicine boxes. In the neck the gowns are always cut round, without a collar; they therefore leave the neck bare; nor is it covered with cravat, cloth, or any thing elſe. The ſleeves are always ill-made, and out of all proportion wide: at the opening before, they are half ſewed up, ſo that they form a ſack, in which the hands can be put in cold weather; they alſo ſerve for a pocket. Girls in particular have their ſleeves ſo long that they reach down to the ground. Such is the ſimplicity of their habit, that they are ſoon dreſſed; and to undreſs, they need only open their girdle and draw in their arms.

As the gowns, from their length, keep the thighs and legs warm, there is no occaſion for ſtockings; nor do they uſe them in all the empire. Among poorer perſons on a journey, and among ſoldiers, who have not ſuch long gowns, one ſees buſkins of cotton. Shoes, or, more properly ſpeaking, ſlippers, are, of all that is worn by the Japaneſe, the ſimpleſt, the meaneſt, and the moſt miſerable, though in general uſe among high and low, rich and poor. They are made of interwoven rice-ſtraw; and ſometimes, for perſons of diſtinction, of reeds ſplit very thin. They conſiſt only of a ſole, without upper-leathers or quarters. Before, there paſſes over, tranſverſely, a bow of linen, of a finger's breadth: from the point of the ſhoe to this bow goes a thin round band, which running within the great toe, ſerves to keep the ſhoe fixed to the foot. The ſhoe being without quarters, ſlides, during walking, like a ſlipper. Travellers have three bands of twiſted ſtraw, by which they faſten the ſhoe to the foot and leg, to prevent its falling off. The Japaneſe never enter their houſes with ſhoes, but put them off in the entrance. This precaution is taken for the ſake of their neat carpets. During the time the Dutch reſide in Japan, as they have ſometimes occaſion to pay the natives viſits in their houſes, and as they have their own apartment at the factory covered with the ſame ſort of carpets, they do not wear European ſhoes, but have in their ſtead red, green, or black ſlippers, which can eaſily be put off at entering in. They, however, wear ſtockings, with ſhoes of cotton, faſtened by buckles. Theſe ſhoes are made in Japan, and may be waſhed whenever they become dirty.

The way of dreſſing the hair is not leſs peculiar to this people, nor leſs univerſally prevalent among them, than the uſe of their long gowns. The men ſhave the head from the forehead to the neck; and the hair remaining on the temples, and in the nape, is well beſmeared with oil, turned upwards, and then tied with a white paper thread, which is wrapped round ſeveral times. The ends of the hair beyond the head, are cut croſsways, about a finger's length being left. This part, after being paſted, together with oil, is bent in ſuch a manner that the point is brought to the crown of the head; in which ſituation it is fixed by paſſing the ſame thread round it once. Women, except ſuch as happen to be ſeparated from their huſbands, ſhave no part of their head.

The head is never covered with hat or bonnet in winter or in ſummer, except when they are on a journey; and then they uſe a conical hat, made of a ſort of graſs, and fixed with a ribband. Some travelling women, who are met with on the roads, have a bonnet like a ſhaving baſon inverted on the head, which is made of cloth, in which gold is interwoven. On other occaſions, their naked heads are preſerved, both from rain and the ſun, by umbrellas. Travellers, moreover, have a ſort of riding-coat, made of thick paper oiled. They are worn by the upper ſervants of princes, and the ſuit of other travellers. Dr. Thunberg and his fellow-travellers, during their journey to court, were obliged to provide ſuch for their attendants when they paſſed through the place where they are made.

A Japaneſe always has his arms painted on one or more of his garments, eſpecially on the long and ſhort gowns, on the ſleeves, or between the ſhoulders; ſo that nobody can ſteal them; which otherwiſe might eaſily happen in a country where the clothes are ſo much alike in ſtuff, ſhape, and ſize.

The weapons of the Japaneſe conſiſt of a bow and arrow, ſabre, halbert, and muſket. The bows are very large, and the arrows long, as in China. When the bows are to be bent and diſcharged, the troop always reſts on the knee which hinders them making a ſpeedy diſcharge. In the ſpring, the troops aſſemble to practiſe ſhooting at a mark. Muſkets are not general; Dr Thunberg only ſaw them in the hands of perſons of diſtinction, in a ſeparate and elevated part of the audience room. The barrel is of a common length; but the ſtock is very ſhort, and there is a match in the lock. The ſabre is their principal and beſt weapon, which is univerſally worn, except by the peaſants. They are commonly a yard long, a little crooked, and thick in the back. The blades are of an incomparable goodneſs, and the old ones are in very high eſteem. They are far ſuperior to the Spaniſh blades ſo celebrated in Europe. A tolerably thick nail is eaſily cut in two without any damage to the edge; and a man, according to the account of the Japaneſe, may be cleft aſunder. A ſeparate ſaſh is never uſed, but the ſword is ſtuck in the belt, on the left ſide, with the edge upwards, which to a European appears ridiculous. All perſons in office wear two ſuch ſabres, one of their own, and the other the *ſword of office*,

office, as it is called; the latter is always the longer. Both are worn in the belt on the ſame ſide, and ſo diſpoſed as to croſs each other. When they are ſitting, they have their ſword of office laid on one ſide or before them.

The ſciences are very far from having arrived at the ſame height in Japan as in Europe. The hiſtory of the country is, notwithſtanding, more authentic, perhaps, than that of any other country; and it is ſtudied, without diſtinction, by all. Agriculture, which is conſidered as the art moſt neceſſary, and moſt conducive to the ſupport and proſperity of the kingdom, is no where in the world brought to ſuch perfection as here; where neither civil nor foreign war, nor emigration, diminiſhes population; and where a thought is never entertained, either of getting poſſeſſion of other countries, or to import the uſeleſs and often hurtful productions of foreign lands; but where the utmoſt care is taken that no turf lies uncultivated, and no produce of the earth unemployed. Aſtronomy is purſued and reſpected; but the natives are unable, without the aid of Chineſe, and ſometimes of Dutch almanacks, to form a true kalender, or calculate an eclipſe of the ſun or moon within minutes and ſeconds. Medicine has neither arrived, nor is it likely to arrive, at any degree of perfection. Anatomy is totally unknown; the knowledge of diſeaſes imperfect, intricate, and often fabulous. Botany, and the knowledge of medicines, conſtitute the whole of their ſkill. They uſe only ſimples; and theſe generally in diuretic and diaphoretic decoctions. They are unacquainted with compound medicines. Their phyſicians always indeed feel the pulſe; but they are very tedious, not quitting it for a quarter of an hour; beſides, they examine firſt one, and then the other arm, as if the blood was not driven by the ſame heart to both pulſes. Beſides thoſe diſeaſes which they have in common with other countries, or peculiar to themſelves, the venereal diſeaſe is very frequent, which they only underſtood how to alleviate by decoctions, thought to purify the blood. Salivation, which their phyſicians have heard mentioned by the Dutch ſurgeons, appears to them extremely formidable, both to conduct and to undergo; but they have lately learned the art of employing the ſublimate with much ſuccceſs.—Juriſprudence is not an extenſive ſtudy in Japan. No country has thinner law-books, or fewer judges. Explanations of the law, and advocates, are things altogether unknown; but no where, perhaps, are the laws more certainly put in force, without reſpect to perſons, without partiality or violence. They are very ſtrict, and law-ſuits very ſhort. The Japaneſe know little more of phyſics or chemiſtry than what they have learned of late years of the Europeans.

Their computation of time takes its riſe from *Min-o*, or 660 years before Chriſt. The year is divided according to the changes of the moon; ſo that ſome years conſiſt of twelve, and others of thirteen months; and the beginning of the year falls out in February or March. They have no weeks conſiſting of ſeven days, or of ſix working days and a holiday; but the firſt and fifteenth day of the month ſerve for a holiday. On theſe days no work is done. On new-year's day they go round to wiſh one another a new year, with their whole families, clad in white and blue chequered, their holiday dreſs; and they reſt almoſt the whole of the firſt month. The day is divided only into twelve hours; and in this diviſion they are directed the whole year by the riſing and ſetting of the ſun. They reckon ſix o'clock at the riſing, and ſix likewiſe at the ſetting of the ſun. Mid-day and mid-night are always at nine. Time is not meaſured by clocks or hour-glaſſes, but with burning matches, which are twiſted together like ropes, and divided by knots. When the match is burnt to a knot, which indicates a certain portion of time elapſed, notice is given during the day, by ſtriking the bells of the temples; and in the night, by the watchmen ſtriking two boards againſt one another. A child is always reckoned a year old at the end of the year of his birth, whether this happen at the beginning or the cloſe. A few days after the beginning of the year, is performed the horrid ceremony of trampling on images repreſenting the croſs and the Virgin Mary with her child. The images are of melted copper, and are ſaid to be ſcarce a foot in height. This ceremony is intended to impreſs every individual with hatred of the Chriſtian doctrine, and the Portugueſe, who attempted to introduce it there; and alſo to diſcover whether there is any remnant of it left among the Japaneſe. It is performed in the places where the Chriſtians chiefly reſided. In Nagaſaki it laſts four days; then the images are conveyed to the circumjacent places, and afterwards are laid aſide againſt the next year. Every perſon, except the Japaneſe governor and his attendants, even the ſmalleſt child, muſt be preſent; but it is not true, as ſome have pretended, that the Dutch are alſo obliged to trample on the image. Overſeers are appointed in every place, who aſſemble the people in companies in certain houſes, call over the name of every one in his turn, and take care that every thing goes on properly. The children, not yet able to walk, have their feet placed upon it; older perſons paſs over it from one ſide of the room to the other.

The Japaneſe are much addicted to poetry, muſic, and painting; the firſt is ſaid to be grand as to the ſtyle and imagery, loftineſs, and cadence; but, like that of the Chineſe, is not eaſily underſtood or reliſhed by the Europeans. The ſame may be ſaid of their muſic, both vocal and inſtrumental; the beſt of which, of either kind, would hardly be tolerable to a nice European ear.

They pretend, like the Chineſe, to have been the inventors of printing from time immemorial, and their method is the ſame with theirs, on wooden blocks; but they excel them in the neatneſs of cutting them, as well as in the goodneſs of their ink and paper. They likewiſe lay claim to the invention of gun-powder; and are vaſtly ſuperior to the Chineſe in the uſe of all ſorts of fire-arms, eſpecially of artillery, as well as the curiouſneſs of their fire-works.

Their manner of writing is much the ſame as that of the Chineſe, viz. in columns from top to bottom, and the columns beginning at the right and ending at the left hand. Their characters were alſo originally the ſame, but now differ conſiderably.

Their language hath ſome affinity with the Chineſe, though it appears from its various dialects to have been a kind of compound of that and other languages, derived from the various nations that firſt peopled thoſe iſlands. It is not only very regular, polite, elegant, and copious, but abounds with a great variety of ſynonyma, adapted to the nature of the ſubject they are upon, whether ſublime, familiar, or low; and to the quality, age, and ſex, both of the ſpeaker and perſon ſpoken to.

The Japaneſe are commonly very ingenious in moſt handicraft trades; and excel even the Chineſe in ſeveral manufactures, particularly in the beauty, goodneſs, and variety of their ſilks, cottons, and other ſtuffs, and in their japan and porcelain wares. No eaſtern nation comes up to them in the tempering and fabricating of ſcymitars, ſwords, muſkets, and other ſuch weapons.

The Japaneſe architecture is much in the ſame taſte and ſtyle as that of the Chineſe, eſpecially as to their temples, palaces, and other public buildings; but in private ones they effect more plainneſs and neatneſs than ſhow. Theſe laſt are of wood and cement, conſiſting of two ſtories: they dwell only in the lower; the upper chamber ſerving for wardrobes. The roofs are covered with ruſh-mats three or four inches thick. In every houſe there is a ſmall court, ornamented with trees, ſhrubs, and flower-pots; as likewiſe with a place for bathing. Chimnies are unknown in this country, although fire is needed from the cold month of October till the end of March. They heat their rooms with charcoal contained in a copper ſtove, which they ſit round. Their cities are generally ſpacious, having each a prince or governor reſiding in them. The capital of Jeddo is 21 French leagues in circumference. Its ſtreets are ſtraight and large. There are gates at little diſtances, with an extremely high ladder, which they aſcend to diſcover fires. Villages differ from cities in having but one ſtreet; which often extends ſeveral leagues. Some of them are ſituated ſo near each other, that they are only ſeparated by a river or a bridge. The principal furniture of the Japaneſe conſiſts in ſtraw-mats, which ſerve them for ſeats and beds; a ſmall table for every one who chooſes to eat is the only moveable. The Japaneſe ſit always upon their hams. Before dinner begins, they make a profound bow and drink to the health of the gueſts. The women eat by themſelves. During the courſes, they drink a glaſs of ſakki, which is a kind of beer made of rice kept conſtantly warm; and they drink at each new morſel. Tea and ſakki are the moſt favourite drink of this people; wine and ſpirits are never uſed, or even accepted when offered by the Dutch. Sakki, or rice beer, is clear as wine, and of an agreeable taſte: taken in quantity, it intoxicates for a few moments and cauſes headach. Both men and women are fond of tobacco, which is in univerſal vogue and ſmoaked continually. The gardens about their houſes are adorned with a variety of flowers, trees, verdure, baths, terraces, and other embelliſhments. The furniture and decorations of the houſes of perſons of diſtinction conſiſt in japan-work of various colours, curious paintings, beds, couches, ſkreens, cabinets, tables, a variety of porcelain jars, vaſes, tea-equipage, and other veſſels and figures, together with ſwords, guns, ſcymitars, and other arms. Their retinues are more or leſs numerous and ſplendid according to their rank; but there are few of the lords who have leſs than 50 or 60 men richly clad and armed, ſome on foot, but moſt on horſeback. As for their petty kings and princes, they are ſeldom ſeen without 300 or 200 at leaſt, when they either wait on the emperor, which is one half of the year, or attend him abroad.

When a prince or great man dies, there are commonly about 10, 20, or more youths of his houſehold, and ſuch as were his greateſt favourites, who put themſelves to a voluntary death, at the place where the body is buried or burned: as ſoon as the funeral pile, conſiſting of odoriferous woods, gums, ſpices, oils, and other ingredients, is ſet on fire, the relations and friends of the deceaſed throw their preſents into it, ſuch as cloaths, arms, victuals, money, ſweet herbs, flowers, and other things which they imagine will be of uſe to him in the other world. Thoſe of the middle or lower rank commonly bury their dead, without any other burning than that of ſome odoriferous woods, gums, &c. The ſepulchres into which the bones and aſhes of perſons of rank are depoſited, are generally very magnificent, and ſituated at ſome diſtance from the towns.

The Dutch and Chineſe are the only nations allowed to traffic in Japan. The Dutch at preſent ſend but two ſhips annually, which are fitted out at Batavia, and ſail in June, and return at the end of the year. The chief merchandiſe is Japaneſe copper and raw camphor. The wares which the Dutch company import are, coarſe ſugar, ivory, a great quantity of tin and lead, a little caſt iron, various kinds of fine chintzes, Dutch cloth of different colours and fineneſs, ſerge wood for dyeing, tortoiſe-ſhell, and *coſtus Arabicus*. The little merchandiſe bought by the officers on their own account, conſiſts of ſaffron, theriaca, ſealing-wax, glaſs-beads, watches, &c. &c. About the time when the Dutch ſhips are expected, ſeveral outpoſts are ſtationed on the higheſt hills by the government; they are provided with teleſcopes, and long before their arrival give the governor of Nagaſaki notice. As ſoon as they anchor in the harbour, the upper and under officers of the Japaneſe immediately betake themſelves on board, together with interpreters; to whom is delivered a cheſt, in which all the ſailors books, the muſter-roll of the whole crew, ſix ſmall barrels of powder, ſix barrels of balls, ſix muſkets, ſix bayonets, ſix Piſtols, and ſix ſwords, are depoſited; this is ſuppoſed to be the whole remaining ammunition after the imperial garriſon has been ſaluted. Theſe things are conveyed on ſhore, and preſerved in a ſeparate warehouſe, nor are they returned before the day the ſhip quits the harbour.

Duties are quite unknown as well in the inland parts as on the coaſt, nor are there any cuſtoms required either for exported or imported goods; an advantage enjoyed by few nations. But, to prevent the importation of any forbidden wares, the utmoſt vigilance is obſerved; then the men and things are examined with the eyes of Argus. When any European goes on ſhore, he is examined before he leaves the ſhip, and afterwards on his landing. This double ſearch is exceedingly ſtrict; ſo that not only the pockets and cloaths are ſtroaked with the hands, but the pudenda of the meaner ſort are preſſed, and the hair of the ſlaves. All the Japaneſe who came on board are ſearched in like manner, except only their ſuperior officers: ſo alſo are the wares either exported or imported, firſt on board, and then at the factory, except the great cheſts, which are opened at the factory, and ſo carefully examined that they ſtrike the very ſides leſt they ſhould be hollow. The bed clothes are often opened, and the feathers examined: rods of iron are run into the pots of butter and confections: a ſquare hole is made in the cheeſe, and a long-pointed iron is thruſt into it in all directions. Their ſuſpicion is carried ſo far, that they take out and break one or two of the eggs brought from Batavia.

The interpreters are all natives; they ſpeak Dutch in different degrees of purity. The government permits no foreigner to learn their language, leſt they ſhould by means of this acquire the knowledge of the manufactures of the country; but forty or fifty interpreters are provided to ſerve the Dutch in their trade, or on any other occaſion.

The interpreters are very inquiſitive after European books, and generally provide themſelves with ſome from the Dutch merchants. They peruſe them with care, and remember what they learn. They beſides endeavour to get inſtruction from the Europeans; for which purpoſe they aſk numberleſs queſtions, particularly reſpecting medicine, phyſics, and natural hiſtory. Moſt of them apply to medicine, and are the only phyſicians of their nation who practiſe in the European manner, and with European medicines, which they procure from the Dutch phyſicians. Hence they are able to acquire money, and to make themſelves reſpected.

Japan Earth. See Mimosa and Terra *Japonica*.

JAPANNING, the art of varniſhing and drawing figures on wood, in the ſame manner as is done by the natives of Japan in the Eaſt Indies.

The ſubſtances which admit of being japanned are almoſt every kind that are dry and rigid, or not too flexible; as wood, metals, leather, and paper prepared.

Wood and metals do not require any other preparation, but to have their ſurface perfectly even and clean: but leather ſhould be ſecurely ſtrained either on frames or on boards; as its bending or forming folds would otherwiſe crack and force off the coats of varniſh: and paper ſhould be treated in the ſame manner, and have a previous ſtrong coat of ſome kind of ſize; but it is rarely made the ſubject of japanning till it is converted into *papier machè*, or wrought by other means into ſuch form, that its original ſtate, particularly with reſpect to flexibility, is loſt.

One principal variation from the method formerly uſed in japanning is, the uſing or omitting any priming or undercoat on the work to be japanned. In the older practice, ſuch priming was always uſed; and is at preſent retained in the French manner of japanning coaches and ſnuff-boxes of the *papier machè*; but in the Birmingham manufacture, it has been always rejected. The advantage of uſing ſuch priming or undercoat is, that it makes a ſaving in the quantity of varniſh uſed; becauſe the matter of which the priming is compoſed fills up the inequalities of the body to be varniſhed; and makes it eaſy, by means of rubbing and water-poliſhing, to gain an even ſurface for the varniſh: and this was therefore ſuch a convenience in the caſe of wood, as the giving a hardneſs and firmneſs to the ground was alſo in the caſe of leather, that it became an eſtabliſhed method; and is therefore retained even in the inſtance of the *papier machè* by the French, who applied the received method of japanning to that kind of work on its introduction. There is nevertheleſs this incovenience always attending the uſe of an undercoat of ſize, that the japan coats of varniſh and colour will be conſtantly liable to be cracked and peeled off by any violence, and will not endure near ſo long as the bodies japanned in the ſame manner, but without any ſuch priming: as may be eaſily obſerved in comparing the wear of the Paris and Birmingham ſnuff-boxes; which latter, when good of their kind, never peel or crack, or ſuffer any damage, unleſs by great violence, and ſuch a continued rubbing as waſtes away the ſubſtance of the varniſh; which the japan coats of the Pariſian crack and fly off in flakes, whenever any knock or fall, particularly near the edges, expoſe them to be injured. But the Birmingham manufacturers, who originally practiſed the japanning only on metals, to which the reaſon above given for the uſe of priming did not extend, and who took up this art of themſelves as an invention, of courſe omitted at firſt the uſe of any ſuch undercoat; and not finding it more neceſſary in the inſtance of *papier manchè*, than on metals, continue ſtill to reject it. On which account, the boxes of their manufacture are, with regard to the wear, greatly better than the French.

The laying on the colours in gum-water, inſtead of varniſh, is alſo another variation from the method of japanning formerly practiſed; but the much greater ſtrength of the work, where they are laid on in varniſh or oil, has occaſioned this way to be exploded with the greateſt reaſon in all regular manufactures: however, they who may practice japanning on cabinets, or other ſuch pieces as are not expoſed to much wear and violence, for their amuſement only, and conſequently may not find it worth their while to incumber themſelves with the preparations neceſſary for the other methods, may paint with water-colours on an undercoat laid on the wood or other ſubſtance of which the piece to be japanned is formed; and then finiſh with the proper coats of varniſh, according to the methods below taught: and if the colours are tempered with the ſtrongeſt iſinglaſs ſize and honey, inſtead of gum-water, and laid on very flat and even, the work will not be much inferior in appearance to that done by the other method, and will laſt as long as the old japan.

Of Japan Grounds.—The proper grounds are either ſuch as are formed by the varniſh and colour, where the whole is to remain of one ſimple colour; or by the varniſh either coloured or without colour, on which ſome painting or other decoration is afterwards to be laid. It is neceſſary, however, before we proceed to ſpeak of the particular grounds, to ſhow the manner of laying on the priming or undercoat, where any ſuch is uſed.

This priming is of the ſame nature with that called *clear-coating*, or vulgarly *clear-coaling*, practiſed erroneouſly by the houſe-painters; and conſiſts only in laying on and drying in the moſt even manner a compoſition of ſize and whiting, or ſometimes lime inſtead of the latter. The common ſize has been generally uſed for this purpoſe: but where the work is of a nicer kind, it is better to employ the glover's or the parchment ſize; and if a third of iſinglaſs be added, it will be ſtill better, and, if not laid on too thick, much leſs liable to peel and crack. The work ſhould be prepared for this priming, by being well ſmoothed with the fiſh-ſkin or glaſs-ſhaver; and, being made thoroughly clean, ſhould be bruſhed over once or twice with hot ſize, diluted with two thirds of water, if it be of the common ſtrength. The priming ſhould then be laid on with the bruſh as even as poſſible; and ſhould be formed of a ſize whoſe conſiſtence is betwixt the common kind and glue, mixed with as much whiting as will give it a ſufficient body of colour to hide the ſurface of whatever it is laid upon, but not more.

Handmaid to the Arts.

If the ſurface be very clean on which the priming is uſed, two coats of it laid on in this manner will be ſufficient; but if, on trial with a fine wet rag, it will not receive a proper water poliſh on account of any inequalities not ſufficiently filled up and covered, two or more coats muſt be given it; and whether a greater or leſs number be uſed, the work ſhould be ſmoothed, after the laſt coat but one is dry, by rubbing it with the Dutch ruſhes. When the laſt coat is dry, the water poliſh ſhould be given, by paſſing over every part of it with a fine rag gently moiſtened, till the whole appear perfectly plain and even. The priming will then be completed, and the work ready to receive the painting or coloured varniſh; the reſt of the proceedings being the ſame in this caſe as where no priming is uſed.

When wood or leather is to be japanned, and no priming is uſed, the beſt preparation is to lay two or three coats of coarſe varniſh compoſed in the following manner:

"Take of rectified ſpirit of wine one pint, and of coarſe ſeed-lac and reſin each two ounces. Diſſolve the ſeed-lac and reſin in the ſpirit; and then ſtrain off the varniſh."

This varniſh, as well as all others formed of ſpirit of wine, muſt be laid on in a warm place; and if it can be conveniently managed, the piece of work to be varniſhed ſhould be made warm likewiſe: and for the ſame reaſon all dampneſs ſhould be avoided; for either cold or moiſture chills this kind of varniſh, and prevents its taking proper hold of the ſubſtance on which it is laid.

When the work is ſo prepared, or by one priming with the compoſition of ſize and whiting above deſcribed, the proper japan ground muſt be laid on, which is much the beſt formed of ſhell-lac varniſh, and the colour deſired, if white be not in queſtion, which demands a peculiar treatment, or great brightneſs be not required, when alſo other means muſt be purſued.

The colours uſed with the ſhell-lac varniſh may be any pigments whatever which give the teint of the ground deſired; and they may be mixed together to form browns or any compound colours.

As metals never require to be undercoated with whiting, they may be treated in the ſame manner as wood or leather, when the under coat is omitted, except in the inſtances particularly ſpoken of below.

White JAPAN Grounds.—The forming a ground perfectly white, and of the firſt degree of hardneſs remains hitherto a deſideratum, or matter ſought for, in the art of japanning, as there are no ſubſtances which form a very hard varniſh but what have too much colour not to deprave the whiteneſs; when laid on of a due thickneſs over the work.

The neareſt approach, however, to a perfect white varniſh already known, is made by the following compoſition.

"Take flake white, or white lead, waſhed over and ground up with a ſixth of its weight of ſtarch, and then dried; and temper it properly for ſpreading with the maſtich varniſh prepared as under the article VARNISH.

"Lay theſe on the body to be japanned, prepared either with or without the undercoat of whiting, in the manner as above ordered; and the varniſh it over with five or ſix coats of the following varniſh:

"Provide any quantity of the beſt ſeed-lac; and pick out of it all the cleareſt and whiteſt grains, reſerving the more coloured and fouler parts for the coarſe varniſhes uſed, ſuch as that for priming or preparing wood or leather. Take of this picked ſeed-lac two ounces, and of gum-animi three ounces; and diſſolve them, being previouſly reduced to a groſs powder, in about a quart of ſpirit of wine; and ſtrain off the clear varniſh."

The ſeed-lac will yet give a ſlight tinge to this compoſition: but cannot be omitted where the varniſh is wanted to be hard; though, when a ſofter will anſwer the end the proportion may be diminiſhed, and a little crude turpentine added to the gum-animi to take off the brittleneſs.

A very good varniſh, free entirely from all brittleneſs, may be formed by diſſolving as much gum-animi as the oil will take, in old nut or poppy oil; which muſt be made to boil gently when the gum is put into it. The ground of white colour itſelf may be laid on in this varniſh, and then a coat or two of it may be put over the ground; but it muſt be well diluted with oil of turpentine when it is uſed. This, though free from brittleneſs, is nevertheleſs liable to ſuffer by being indented or bruiſed by any ſlight ſtrokes; and it will not well bear any poliſh, but may be brought to a very ſmooth ſurface without, if it be judiciouſly managed in the laying it on. It is likewiſe ſomewhat tedious in drying, and will require ſome time where ſeveral coats are laid on; as the laſt ought not to contain much oil of turpentine.

Blue JAPAN Grounds.—Blue japan grounds may be formed of bright Pruſſian blue, or of verditer glazed over by Pruſſian blue or of ſmalt. The colour may be beſt mixed with ſhell-lac varniſh, and brought to a poliſhing ſtate by five or ſix coats of varniſh of ſeed-lac; but the varniſh, nevertheleſs, will ſomewhat injure the colour by giving to a true blue a caſt of green, and fouling in ſome degree a warm blue by the yellow it contains; where, therefore, a bright blue is required, and a leſs degree of hardneſs can be diſpenſed with, the method before directed in the caſe of white grounds muſt be purſued.

Red JAPAN Grounds.—For a ſcarlet japan ground, vermilion may be uſed: but the vermilion has a glaring effect, that renders it much leſs beautiful than the crimſon produced by glazing it over with carmine or fine lake; or even with roſe-pink, which has a very good effect uſed for this purpoſe. For a very bright crimſon, nevertheleſs, inſtead of glazing with carmine the Indian lake ſhould be uſed, diſſolved in the ſpirit of which the varniſh is compounded, which it readily admits of when good: and, in this caſe, inſtead of glazing with the ſhell-lac varniſh, the upper or poliſhing coats need only be uſed; as they will equally receive and convey the tinge of the Indian lake, which may be actually diſſolved by ſpirit of wine; and this will be found a much cheaper method than the uſing carmine. If nevertheleſs, the higheſt degree of brightneſs be required, the white varniſhes muſt be uſed.

Yellow JAPAN Grounds.——For bright yellow grounds, the king's yellow, or the turpeth mineral, ſhould be employed, either alone or mixed with fine Dutch pink; and the effect may be ſtill more heightened by diſſolving powdered turmeric-root in the ſpirit of wine of which the upper or poliſhing coat is made; which ſpirit of wine muſt be ſtrained from off the dregs before the ſeed-lac be added to it to form the varniſh.

The ſeed-lac varniſh is not equally injurious here, and with greens, as in the caſe of other colours; becauſe, being only tinged with a reddiſh yellow, it is little more than an addition to the force of the colours.

Yellow grounds may be likewiſe formed of the Dutch pink only; which, when good, will not be wanting in brightneſs, though extremely cheap.

Green JAPAN Grounds.——Green grounds may be produced by mixing the king's yellow and bright Pruſſian blue, or rather the turpeth mineral and Pruſſian blue; and a cheap, but fouler kind, by verdegris with a little of the abovementioned yellows, or Dutch pink. But where a very bright green is wanted the cryſtals of verdegris, called *diſtilled verdegris*, ſhould be employed; and to heighten the effect they ſhould be laid on a ground of leaf-gold which renders the colour extremely brilliant and pleaſing.

They may any of them be uſed ſucceſsfully with good ſeed-lac varniſh for the reaſon before given; but will be ſtill brighter with white varniſh.

Orange coloured JAPAN Grounds—Orange coloured japan grounds may be formed by mixing vermilion or red lead with king's yellow, or Dutch pink; or the orange-lac, which will make a brighter orange ground than can be produced by any mixture.

Purple JAPAN Grounds.—Purple japan grounds may be produced by the mixture of lake and Pruſſian blue; or a fouler kind, by vermilion and Pruſſian blue. They may be treated as the reſt with reſpect to the varniſh.

Black JAPAN Grounds to be produced without Heat.—Black grounds may be formed by either ivory-black or lamp-black; but the former is preferable where it is perfectly good.

Theſe may be always laid on with ſhell-lac varniſh; and have their upper or poliſhing coats of common ſeed-lac varniſh, as the tinge or foulneſs of the varniſh can be here no injury.

Common Black JAPAN Grounds on Iron or copper produced by means of Heat.—— For forming the common black japan grounds by means of heat, the piece of work to be japanned muſt be painted over with drying oil; and, when it is of a moderate dryneſs, muſt be put into a ſtove of ſuch degree of heat as will change the oil to black, without burning it ſo as to deſtroy or weaken its tenacity. The ſtove ſhould not be too hot when the work is put into it, nor the heat increaſed too faſt; either of which errors would make it bliſter: but the ſlower the heat is augmented, and the longer it is continued, provided it be reſtrained within the due degree, the harder will be the coat of japan. This kind of varniſh requires no poliſh, having received when properly managed, a ſufficient one from the heat.

The fine Tortoiſe-ſhell JAPAN Ground produced by means of Heat.—The beſt kind of tortoiſe-ſhell ground produced by heat is not leſs valuable for its great hardneſs, and enduring to be made hotter than boiling water without damage, than for its beautiful appearance. It is to be made by means of a varniſh prepared in the following manner:

"Take of good linſeed-oil one gallon, and of umbre half a pound; boil them together till the oil becomes very brown and thick: ſtrain it then through a coarſe cloth, and ſet it again to boil; in which ſtate it muſt be continued till it acquire a pitchy conſiſtence; when it will be fit for uſe."

Having prepared thus the varniſh, clean well the iron or copper plate or other pieces which is to be japanned; and then lay vermilion tempered with ſhell-lac varniſh, or with drying oil diluted with oil of turpentine, very thinly, on the places intended to imitate the more tranſparent parts of the tortoiſe-ſhell. When the vermilion is dry, bruſh over the whole with the black varniſh, tempered to a due conſiſtence with oil of turpentine; and when it is ſet and firm, put the work into a ſtove, where it may undergo a very ſtrong heat, and muſt be continued a conſiderable time; if even three weeks or a month, it will be the better.

This was given amongſt other receipts by Kunckel; but appears to have been neglected till it was revived with great ſucceſs in the Birmingham manufactures, where it was not only the ground of ſnuff-boxes, dreſſing-boxes, and other ſuch leſſer pieces, but of thoſe beautiful tea-waiters which have been ſo juſtly eſteemed and admired in ſeveral parts of Europe where they have been ſent. This ground may be decorated with painting and gilding, in the ſame manner as any other varniſhed ſurface, which had beſt be done after the ground has been duly hardened by the hot ſtove; but it is well to give a ſecond annealing with a more gentle heat after it is finiſhed.

Method of painting JAPAN Work.—Japan work ought properly to be painted with colours in varniſh; though, in order for the greater diſpatch, and, in ſome very nice works in ſmall, for the freer uſe of the pencil, the colours are ſometimes tempered in oil; which ſhould previouſly have a fourth part of its weight of gum-animi diſſolved in it; or, in default of that, of the gums ſandarac or maſtich: When the oil is thus uſed, it ſhould be well diluted with ſpirit of turpentine, that the colours may be laid more evenly and thin; by which means, fewer of the poliſhing or upper coats of varniſh become neceſſary.

In ſome inſtances, water-colours are laid on grounds of gold, in the manner of other paintings; and are beſt, when ſo uſed, in their proper appearance, without any varniſh over them; and they are alſo ſometimes ſo managed as to have the effect of emboſſed work. The colours employed in this way, for painting, are beſt prepared by means of iſinglaſs ſize corrected with honey or ſugar-candy. The body of which the emboſſed work is raiſed, need not, however, be tinged with the exterior colour; but may be beſt formed of very ſtrong gum-water, thickened to a proper conſiſtence by bole-armenian and whiting in equal parts; which being laid on the proper figure, and repaired when dry, may be then painted with the proper colours tempered in the iſinglaſs ſize, or in the general manner with ſhell-lac varniſh.

Manner of Varniſhing JAPAN *Work.*—The laſt and finiſhing part of japanning lies in the laying on and poliſhing the outer coats of varniſh: which are neceſſary, as well in the pieces that have only one ſimple ground of colour, as with thoſe that are painted. This is in general beſt done with common ſeed-lac varniſh, except in the inſtances and on thoſe occaſions where we have already ſhown other methods to be more expedient; and the ſame reaſons which decide as to the fitneſs or impropriety of the varniſhes, with reſpect to the colours of the ground, hold equally with regard to thoſe of the painting: for where brightneſs is the moſt material point, and a tinge of yellow will injure it, ſeed-lac muſt give way to the whiter gums; but where hardneſs, and a greater tenacity, are moſt eſſential, it muſt be adhered to; and where both are ſo neceſſary, that it is proper one ſhould give way to the other in a certain degree reciprocally, a mixed varniſh muſt be adopted.

This mixed varniſh, as we have already obſerved, ſhould be made of the picked ſeed-lac. The common ſeed-lac varniſh, which is the moſt uſeful preparation of the kind hitherto invented, may be thus made:

“Take of ſeed-lac three ounces, and put it into water to free it from the ſticks and filth that are frequently intermixed with it; and which muſt be done by ſtirring it about, and then pouring off the water, and adding freſh quantities in order to repeat the operation, till it be freed from all impurities, as it very effectually may be by this means. Dry it then, and powder it groſsly, and put it, with a pint of rectified ſpirit of wine, into a bottle, of which it will not fill above two-thirds. Shake the mixture well together; and place the bottle in a gentle heat, till the ſeed appear to be diſſolved; the ſhaking being in the mean time repeated as often as may be convenient: and then pour off all that can be obtained clear by this method, and ſtrain the remainder through a coarſe cloth. The varniſh thus prepared muſt be kept for uſe in a bottle well ſtopt.”

When the ſpirit of wine is very ſtrong, it will diſſolve a greater proportion of the ſeed-lac: but this will ſaturate the common, which is ſeldom of a ſtrength ſufficient for making varniſhes in perfection. As the chilling, which is the moſt inconvenient accident attending thoſe of this kind is prevented, or produced more frequently, according to the ſtrength of the ſpirit; we ſhall therefore take this opportunity of ſhowing a method by which weaker rectified ſpirits may with great eaſe, at any time, be freed from the phlegm, and rendered of the firſt degree of ſtrength.

“Take a pint of the common rectified ſpirit of wine, and put it into a bottle, of which it will not fill above three parts. Add to it half an ounce of pearl-aſhes, ſalt of tartar, or any other alkaline ſalt, heated red-hot, and powdered, as well as it can be without much loſs of its heat. Shake the mixture frequently for the ſpace of half an hour; before which time, a great part of the phlegm will be ſeparated from the ſpirit, and will appear, together with the undiſſolved part of the ſalts, in the bottom of the bottle. Let the ſpirit then be poured off, or freed from the phlegm and ſalts, by means of a tritorium or ſeparating funnel; and let half an ounce of the pearl-aſhes, heated and powdered as before, be added to it, and the ſame treatment repeated. This may be done a third time, if the quantity of phlegm ſeparated by the addition of the pearl-aſhes appear conſiderable. An ounce of alum reduced to powder and made hot, but not burnt, muſt then be put into the ſpirit, and ſuffered to remain ſome hours; the bottle being frequently ſhaken: after which, the ſpirit being poured off from it, will be fit for uſe.”

The addition of the alum is neceſſary, to neutralize the remains of the alkaline ſalt or pearl-aſhes; which would otherwiſe greatly deprave the ſpirit with reſpect to varniſhes and laquer, where vegetable colours are concerned; and muſt conſequently render another diſtillation neceſſary.

The manner of uſing the ſeed-lac or white varniſhes is the ſame, except with regard to the ſubſtance uſed in poliſhing; which, where a pure white or great clearneſs of other colours is in queſtion, ſhould be itſelf white: whereas the browner ſorts of poliſhing duſt, as being cheaper, and doing their buſineſs with greater diſpatch, may be uſed in other caſes. The pieces of work to be varniſhed ſhould be placed near a fire, or in a room where there is a ſtove, and made perfectly dry; and then the varniſh may be rubbed over them by the proper bruſhes made for that purpoſe, beginning in the middle, and paſſing the bruſh to one end: and then with another ſtroke from the middle, paſſing it to the other. But no part ſhould be croſſed or twice paſſed over, in forming one coat, where it can poſſibly be avoided. When one coat is dry, another muſt be laid over it; and this muſt be continued at leaſt five or ſix times, or more, if on trial there be not ſufficient thickneſs of varniſh to bear the poliſh, without laying bare the painting or the ground colour underneath.

When a ſufficient number of coats is thus laid on, the work is fit to be poliſhed: which muſt be done, in common caſes, by rubbing it with a rag dipped in Tripoli or pumice-ſtone, commonly called *rotten ſtone*, finely powdered: but towards the end of the rubbing, a little oil of any kind ſhould be uſed along with the powder: and when the work appears ſufficiently bright and gloſſy, it ſhould be well rubbed with the oil alone, to clean it from the powder, and give it a ſtill brighter luſtre.

In the caſe of white grounds, inſtead of the Tripoli or pumice-ſtone, fine putty or whiting muſt be uſed; both which ſhould be waſhed over to prevent the danger of damaging the work from any ſand or other gritty matter that may happen to be commixed with them.

It is a great improvement of all kinds of japan work, to harden the varniſh by means of heat; which, in every degree that it can be applied ſhort of what would burn or calcine the matter, tends to give it a more firm and ſtrong texture. Where metals form the body, therefore, a very hot ſtove may be uſed, and the pieces of work may be continued in it a conſiderable time; eſpecially if the heat be gradually increaſed: but where wood is in queſtion, heat muſt be ſparingly uſed, as it would otherwiſe warp or ſhrink the body, ſo as to injure the general figure.

JAPHETH, the ſon of Noah. His deſcendants poſſeſſed all Europe and the iſles in the Mediterranean, as well thoſe which belong to Europe, as others which depend on Aſia. They had all Aſia Minor, and the northern parts of Aſia above the ſources of the Tygris and Euphrates. Noah, when he bleſſed Japheth, ſaid to him, "God ſhall enlarge Japheth, and he ſhall dwell in the tents of Shem; and Canaan ſhall be his ſervant." This bleſſing of Noah was accompliſhed, when the Greeks, and after them the Romans, carried their conqueſts into Aſia and Africa, where were the dwelling and dominions of Shem and Canaan.

The ſons of Japheth were Gomer, Magog, Madai, Javan, Tubal, Meſhech, and Tiras. The ſcripture ſays, "that they peopled the iſles of the Gentiles, and ſettled in different countries, each according to his language, family, and people." It is ſuppoſed, that Gomer was the father of the Cimbri, or Cimmerians; Magog of the Scythians; Madai of the Macedonians or Medes; Javan of the Ionians and Greeks; Tubal of the Tibarenians; Meſhech of the Muſcovites or Ruſſians; and Tiras of the Thracians. By the iſles of the Gentiles, the Hebrews underſtand the iſles of the Mediterranean, and all the countries ſeparated by the ſea from the continent of Paleſtine; whether alſo the Hebrews could go by ſea only, as Spain, Gaul, Italy Greece, Aſia Minor.

Japheth was known by profane authors under the name Japetus. The poets make him the father of heaven and earth. The Greeks believe that he was the father of their race, and acknowledged nothing more ancient than him. Beſides the ſeven ſons of Japheth abovementioned, the Septuagint, Euſebius, the Alexandrian Chronicle, and St Auſtin, give him an eighth called Eliza, who is not mentioned either in the Hebrew or Chaldee, and the eaſtern people affirm that Japheth had eleven children.

JAPYDIA (anc. geog.), a weſtern diſtrict of Illyricum anciently threefold; the firſt *Japydia* extending from the ſprings of the Timavus to Iſtria; the ſecond, from the river Arſia to the river Tedanius; and the third, called *Inalpina*, ſituated on mount Albius and the other Alps, which run out above Iſtria. *Japodes*, or *Japydes* the people. Now conſtituting the ſouth part of Carniola, and the weſt of Auſtrian Croatia.

JAPYGIA, Calabria, anciently ſo called by the Greeks. *Japyges*, the people.

JAPYGIUM (anc. geog.), a promontory of Calabria; called alſo *Salentinum*. Now *Copa di S. Maria di Leuca*.

JAQUELOT (Iſaac), a celebrated French Proteſtant divine, born in 1647, at Vaſſy in Champagne, where his father was miniſter. The revocation of the edict of Nantz obliging him to quit France; he took refuge firſt at Heidelberg, and then at the Hague, where he procured an appointment in the Walloon church. Here he continued till that capital was taken by the king of Pruſſia, who, hearing him preach, made him his French miniſter in ordinary at Berlin; to which city he removed in 1702. While he lived at Berlin, he entered into a warm controverſy with M. Bayle on the doctrine advanced in his dictionary favouring manichæiſm, which continued until death impoſed ſilence on both parties: and it was in this diſpute that M. Jaquelot openly declared in favour of the Remonſtrants. He wrote, among other works, 1. *Diſſertations ſur l'exiſtence de Dieu.* 2. *Diſſertations ſur le Meſſie.* 3. *Lettres a Meſſieures le Prelats de l'Egliſe Gallicane.* He was employed in finiſhing an important work upon the divine authority of the holy ſcriptures, when he died ſuddenly in 1708, aged 61.

JAR, or Jarr, an earthen pot or pitcher, with a big belly and two handles.—The word comes from the Spaniſh *jarra* or *jarro*, which ſignify the ſame.

Jar is uſed for a ſort of meaſure or fixed quantity of divers things.—The *jar* of oil is from 18 to 26 gallons; the *jar* of green ginger is about 100 pounds weight.

JARCHI (Solomon), otherwiſe *Raſchi* and *Iſaaki Solomon*, a famous rabbi, born at Troyes in Champagne, who flouriſhed in the 12th century. He was a perfect maſter of the talmud and gemara; and he filled the poſtils of the bible with ſo many talmudical reveries, as totally extinguiſhed both the literal and moral ſenſe of it. A great part of his commentaries are printed in Hebrew, and ſome have been tranſlated into Latin by the Chriſtians. They are all greatly eſteemed by the Jews, who have beſtowed on the author the title of *prince of commentators*.

JARDYN, or Jardin, (Karel du), painter of converſations, landſcapes, &c. was born at Amſterdam in 1640, and became a diſciple of Nicholas Berchem. He travelled to Italy whilſt he was yet a young man; and arriving at Rome, he gave himſelf up alternately to ſtudy and diſſipation. Yet, amidſt this irregularity of conduct, his proficiency in the art was ſurpriſing; and his paintings roſe into ſuch high repute, that they were exceedingly coveted in Rome, and bought up at great prices. With an intention to viſit his native city he at laſt left Rome; but paſſing through Lyons, and meeting ſome agreeable companions, they prevailed on him to ſtay there for ſome time, and he found as much employment in that city as he could poſſibly undertake or execute. But the profits which aroſe from his paintings were not proportionable to his profuſion; and in order to extricate himſelf from the incumbrances in which his extravagance had involved him, he was induced to marry his hoſteſs, who was old and diſagreeable, but very rich. Mortified and aſhamed of the adventure, he returned as expeditiouſly as poſſible to Amſterdam, accompanied by his wife, and there for ſome time followed his profeſſion with full as much ſucceſs as he had met with in Italy or Lyons. He returned to Rome the ſecond time; and after a year or two ſpent there in his uſual extravagant manner, he ſettled at Venice. In that city his merit was well known before his arrival, which procured him a very honourable reception. He lived there highly careſſed, and continually employed; but died at the age of 38. He was ſumptuouſly interred, out of reſpect to his talents; and although a Proteſtant, permitted to be laid in conſecrated ground. This painter, in his colouring and touch, reſembled his maſter Berchem: but he added to that manner a force which diſtinguiſhes the great maſters of Italy; and it is obſerved, that moſt of his pictures ſeem to expreſs the warmth of the ſun, and the light of mid-day. His pictures are not much encumbered; a few figures, ſome animals, a little landſcape for the back-grounds, generally compriſe the whole of his compoſition. However, ſome of his ſubjects are often more extenſive, containing more objects, and a larger deſign. His works are as much ſought after, as they are difficult to be met with.

JARGON, a kind of precious ſtone, of the nature of the diamond, but ſofter; found in Braſil according to M. Bomare; but in Ceylon, according to M. Rome de Liſle. Its ſpecific gravity is nearly equal to that of the ponderous ſpar, being 4416. Its cryſtals conſiſt of two tetrahedral pyramids of equal ſides, ſeparated by a ſhort priſm; ſo that the jargon is properly of a dodecahedral form. According to ſome lapidaries, the jargon comes neareſt to the ſapphire in hardneſs; and as they have when cut and poliſhed a great reſemblance to the diamond, they are alſo called by ſome *ſoft diamonds*; and one may be eaſily impoſed upon in purchaſing theſe for the true kind, when they are made up in any ſort of jewellery work. On expoſing this ſtone to a violent fire, M. D'Arcet found the ſurface a little vitrified where it ſtuck to the porcelain teſt in which it was ſet; whence it appears, that the jargon has not the leaſt reſemblance to the diamond, which is deſtructible by fire. See DIAMOND.

JARIMUTH, JARMUTH, or *Jer moth*, Joſh. xv. a town reckoned to the tribe of Judah, four miles from Eleutheropolis, weſtward, (Jerome). Thought to be the ſame with Ramoth and Remeth, Joſhua xix. and Nehem. x. 2. (Reland.)

JARNAC, a town of France, in Orleanois and in Angumois, remarkable for a victory gained by Henry III. over the Hugenots in 1569. It is ſeated on the river Charente, in W. Long. 0. 13. N. Lat. 45. 40.

JAROSLOW, a handſome town of Poland, in the palatinate of Ruſſia, with a ſtrong citadel. It is remarkable for its great fair, its handſome buildings, and a battle gained by the Swedes in 1656, after which they took the town. It is ſeated on the river Saine, in E. Long. 22. 23. N. Lat. 49. 58.

JASHER (The book of). This is a book which Joſhua mentions and refers to in the following paſſage: and the ſun ſtood ſtill, and the moon ſtayed, until the people had avenged themſelves upon their enemies: is not this written in the book of Jaſher?"

It is difficult to determine what this *book of Jaſher*, or "the upright," is. St Jerom and the Jews believed it to be Geneſis, or ſome other book of the Pentateuch, wherein God foretold he would do wonderful things in favour of his people. Huetius ſuppoſes it was a book of morality, in which it was ſaid that God would ſubvert the courſe of nature in favour of thoſe who put their truſt in him. Others pretend, it was public annals, or records which were ſtyled *juſtice* or *upright*, becauſe they contained a faithful account of the hiſtory of the Iſraelites. Grotius believes, that this book was nothing elſe but a ſong made to celebrate this miracle and this victory. This ſeems the more probable opinion, becauſe the words cited by Joſhua as taken from this work, "Sun, ſtand thou ſtill upon Gibeon, and thou moon in the valley of Ajalon," are ſuch poetical expreſſions as do not ſuit with hiſtorical memoirs; beſides that in the 2d book of Samuel (i. 18.) mention is made of a book under the ſame title, on account of a ſong made on the death of Saul and Jonathan.

JASIONE, in botany: A genus of the monogamia order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 29th order, *Campanaceæ*. The common calyx is ten-leaved; and the corolla has five regular petals; the capſule beneath, two celled.

JASMINE. See JASMINUM.

Arabian JASMINE. See NYCTANTHES.

JASMINUM, JASMINE, or *Jeſſamine-tree*, in botany: A genus of the monogynia order, belonging to the diandria claſs of plants; and in the natural method ranking under the 44th order, *Sepiariæ*. The corolla is quinquefid, the berry dicoccous; the ſeeds arillated, the antheræ within the tube.

Species. 1. The officinalis, or common white jaſmine, hath ſhrubby long ſlender ſtalks and branches, riſing upon ſupport 15 or 20 feet high, with numerous white flowers from the joints and ends, of a very fragrant odour. There is a variety with white-ſtriped, and another with yellow-ſtriped leaves. 2. The fruticans, or ſhrubby yellow jaſmine, hath ſhrubby, angular, trailing ſtalks and branches, riſing upon ſupport eight or ten feet high; trifoliate and ſimple alternate leaves; with yellow flowers from the ſides and ends of the branches, appearing in June; frequently producing berries of a black colour. This ſpecies is remarkable for ſending up many ſuckers from its roots; often ſo plentifully as to overſpread the ground, if not taken up annually. 3. The humilis, or dwarf yellow jaſmine, hath ſhrubby firm ſtalks, and angular branches, of low, ſomewhat robuſt and buſhy growth; broad, trifoliate, and pinnated leaves; and large yellow flowers in July, ſometimes ſucceeded by berries. 4. The grandiflorum, or great-flowered Catalonian jaſmine, hath a ſhrubby firm upright ſtem, branching out into a ſpreading head from about three to ſix or eight feet high with large flowers of a bluſh-red colour without, and white within appearing from July to November. Of this there is a variety with ſemi-double flowers, having two ſeries of petals. 5. The azoricum, or azorian white jaſmine, hath ſhrubby, long ſlender ſtalks and branches, riſing upon ſupport 15 or 20 feet high, with pretty large flowers of a pure white colour; coming out in looſe bunches from the ends of the branches, and appearing moſt part of the ſummer and autumn. 6. The odoratiſſimum, or moſt ſweet-ſcented yellow Indian jaſmine, hath a ſhrubby upright ſtalk branching erect, without ſupport, ſix or eight feet high, with bright yellow flowers in bunches from the ends of the branches; flowering from July till October, and emitting a moſt fragrant odour.

Culture. The three firſt ſpecies are ſufficiently hardy to thrive in this climate without any ſhelter. They may be eaſily propagated by layers and cuttings; and the ſtriped varieties by grafting or budding on ſtocks of the common kind.—The other three ſpecies, which are tender, may alſo be increaſed by layers, or ſeeds, or by grafting and budding them upon the common white and ſhrubby yellow jaſmine. They require ſhelter in a green houſe in winter, and therefore muſt always be kept in pots to move them out and in occaſionally. The pots muſt be filled with light, rich earth, frequently watered in ſummer, and about once a week in winter, but always moderately during that ſeaſon. Prune off all the decayed wood at any time when it appears, and ſhorten or retrench the rambling ſhoots as you ſee occaſion, to preſerve the heads ſomewhat regular; managing them in other reſpect as the common green-houſe plants.

JASON the Greek hero who undertook the Argonautic expedition, the hiſtory of which is obſcured by fabulous traditions, flouriſhed about 933 B.C. See ARGONAUTS.

JASPACHATES. See JADE-STONE.

JASPER, in natural hiſtory, a genus of ſtones belonging to the ſiliceous claſs. According to Cronſtedt all the opaque flints are called by this name whoſe texture reſembles dry clay, and which cannot be any other way diſtinguiſhed from flints except that they are more eaſily melted; which perhaps may alſo proceed from a mixture of iron. The ſpecies are.

1. Pure jaſper, which, Cronſtredt informs us, cannot be decompounded by any means hitherto known; tho' Mr Kirwan ſays that it contains 75 *per cent.* of ſilex; 20 of argil, and about five of calx of iron. The ſpecific gravity is from 2680 to 2778. It is found of different colours: viz. green with red dots from Egypt, called alſo the *heliotrope*, or *blood-ſtone*; quite green from Bohemia; red from Italy, called there *diaſpro roſſo*, or yellow called *melites* by the ancients; a name, according to Pliny, of the ſame import with *male coloris*. It is alſo found red with yellow ſpots and veins, in Sicily, Spain, and near Conſtantinople, called by the Italians *diaſpro florido*; or black from ſome places in Sweden, called by the Italians *paragone antico*.

2. Jaſpis martialis, or ſinople, containing iron. This is a dark red ſtone containing 18 or 20 *per cent.* of metal. Near Chemnitz, where it forms very conſiderable veins, as Brunnich informs us, it has frequently ſpecks of marcaſite, cubic lead ores, and blend. It has likewiſe ſo much gold as to be worth working; there is likewiſe a ſtriped ſinople of various colours. There are ſeveral varieties differing in the coarſeneſs and fineneſs of their texture, as well as the ſhade of their colour; varying from a deep brown to a yellow. The laſt is attracted by the magnet after calcination.

Cronſtedt obſerves that jaſper, when freſh broken, ſo nearly reſembles a bole of the ſame colour, that it can only be diſtinguiſhed by its hardneſs. In the province of Dalarne in Sweden, it is found in a kind of hard ſand-ſtone; in other places it is found within ſuch unctuous clefts as are uſually met with in Colniſh clay, red chalk, and other ſubſtances of that kind. There are likewiſe ſome jaſpers that imbibe water; from whence, and other conſiderations, our author is of opinion that they have clay for their baſis, notwithſtanding their hardneſs. According to Magellan, it reſiſts the blowpipe, *per ſe*, and is only partially ſoluble with the mineral alkali; ſeparating into ſmall particles with effervеſcence: with borax or microcoſmic ſalt it melts without any effervеſcence. Bergman, in his Sciagraphia, informs us, that it is compoſed of ſiliceous earth united to a clay very full of iron. The mineral acids have no effect upon it in a ſhort time, but corrode it by ſome months immerſion. On treating a ſmall piece of green jaſper with vitriolic acid, ſome cryſtals of alum and green vitriol were obtained; which ſhows that iron and clay are ingredients in its compoſition. M. Daubenton mentions 15 varieties of this ſubſtance. 1. Green, from Bohemia, Sileſia, Siberia, and the ſhores of the Caſpian ſea; which ſeems to be the *pavonium* of Aldrovandus. 2. The diaſpro roſſo, or red jaſper; leſs common, and in ſmaller maſſes, than the green. 3. Yellow from Freyberg and Rochtliz; ſometimes of a citron colour, and appearing as if compoſed of ſilky filaments; commonly called the *ſilk jaſper*. 4. Brown from Dalecarlia in Finland and Sweden. 5. The violet from Siberia. 6. The black from Sweden, Saxony, and Finland. 7. The bluiſh-grey, a very rare ſpecies. 8. The milky white mentioned by Pliny, and found in Dalecarlia. 9. The variegated with green, red, and yellow clouds. 10. The blood ſtone, green with red ſpecks, from Egypt, which was ſuppoſed to ſtop the blood. 11. The veined with various colours. Sometimes theſe veins have a diſtant reſemblance to various letters, and then the jaſper is named by the French *jaſper grammatique*. Some of theſe found near Rochelle in France, on account of their curious variety in this reſpect, are named *polygrammatiques*. 12. The jaſper with various coloured zones. 13. That called *florito* by the Italians; which has various colours mixed promiſcuouſly without any order. 14. When the jaſper has many colours together, it is then (very improperly) called *univerſal*. 15. When it contains ſome particles of agate, it is then called *agatiſed* jaſper.

JASPONYX, in natural hiſtory, the pureſt horn-coloured onyx, with beautiful green zones, which are compoſed of the genuine matter of the fineſt jaſpers. See JASPER and ONYX.

JATROPHA, the CASSADA PLANT: A genus of the monodelphia order, belonging to the monœcia claſs of plants; and in the natural method ranking under the 38th order, *Tricoccæ*. There is no male calyx; the corolla is monopetalous, and funnel-ſhaped; there are ten ſtamina, one alternately longer than the other. There is no female calyx; the corolla is pentapetalous, and patent; there are three bifid ſtyles; the capſule is trilocular, with one ſeed in each cell. There are nine

Species. Of theſe the moſt remarkable are the following: 1. The curcas, or Engliſh phyſic-nut, with leaves cordate and angular, is a knotty ſhrub growing about 10 or 12 feet high. The extremities of the branches are covered with leaves; and the flowers, which are of a green herbaceous kind, are ſet on in an umbel faſhion round the extremities of the branches, but eſpecially the main ſtalks. Theſe are ſucceeded by as many nuts, whoſe outward tegument is green and huſky; which being peeled off, diſcovers the nut, whoſe ſhell is black, and eaſily cracked: This contains an almond like kernel, divided into two parts; between which ſeparation lie two milk white thin membranaceous leaves, eaſily ſeparable from each other. Theſe have not only a bare reſemblance of perfect leaves, but have, in particular, every part, the ſtalk. the middle rib, and traverſe ones, as viſible as any leaf whatſoever. 2. The goſſypifolia, cotton-leaved jatropha, or belly-ach buſh, the leaves of which are quinquepartite, with lobes ovate and entire, and glandular branchy briſtles. The ſtem, which is covered with a light greyiſh bark, grows to about three or four feet high, ſoon dividing into ſeveral wide extended branches. Theſe are neither decorated with leaves nor flowers till near the top, which is then ſurrounded by the former: their footſtalks as well as the young buds on the extremity of the branches, are guarded round with ſtiff hairy briſtles, which are always tipt with glutinous liquid drops. From among theſe riſe ſeveral ſmall deep-red pentapetalous flowers the piſtil of each being thick ſet at the top with yellow farinaceous duſt which blows off when ripe: theſe flowers are ſucceeded by hexagonal huſky blackiſh berries, which when ripe open by the heat of the ſun, emitting a great many ſmall dark coloured ſeeds, which ſerve as food for ground-doves. The leaves are few, but ſeldom or never drop off, nor are eaten by vermin of any kind. 3. The multifida, or French phyſic-nut; with leaves many parted and poliſhed, and ſtipules briſtly and multifid, grows to be ten feet high. The main ſtalk divides into very few branches, and is covered with a greyiſh white bark. The leaves ſtand upon ſix-inch footſtalks, ſurrounding the main ſtalk, generally near the top, in an irregular order. The flowers grow in bunches, umbel-faſhion, upon the extremities of each large ſtalk, very much reſembling, at their firſt appearance, a bunch of red coral; theſe afterwards open into ſmall five leaved purple flowers, and are ſucceeded by nuts, which reſemble thoſe of the firſt ſpecies. 4. The manihot, or bitter caſſada, has palmated leaves, with lobes lanceolate, very entire, and poliſhed. 5 The janipha, or ſweet caſſada, has palmated leaves, with lobes very entire; the intermediate leaves lobed with a ſinus on both ſides. 6. The elaſtica, with ternate leaves, elliptic, very entire, hoary underneath, and longly petioled. See figure of the two laſt on Plates CCXLVIII. and CCXLIX. Which renders a more particular deſcription unneceſſary.

Properties, &c. The firſt ſpecies, a native of the Weſt Indies, is planted round negro gardens. A decoction of the *leaves* of it, and of the ſecond ſpecies (which grows wild) Dr Wright informs us, is often uſed with advantage in ſpaſmodic belly-ach, attended with vomiting: it ſits eaſier on the ſtomach than any thing elſe, and ſeldom fails to bring about a diſcharge by ſtool. The third ſpecies, a native of the ſame countries, is cultivated there as an ornamental ſhrub. The *ſeeds* of all the three are draſtic purgatives and emetics: and they yield by decoction, an oil of the ſame uſes and virtues as the oleum ricini. See RICINUS.

The 4th and 5th ſpecies, the janipha and manihot are natives of Affirica and the Weſt Indies, where they are cultivated as articles of food. It is difficult, Dr Wright ſays, to diſtinguſh the bitter fom the ſweet caſſada by the roots: but it will be beſt to avoid thoſe of the caſſada that bears flowers, as it is the bitter, which is poiſonous when raw.

The root of bitter caſſada has no fibrous or woody filaments in the heart, and neither boils nor roaſts ſoft; the ſweet caſſada has all the oppoſite qualities. The bitter however may be deprived of its noxious qualities (which reſide in the juice) by heat. Caſſada bread, therefore is made of both the bitter and ſweet thus.—The roots are waſhed and ſcraped clean: then grated into a tub or trough: after this they are put into a hair bag, and ſtrongly preſſed with a view to ſqueeze out the juice, and the meal or farina is dried in a hot ſtone-baſon over the fire: it is then made into cakes. It alſo makes excellent puddings equal to millet.—The ſcrapings of freſh bitter caſſada are ſucceſsfully applied to ill-diſpoſed ulcers.—Caſſada, roots yield a great quantity of ſtarch, which the Braſilians export in little lumps under the name of *tapioca*. According to Father Labat, the ſmall bits of maniac which have eſcaped the grater, and the clods which have not paſſed the ſieve, are not uſeleſs. They are dried in the ſtove after the flour is roaſted, and then pounded in a mortar to a fine white powder, with which they make ſoap. It is likewiſe uſed for making a kind of thick coarſe caſſada, which is roaſted till almoſt burnt; of this fermented with molaſſes and Weſt-India potatoes, they prepare a much eſteemed drink or beverage called *ouycou*. This liquor, the favourite drink of the natives, is ſometimes made extremely ſtrong: eſpecially on any great occaſion, as a feaſt: with this they get intoxicated, and, remembering their old quarrels, maſſacre and murder each other. Such of the inhabitants and workmen as have not wine, drink ouycou. It is of a red-colour, ſtrong nouriſhing, refreſhing, and eaſily inebriates the inhabitants, who ſoon accuſtom themſelves to it as eaſily as beer.

The 17th ſpecies is the *Hevea Guianenſis* of Aublet † or tree which yields the elaſtic reſin called *caoutchouc* or *India rubber*; for a particular account of which, ſee the article CAOUTCHOUC. Our figure is copied from Aublet's tab. 335. and not from the erroneous plate given in the *Acta Pariſiana*.

JAVA, a large iſland of the Eaſt Indies, lying between 105° and 116°. E. Long. and from 6° to 8° S. Lat extending in length 700 miles, and in breadth about 100. It is ſituated to the ſouth of Borneo, and ſouth eaſt from the peninſula of Malacca, having Sumatra lying before it, from which it is ſeparated by a narrow paſſage, now ſo famous in the world by the name of the *Straits of Sunda*. The country is mountainous and woody in the middle, but a flat coaſt, full of bogs and marſhes, renders the air unhealthful. It produces pepper, indigo, ſugar, tobacco, rice, coffee, cocoa-nuts, plantains, cardamoms, and other tropical fruits. Gold alſo, but in no great quantities, hath been found in it. It is diverſified by many mountains, woods, and rivers; in all which nature has very bountifully beſtowed her treaſures. The mountains are many of them ſo high as to be ſeen at the diſtance of three or four leagues. That which is called the *Blue Mountain* is by far the higheſt of them all, and ſeen the fartheſt off at ſea. They have frequent and very terrible earthquakes in this iſland, which ſhake the city of Batavia and places adjacent, to ſuch a degree that the fall of the houſes is expected every moment. The waters in the road are exceſſively agitated, inſomuch that their motion reſembles that of a boiling pot; and in ſome places the earth opens, which affords a ſtrange and terrible ſpectacle. The inhabitants are of opinion, that theſe earthquakes proceed from the mountain Parang, which is full of ſulphur, ſaltpetre, and bitumen. The fruits and plants of their iſland are all in their ſeveral kinds excellent, and almoſt out of number. There are abundance of foreſts ſcattered over it in which are all kinds of wild beaſts, ſuch as buffaloes

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† *Hiſtoire Plantes de la Guiana Françoiſe*, p. 87.

Java.

tygers, rhinoceroſes, and wild horſes, with infinite variety of ſerpents, ſome of them of an enormous ſize. Crocodiles are prodigiouſly large in Java, and are found chiefly about the mouths of rivers; for, being amphibious animals, they delight moſtly in marſhes and ſavannahs. This creature like the tortoiſe, lays its eggs in the hot ſands, without taking any further care of them; and the ſun hatches them at the proper ſeaſon, when they run inſtantly into the water. There is, in ſhort, no kind of animal wanting here: fowls they have of all ſorts and are exquiſitely good, eſpecially peacocks, partridges, pheaſants, wood-pigeons; and, for curioſity they have the Indian bat, which differs little in form from ours; but its wings, when extended, meaſure a full yard, and the body of it is of the ſize of a rat. They have fiſh in great plenty, and very good; ſo that for the value of three-pence there may be enough bought to dine ſix or ſeven men. They have likewiſe a multitude of tortoiſes, the fleſh of which is very little inferior to veal, and there are many who think it better.

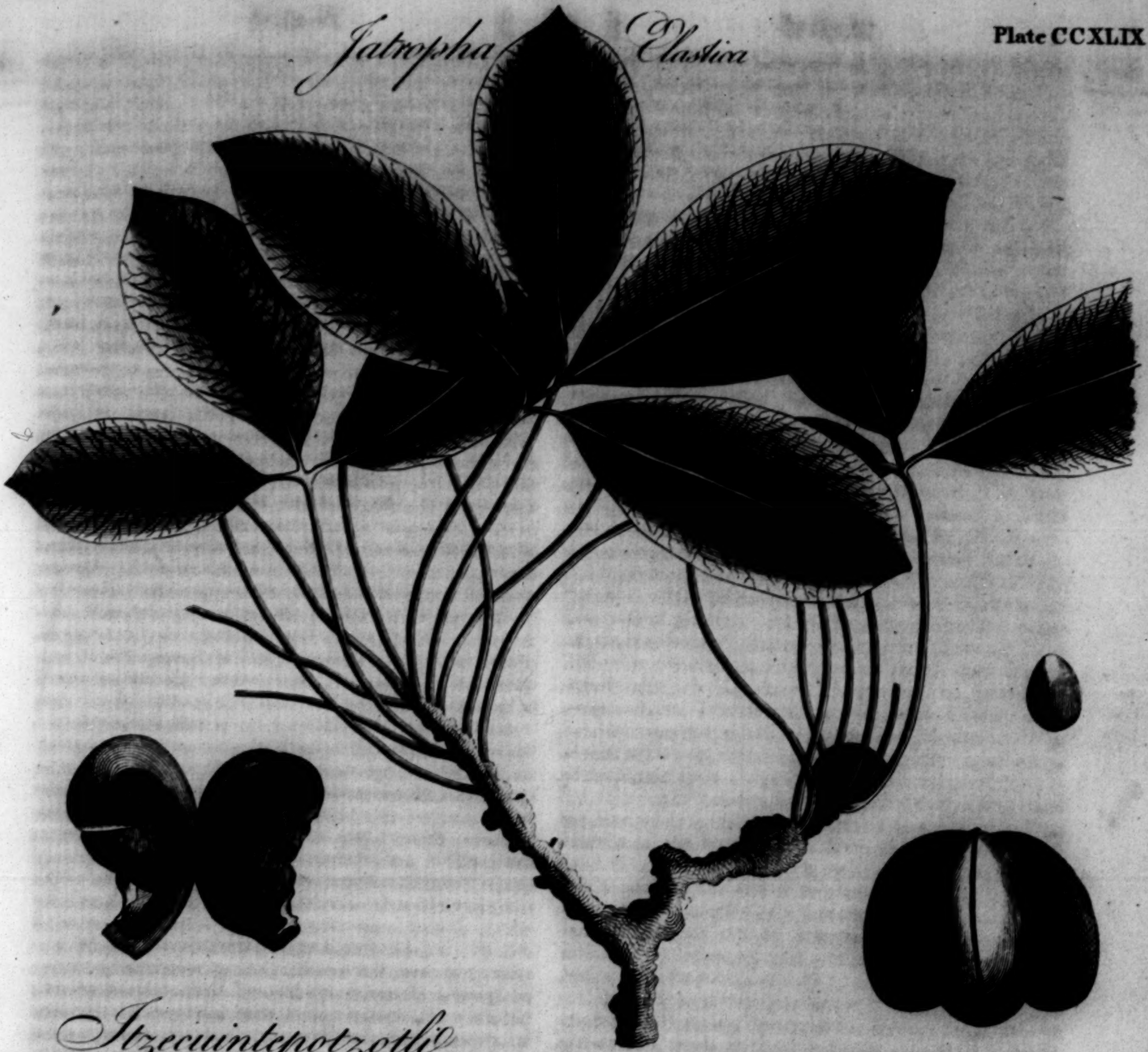
It is ſaid, that there are in the iſland upwards of 40 great towns, which from the number of their inhabitants, would in any other part of the world, merit the title of *cities*; and more than 4500 villages, beſides hamlets, and ſtraggling houſes, lying very near each other, upon the ſea-coaſt, and in the neighbourhood of great towns: hence, upon a fair and moderate computation, there are within the bounds of the whole iſland, taking in perſons of both ſexes, and of all ranks and ages, more than thirty millions of ſouls; ſo that it is thrice as populous as France, which though twice as big, is not computed to have more than twenty millions of inhabitants.

There are a great many princes in the iſland, of which the moſt conſiderable are, the emperor of Materan, who reſides at Kataſura, and the kings of Bantam and Japara. Upon the firſt of theſe many of the petty princes are dependant; but the Dutch are abſolute maſters of the greateſt part of the iſland, particularly of the north coaſt, though there are ſome of the princes beyond the mountains, on the ſouth coaſt, who ſtill maintain their independency. The natives of the country, who are eſtabliſhed in the neighbourhood of Batavia, and for a tract of about 40 leagues along the mountains of the country of Bantam, are immediately ſubject to the governor-general. The company ſend droſſards, or commiſſaries, among them who adminiſter juſtice and take care of the public revenues.

The city of Batavia is the capital not only of this iſland but of all the Dutch dominions in India. It is an exceeding fine city, ſituated in the latitude of 6° ſouth, at the mouth of the river Jucatra, and in the boſom of a large commodious bay, which may be conſidered not only as one of the ſafeſt harbours in India, but in the world. The city is ſurround by a rampart 21 feet thick, covered on the outſide with ſtone and fortified with 22 baſtions. This rampart is environed by a ditch 45 yards over, and full of water, eſpecially when the tides are high in the ſpring. The avenues to the town are defended by ſeveral forts, each of which is well furniſhed with excellent braſs cannon: no perſon is ſuffered to go beyond theſe forts without a paſſport. The river Jucatra paſſes through the midſt of the town, and forms 15 canals of running water all faced with free-ſtone, and adorned with trees that are ever green; over theſe canals are 56 bridges, beſides thoſe which lie without the town. The ſtreets are all perfectly ſtraight, and each, generally ſpeaking, 30 feet broad. The houſes are built of ſtone, after the manner of theſe in Holland. The city is about a league and an half in circumference, and has five gates; but there are ten times the number of houſes without that there are within it. There is a very fine town-houſe, four Calviniſt churches, beſides other places of worſhip for all ſorts of religions, a ſpin houſe or houſe of correction, an orphan-houſe, a magazine of ſea-ſtores, ſeveral for ſpices, with wharts and cord-manufactures, and many other public buildings. The garriſon conſiſts commonly of between 2000 and 3000 men. Beſides the forts mentioned above, there is the citadel of Batavia, a very fine regular fortification, ſituated at the mouth of the river and flanked with four baſtions, two of which command the ſea, and the other two the town. It is in this citadel that the governor-general of the Indies has his palace; over againſt which is that of the director-general, who is the next perſon to the governor. The counſellors and other principal officers of the company, have alſo their apartments there; as have likewiſe the phyſician, the ſurgeon, and the apothecary. There are in it, beſides, arſenals and magazines furniſhed with ammunition for many years. The city of Batavia is not only inhabited by Dutch, French, Portugueſe, and other Europeans, eſtabliſhed here on account of trade; but alſo by a vaſt number of Indians of different nations, Javaneſe, Chineſe, Malayans, Negroes, Amboyneſe, Armenians, natives of the iſle of Bali, Mardykers or Topaſſes, Macaſſers, Timors, Bougis, &c. Of the Chineſe, there are, it is ſaid, about 100,000 in the iſland; of which near 30,000 reſided in the city till the year 1740, when the Dutch, pretending that they were in a plot againſt them, ſent a body of troops into their quarter, and demanded their arms, which the Chineſe readily delivered up; and the next day the governor ſent another body, with orders to murder and maſſacre every one of the Chineſe, men, women, and children. Some relate there were 20,000, others 30,000, that were put to death without any manner of trial: and yet the barbarous governor, who was the inſtrument of this cruel proceeding had the aſſurance to embark for Europe, imagining he had amaſſed wealth enough to ſecure him againſt any proſecution in Holland: but the Dutch, finding themſelves deteſted and abhorred by all mankind for this piece of tyranny, endeavoured to throw the odium of it upon the governor, though he had the hands of all the council of Batavia, exceptione, to the order for the maſſacre. The States, therefore diſpatched a packet to the Cape of Good Hope, containing orders to apprehend the governor, and ſend him back to Batavia to be tried. He was accordingly apprehended at the Cape; but has never been heard of ſince. It is ſupppoſed he was thrown over-board in his paſſage to Batavia, that there might be no farther inquiries into the matter; and it is ſaid, all the wealth this merciful gentleman had amaſſed, and ſent over before him in four ſhips, was caſt away in the paſſage.

Plate CCXLIX

Jatropha Elastica



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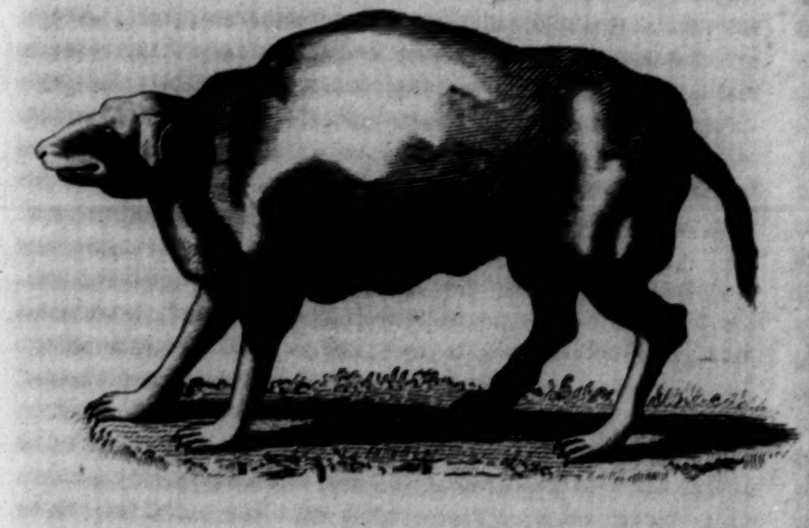
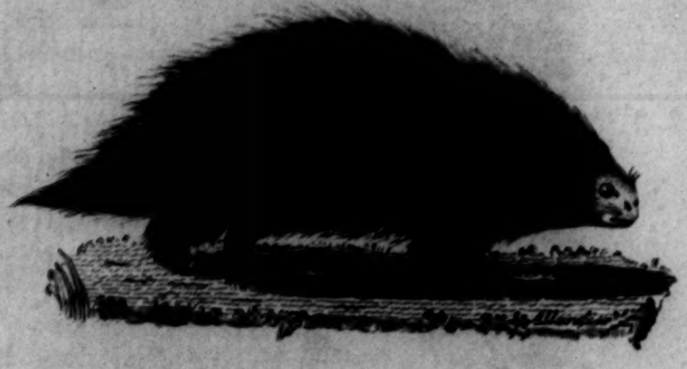


Hystrix dorsata



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Beſides the garriſon here, the Dutch, it is ſaid have about 15,000 men in the iſland, either Dutch, or formed out of the ſeveral nations they have enſlaved; and they have a fleet of between 20 and 30 men of war, with which they give law to every power on the coaſt of Aſia and Africa, and to all the European powers that viſit the Indian Ocean, unleſs we ſhould now except the Britiſh: it was, however, but a little before the revolution that they expelled them from their ſettlement at Bantam.

JAVELIN, in antiquity, a ſort of ſpear five feet and an half long; the ſhaft of which was of wood, with a ſteel point.—Every ſoldier in the Roman armies had ſeven of theſe, which were very light and ſlender.

JAVELLO (Chryſoſtome), a learned Italian Dominican of the 16th century, taught philoſophy and theology at Bologna, and died about the year 1540. He wrote a work on philoſophy, another on politics, and another on Chriſtian œconomy, which are eſteemed; with notes on Pomponatius, and other works, printed in 3 vols folio.

JAWER, a city of Sileſia, capital of a province of the ſame name, with a citadel, and a large ſquare ſurrounded with piazzas. It is 12 miles ſouth-eaſt of Lignitz, 30 ſouth-weſt of Breſlau, and 87 eaſt of Prague. E. Long. 16. 29. N. Lat. 50. 56.

JAUNDICE (derived from the French *jauniſſe* "yellowneſs," of *jaune* "yellow"); a diſeaſe conſiſting in a ſuffuſion of the bile, and a rejection thereof to the ſurface of the body, whereby the whole exterior habit is diſcoloured. Dr Maclurg is of opinion, that the bile returns into the circulation in this diſorder by the courſe of the lymphatics. See Medicine-*Index*.

JAWS. See Maxillæ.

Locked Jaw, is a ſpaſmodic contraction of the lower jaw, commonly produced by ſome external injury affecting the tendons or ligaments. See Medicine-*Index*.

JAY, in ornithology. See Corvus.

Jay (Guy Michael le), a French gentleman, who diſtinguiſhed himſelf by cauſing a polyglot bible to be printed at his own expence in 10 vols folio: but he ruined himſelf by that impreſſion, firſt becauſe he would not ſuffer it to appear under the name of cardinal Richelieu, who, after the example of cardinal Ximenes, was ambitious of eternizing his name by this means; and next, becauſe he made it too dear for the Engliſh market; on which Dr Walton undertook his polyglot bible, which, being more commodious, reduced the price of M. le Jay's. After the death of his wife, M. le Jay took orders, was made dean of Vezelay in the Nivernois, and Louis XIV. gave him the poſt of counſellor of ſtate.

JAZER, or Jaser (anc. geog.), a Levitical city in the territory of the Amorhites beyond Jordan, 10 miles to the weſt, or rather ſouth-weſt, of Philadelphia, and 15 miles from Eſebon; and therefore ſituated between Philadelphia and Heſhbon, on the eaſt border of the tribe of Gad, ſuppoſed to be the *Jazorem* of Joſephus. In Jeremiah xlviii. mention is made of the ſea of Jazer, that is a lake; taken either for an effuſion or overflowing of the Arnon, or a lake through which it paſſes, or from which it takes its riſe.

IBERIA (Spain), ſo called by the ancients from the river Iberius. *Iberes* the people, from the nominative *Iber*. See Hispania.

Iberia was alſo the name of an inland country of Aſia, having Colchis to the weſt, with a part of Pontus; to the north mount Caucaſus; on the eaſt Albania; and on the ſouth Armenia Magna: Now the weſtern part of Georgia (ſee Georgia). Iberia, according to Joſephus, was firſt peopled by Tubal, the brother of Gomer and Magog. His opinion is confirmed by the Septuagint; for Meſhech and Tubal are by theſe interpreters rendered *Moſchi* and *Iberians*. We know little of the hiſtory of the country till the reign of Mithridates, when their king, named *Artocis*, ſiding with that prince againſt Lucullus, and afterwards againſt Pompey, was defeated by the latter with great ſlaughter; but afterwards obtained a peace, upon delivering up his ſons as hoſtages. Little notice is taken of the ſucceeding kings by the ancient hiſtorians. They were probably tributary to the Romans till that empire was overturned, when this, with the other countries in Aſia bordering on it, fell ſucceſſively under the power of the Saracens and Turks.

IBERIS, sciatica Cresses, or *Candy-tuft*: A genus of the ſiliquoſa order, belonging to the tetradynamia claſs of plants; and in the natural method ranking under the 39th order, *Siliquoſæ*. The corolla is irregular; the two exterior petals larger than the interior ones; the ſilicula polyſpermous, emarginated.

Species. 1. The umbellata, or common candy-tuft, hath herbaceous, ſhort, round, and very branchy ſtalks of tufty growth, from about ſix to eight or ten inches high; ſmall ſpear-ſhaped leaves, the lower ones ſerrated, the upper entire; and all the ſtalks and branches terminated by umbellate cluſters of flowers of different colours in the varieties. 2. The amara, or bitter candy-tuft, hath ſtalks branching like the former, which riſe from eight to ten or twelve inches high; ſmall, ſpear-ſhaped, and ſlightly indented leaves; and all the branches terminated by racemoſe bunches of white flowers in June and July. 3. The ſempervirens, commonly called *tree candy-tuft*, hath low underſhrubby ſtalks, very branchy and buſhy, riſing to the height of 10 or 12 inches, with white flowers in umbels at the ends of the branches, appearing great part of the ſummer. 4. The ſemperflorens, or ever-flowering ſhrubby iberis, hath low underſhrubby ſtalks very branchy, growing to the height of 18 inches, with white flowers in umbels at the ends of the branches, appearing at all times of the year.

Culture. The two firſt kinds, being hardy annuals, may be ſowed in any common ſoil in the month of March, or from that time till midſummer, and will thus afford a ſucceſſion of flowers from June to September, which are ſucceeded by great plenty of ſeeds. The other two are ſomewhat tender; and therefore muſt be planted in pots, in order to be ſheltered from the winter-froſts. They are eaſily propagated by ſlips or cuttings.

IBEX, in zoology. See Capra.

IBIS, in ornithology. See Tantalus.

IBYCUS, a Greek lyric poet, of whoſe works there are only a few fragments remaining, flouriſhed 550 B. C. It is ſaid, that he was aſſaſſinated by robbers; and that, when dying, he called upon ſome cranes, he ſaw flying, to bear witneſs. Some time after one of the murderers ſeeing ſome cranes, ſaid to his companions, "There are the witneſſes of Ibycus's death :" which being reported to the magiſtrates, the aſſaſſins were put to the torture, and having confeſſed the fact, were hanged. Thence aroſe the proverb *Ibyci Grues*.

ICE, in phyſiology, a ſolid, tranſparent, and brittle-body, formed of ſome fluid, particularly water, by means of cold. See FROST.

The younger Lemery obſerves, that ice is only a re-eſtabliſhment of the parts of water in their natural ſtate; that the mere abſence of fire is ſufficient to account for this re-eſtabliſhment; and that the fluidity of water is a real fuſion, like that of metals expoſed to the fire; differing only in this, that a greater quantity of fire is neceſſary to the one than the other. Gallileo was the firſt that obſerved ice to be lighter than the water which compoſed it: and hence it happens, that ice floats upon water, its ſpecific gravity being to that of water as eight to nine. This rarefaction of ice ſeems to be owing to the air-bubbles produced in water by freezing; and which being conſiderably large in proportion to the water frozen, render the body ſo much ſpecifically lighter: theſe air-bubbles, during their production, acquire a great expanſive power, ſo as to burſt the containing veſſels, though ever ſo ſtrong. See CONGELATION, COLD.

M. Mairan, in a diſſertation on ice, attributes the increaſe of its bulk chiefly to a different arrangement of the parts of the water from which it is formed; the icy ſkin on the water being compoſed of filaments which, according to him, are found to be conſtantly and regularly joined at an angle of 60°; and which, by this angular diſpoſition, occupy a greater volume than if they were parallel. He found the augmentation of the volume of water by freezing, in different trials, a 14th, an 18th, a 19th, and when the water was previouſly purged of air, only a 22d part: that ice, even after its formation, continues to expand by cold; for, after water had been frozen to ſome thickneſs, the fluid part being let out by a hole in the bottom of the veſſel, a continuance of the cold made the ice convex; and a piece of ice, which was at firſt only a 14th part ſpecifically lighter than water, on being expoſed ſome days to the froſt, became a 12th part lighter. To this cauſe he attributes the burſting of ice on ponds.

Wax, reſins, and animal fats, made fluid by fire, inſtead of expanding like watery liquors, ſhrink in their return to ſolidity: for ſolid pieces of the ſame bodies ſink to the bottom of the reſpective fluids; a proof that theſe bodies are more denſe in their ſolid than in their fluid ſtate. The oils which congeal by cold, as oil-olive, and the eſſential oil of aniſeeds, appear alſo to ſhrink in their congelation. Hence, the different diſpoſitions of different kinds of trees to be burſt by, or to reſiſt, ſtrong froſts, are by ſome attributed to the juices with which the tree abounds; being in the one caſe watery, and in the other reſinous or oily.

Though it has been generally ſuppoſed that the natural cryſtals of ice are ſtars of ſix rays, forming angles of 60° with each other, yet this cryſtallization of water, as it may properly be called, ſeems to be as much affected by circumſtances as that of ſalts. Hence we find a conſiderable difference in the accounts of thoſe who have undertaken to deſcribe theſe cryſtals. M. Mairan informs us, that they are ſtars with ſix radii; and his opinion is confirmed by obſerving the figure of froſt on glaſs. M. Rome de L'Iſle determines the form of the ſolid cryſtal to be an equilateral octaedron. M. Haſſenfratz found it to be a priſmatic hexaedron; but M. d'Antic found a method of reconciling theſe ſeemingly oppoſite opinions. In a violent hail-ſtorm, where the hail-ſtones were very large, he found they had ſharp wedge-like angles of more than half an inch; and in theſe he ſuppoſed it impoſſible to ſee two pyramidal tetraedra joined laterally, and not to conclude that each grain was compoſed of octaedrons converging to a centre. Some had a cavity in the middle; and he ſaw the oppoſite extremities of two oppoſite pyramids, which conſtitute the octaedron; he likewiſe ſaw the octaedron entire united in the middle; all of them were therefore ſimilar to the cryſtals formed upon a thread immerſed in a ſaline ſolution. On theſe principles M. d'Antic conſtructed an artificial octaedron reſembling one of the largeſt hailſtones; and found that the angle at the ſummit of the pyramid was 45°, but that of the junction of the two pyramids 145°. It is not, however, eaſy to procure regular cryſtals in hailſtones where the operation is conducted with ſuch rapidity: in ſnow and hoar-froſt, where the cryſtallization goes on more ſlowly, our author is of opinion that he ſees the rudiments of octaedra.

Ice, as is explained under the article FROST, forms generally on the ſurface of water: but this too, like the cryſtallization, may be varied by an alteration in the circumſtances. In Germany, particularly the northern parts of that country, it has been obſerved that there are three kinds of ice. 1. That which forms on the ſurface. 2. Another kind formed in the middle of the water, reſembling nuclei or ſmall hail. 3. The ground ice which is produced at the bottom, eſpecially where there is any fibrous ſubſtance to which it may adhere. This is full of cells like a waſp's neſt, but leſs regular; and performs many ſtrange effects in bringing up very heavy bodies from the bottom, by means of its inferiority in ſpecific gravity to the water in which it is formed. The ice which forms in the middle of the water riſes to the top, and there unites into large maſſes; but the formation both of this and the ground-ice takes place only in violent and ſudden colds, where the water is ſhallow, and the ſurface diſturbed in ſuch a manner that the congelation cannot take place. The ground-ice is very deſtructive to dykes and other aquatic works. In the more temperate European climates theſe kinds of ice are not met with.

In many countries the warmth of the climate renders ice not only a deſireable, but even a neceſſary article; ſo that it becomes an object of ſome conſequence to fall upon a ready and cheap method of procuring it. Though the cheapeſt method hitherto diſcovered ſeems to be that related under the article COLD, by means of ſal ammoniac or Glauber's ſalt, yet it may not be amiſs to take notice of ſome attempts made by Mr Cavallo to diſcover a method of producing a ſufficient degree of cold for this purpoſe by the evaporation of volatile liquors. He found, however, in the courſe of theſe experiments, that ether was incomcomparably ſuperior to any other fluid in the degree of cold it procured. The price of the liquor naturally induced him to fall upon a method of uſing it with as little waſte as poſſible. The thermometer he made uſe of had the ball quite detached from the ivory piece on which the ſcale was engraved. The various fluids were then thrown upon the ball through the capillary aperture of a ſmall glaſs veſſel ſhaped like a funnel; and care was taken to throw them upon it ſo ſlowly that a drop might now and then fall from the under part, excepting when thoſe fluids were uſed, which evaporate very ſlowly; in which caſe it was ſufficient barely to keep the ball moiſt, without any drop falling from it. During the experiment the thermometer was kept very gently turning round its axis, that the fluid made uſe of might fall upon every part of its ball. He found this method preferable to that of dipping the ball of the thermometer into the fluid and taking it out again immediately, or even of anointing it conſtantly with a feather. The evaporation, and conſequently the cold, produced by it, may be increaſed by blowing on the thermometer with a pair of bellows; though this was not uſed in the experiments now to be related, on account of the difficulty of its being performed by one perſon, and likewiſe becauſe it occaſions much uncertainty in the reſults.

The room in which the experiments were made was heated to 64° of Fahrenheit; and with water it was reduced to 56°, viz. 8° below that of the room or of the water employed. The effect took place in about two minutes; but though the operation was continued for a longer time, it did not ſink lower. With ſpirit of wine it ſunk to 48°. The cold was greater with highly rectified ſpirit than with the weaker ſort; but the difference is leſs than would be expected by one who had never ſeen the experiment made. The pure ſpirit produces its effect much more quickly. On uſing various other fluids which were either compounded of water and ſpirituous liquors or pure eſſences, he found that the cold produced by their evaporation was generally ſome intermediate degree between that produced by water and the ſpirit of wine. Oil of turpentine ſunk the mercury three degrees; but olive oil and others, which evaporate very ſlowly, or not at all, did not ſenſibly affect the thermometer.

To obſerve how much the evaporation of ſpirit of wine, and conſequently the cold produced by it, would be increaſed by electricity, he put the tube containing it into an inſulating handle, and connected it with the conductor of an electrical machine, which was kept in action during the time of making the experiment; by which means one degree of cold ſeemed to be gained, as the mercury now ſunk to 47° inſtead of 48°, at which it had ſtood formerly. On trying the three mineral acids, he found that they heated the thermometer inſtead of cooling it; which effect he attributes to the heat they themſelves acquired by uniting with the moiſture of the atmoſphere. The vitriolic acid, which was very ſtrong and tranſparent, raiſed the mercury to 102°, the ſmoking nitrous acid to 72°, and the marine to 66°.

The apparatus for uſing the leaſt poſſible quantity of ether for freezing water conſiſts in a glaſs tube (fig. 1.), terminating in a capillary aperture, which is to be fixed upon the bottle containing the ether. Round the lower part of the neck at A ſome thread is wound, in order to let it fit the neck of the bottle. When the experiment is to be made, the ſtopper of the bottle containing the ether is to be removed, and the tube juſt mentioned put in its room. The thread round the tube ought alſo to be previouſly moiſtened with water or ſpittle before it is put into the neck of the bottle, in order the more effectually to prevent the eſcape of the ether betwixt the neck of the vial and tube. Holding then the bottle by its bottom FG (fig. 2.), and keeping it inclined as in the figure, the ſmall ſtream of ether iſſuing out of the aperture D of the tube DE, is directed upon the ball of the thermometer, or upon a tube containing water or other liquor that is required to be congealed. As ether is very volatile, and has the remarkable property of increaſing the bulk of air, there is no aperture requiſite to allow the air to enter the bottle while the liquid flows out. The heat of the hand is more than ſufficient to force out the ether in a continued ſtream at the aperture D.

Plate CCL.

In this manner, throwing the ſtream of ether upon the ball of a thermometer in ſuch a quantity that a drop might now and then, every 10 ſeconds for inſtance, fall from the bulb of the thermometer, Mr Cavallo brought the mercury down to 3°, or 29° below the freezing point, when the atmoſphere was ſomewhat hotter than temperate. When the ether is very good, *i. e.* capable of diſſolving elaſtic gum, and has a ſmall bulb, not above 20 drops of it are required to produce this effect, and about two minutes of time; but the common ſort muſt be uſed in greater quantity, and for a longer time; though at laſt the thermometer is brought down by this very nearly as low as by the beſt ſort.

To freeze water by the evaporation of ether, Mr Cavallo takes a thin glaſs tube about four inches long, and one-fifth of an inch diameter, hermetically ſealed at one end, with a little water in it, ſo as to take up about half an inch of the cavity, as is ſhown at CB in fig. 3. Into this tube a ſlender wire H is alſo introduced, the lower extremity of which is twiſted into a ſpiral, and ſerves to draw up the bit of ice when formed. He then holds the glaſs tube by its upper part A with the fingers of the left hand, and keeps it continually and gently turning round its axis, firſt one way and then the other; whilſt with the right hand he holds the phial containing the ether in ſuch a manner as to direct the ſtream on the outſide of the tube, and a little above the ſurface of the water contained in it. The capillary aperture D ſhould be kept almoſt in contact with the ſurface of the tube containing the water; and by continuing the operation for two or three minutes, the water will be frozen as it were in an inſtant; and the opacity will aſcend to C in leſs than half a ſecond of time, which makes a beautiful appearance. This congelation, however, is only ſuperficial; and in order to congeal the whole quantity of water, the operation muſt be continued a minute or two longer; after which the wire H will be found kept very tight by the ice. The hand muſt then be applied to the outſide of the tube, in order to ſoften the ſurface of the ice; which would otherwiſe adhere very firmly to the glaſs; but when this is done, the wire H eaſily brings it out.

Sometimes our author was accuſtomed to put into the tube a ſmall thermometer inſtead of the wire H; and thus he had an opportunity of obſerving a very curious phenomenon unnoticed by others, viz. that in the winter time water requires a ſmaller degree of cold to congeal it than in the ſummer. In the winter, for inſtance, the water in the tube AB will freeze when the thermometer ſtands about 30°; but in the ſummer, or even when the thermometer ſtands at 60°, the quickſilver muſt be brought down 10, 15, or even more degrees below the freezing point before any congelation can take place. In the ſummer time therefore a greater quantity of ether, and more time, will be required to congeal any given quantity of water than in winter. When the temperature of the atmoſphere has been about 40°, our author has been able to congeal a quantity of water with an equal quantity of good ether; but in ſummer two or three times the quantity are required to perform the effect. "There ſeems (ſays he) to be ſomething in the air, which, beſides heat, interferes with the freezing of water, and perhaps of all fluids; though I cannot ſay from my own experience whether the abovementioned difference between the freezing in winter and ſummer takes place with other fluids, as milk, oils, wines," &c.

The proportion of ether requiſite to congeal water ſeems to vary with the quantity of the latter; that is, a large quantity of water ſeems to require a proportionably leſs quantity of ether to freeze it than a ſmaller one. "In the beginning of the ſpring (ſays Mr Cavallo), I froze a quarter of an ounce of water with about half an ounce of ether; the apparatus being larger, though ſimilar to that deſcribed above. Now as the price of ether, ſufficiently good for the purpoſe, is generally about 18d. or 2s. per ounce, it is plain, that with an expence under two ſhillings, a quarter of an ounce of ice, or ice-cream, may be made, in every climate, and at any time, which may afford great ſatisfaction to thoſe perſons, who, living in theſe places where no natural ice is to be had, never ſaw or taſted any ſuch delicious refreſhment. When a ſmall piece of ice, for inſtance, of about ten grains weight, is required, the neceſſary apparatus is very ſmall, and the expence not worth mentioning. I have a ſmall box four inches and a half long, two inches broad, and one and a half deep, containing all the apparatus neceſſary for this purpoſe; viz. a bottle capable of containing about one ounce of ether; two pointed tubes, in caſe one ſhould break; a tube in which the water is to be frozen, and a wire. With the quantity of ether contained in this ſmall and very portable apparatus, the experiment may be repeated about ten times. A perſon who wiſhes to perform ſuch experiments in hot climates, and in places where ice is not eaſily procured, requires only a larger bottle of ether beſides the whole apparatus deſcribed above." Electricity increaſes the cold produced by means of evaporating ether but very little, though the effect is perceptible. Having thrown the electrified and alſo the unelectrified ſtream of ether upon the bulb of the thermometer, the mercury was brought down two degrees lower in the former than in the latter caſe.

Our author obſerves, for the ſake of thoſe who may be inclined to repeat this experiment, that a cork confines this volatile fluid much better than a glaſs ſtopple, which it is almoſt impoſſible to grind with ſuch exactneſs as to prevent entirely the evaporation of the ether. When a ſtopple, made very nicely out of an uniform and cloſe piece of cork, which goes rather tight, is put upon a bottle of ether, the ſmell of that fluid cannot be perceived through it; but he never ſaw a glaſs ſtopple which could produce that effect. In this manner, ether, ſpirit of wine, or any other volatile fluid, may be preſerved, which does not corrode cork by its fumes. When the ſtopple, however, is very often taken out, it becomes looſe, as it will alſo do by long keeping; in either of which caſes it muſt be changed.

Blink of the ICE, is a name given by the pilots to a bright appearance near the horizon occaſioned by the ice, and obſerved before the ice itſelf is ſeen.

ICE-Boats, boats ſo conſtructed as to ſail upon ice, and which are very common in Holland, particularly upon the river Maeſe and the lake Y. See Plate CCL. They go with incredible ſwiftneſs, ſometimes ſo quick as to affect the breath, and are found very uſeful in conveying goods and paſſengers over lakes and great rivers in that country. Boats of different ſizes are placed in a tranſverſe form upon a 2½, or 3 inch deal board; at the extremity of each end are fixed irons, which turn up in the form of ſkaits; upon this plank the boat reſts, and the two ends ſeem as out-riggers to prevent overſetting; whence ropes are faſtened that lead to the head of the maſt in the nature of ſhrowds, and others paſſed through a block acroſs the bowſprit: the rudder is made ſomewhat like a hatchet with the head placed downward, which being preſſed down, cuts the ice, and ſerves all the purpoſes of a rudder in the water, by enabling the helmſman to ſteer, tack, &c.

Method of making ICE-Cream. Take a ſufficient quantity of cream, and, when it is to be mixed with raſpberry, or currrant, or pine, a quarter part as much of the juice or jam as of the cream: after beating and ſtraining the mixture through a cloth, put it with a little juice of lemon into the mould which is a pewter veſſel, and varying in ſize and ſhape at pleaſure; cover the mould and place it in a pail about two thirds full of ice, into which two handfuls of ſalt have been thrown; turn the mould by the hand-hold with a quick motion to and fro, in the manner uſed for milling chocolate, for eight or ten minutes; then let it reſt as long, and turn it again for the ſame time; and having left it to ſtand half an hour, it is fit to be turned out of the mould and to be ſent to table. Lemon juice and ſugar, and the juices of various kinds of fruits, are frozen without cream; and when cream is uſed, it ſhould be well mixed.

ICE-Hills, a ſort of ſtructure or contrivance common upon the river Neva at Peterſburgh, and which afford a perpetual fund of amuſement to the populace. They are conſtructed in the following manner. A ſcaffolding is raiſed upon the river about 30 feet in height, with a landing place on the top, the aſcent to which is by a ladder. From this ſummit a ſloping plain of boards, about four yards broad and 30 long, deſcends to the ſuperficies of the river: it is ſupported by ſtrong poles gradually decreaſing in height, and its ſides are defended by a parapet of planks. Upon theſe boards are laid ſquare maſſes of ice about four inches thick, which being firſt ſmoothed with the axe and laid cloſe to each other, are then ſprinkled with water: by theſe means they coaleſce, and, adhering to the boards, immediately form an inclined plain of pure ice. From the bottom of this plain the ſnow is cleared away for the length of 200 yards and the breadth of four, upon the level bed of the river; and the ſides of this courſe, as well as the ſides and top of the ſcaffolding, are ornamented with firs and pines. Each perſon, being provided with a ſledge, mounts the ladder; and having attained the ſummit, he ſets himſelf upon his ſledge at the upper extremity of the inclined plain, down which he ſuffers it to glide with conſiderable rapidity, poiſing it as he goes down, when the velocity acquired by the deſcent carries it above 100 yards upon the level ice of the river. At the end of this courſe, there is uſually a ſimilar ice-hill, nearly parallel to the former, which begins where the other ends; ſo that the perſon immediately mounts again, and in the ſame manner glides down the other inclined plain of ice. This diverſion he repeats as often as he pleaſes. The boys alſo are continually employed in ſkaiting down theſe hills: they glide chiefly upon one ſkait, as they are able to poiſe themſelves better upon one leg than upon two. Theſe ice-hills exhibit a pleaſing appearance upon the river, as well from the trees with which they are ornamented, as from the moving objects which at particular times of the day are deſcending without intermiſſion.

Ice-Houſe, a repoſitory for ice during the ſummer months. The aſpect of ice-houſes ſhould be towards the eaſt or ſouth-eaſt, for the advantage of the morning ſun to expel the damp air, as that is more pernicious than warmth; for which reaſon trees in the vicinity of an ice-houſe tend to its diſadvantage.

The beſt ſoil for an ice-houſe to be made in is chalk, as it conveys away the waſte water without any artificial drain; next to that, looſe ſtony earth or gravelly ſoil. Its ſituation ſhould be on the ſide of a hill, for the advantage of entering the cell upon a level, as in the drawing, Plate CCL.

To conſtruct an ice-houſe firſt chooſe a proper place at a convenient diſtance from the dwelling-houſe or houſes it is to ſerve: dig a cavity (if for one family, of the dimenſions ſpecified in the deſign) of the figure of an inverted cone, ſinking the bottom, concave, to form a reſervoir for the waſte water till it can drain off; if the ſoil requires it, cut a drain to a conſiderable diſtance, or ſo far as will come out at the ſide of the hill, or into a well, to make it communicate with the ſprings, and in that drain form a ſink or air-trap, marked *l*, by ſinking the drain ſo much lower in that place as it is high, and bring a partition from the top an inch or more into the water, which will conſequently be in the trap; and will keep the well air tight. Work up a ſufficient number of brick piers to receive a cart-wheel, to be laid with its convex ſide upwards to receive the ice; lay hurdles and ſtraw upon the wheel, which will let the melted ice drain through, and ſerve as a floor. The ſides and dome of the cone are to be nine inches thick—the ſides to be dome in ſteened brickwork, *i. e.* without mortar, and wrought at right angles to the face of the work: the filling in behind ſhould be with gravel, looſe ſtones, or brick-bats, that he water which drains through the ſides may the more eaſily eſcape into the well. The doors of the ice-houſe ſhould be made as cloſe as poſſible, and bundles of ſtraw placed always before the inner door to keep out the air.

Deſcription of the parts referred to by the letters. *a* The line firſt dug out. *b* The brick circumference of the cell. *c* The diminution of the cell downwards. *d* The leſſer diameter of the cell. *e* The cart-wheel or joiſts and hurdles. *f* The piers to receive the wheel or floor. *g* The principal receptacle for ſtraw. *h* The inner paſſage, *i* the firſt entrance, *k* the outer door, paſſages having a ſeparate door each. *l* An air-trap. *m* The well. *n* The profile of the piers. *o* The ice filled in. *p* The height of the cone. *q* The dome worked in two half brick arches. *r* The arched paſſage. *s* The door-ways inſerted in the walls. *t* The floor of the paſſage. *u* An aperture through which the ice may be put into the cell; this muſt be covered next the crown of the dome, and then filled in with earth. *x* The ſtooping floor, againſt which the ſtraw ſhould be laid.

The ice when to be put in ſhould be collected during the froſt, broken into ſmall pieces, and rammed down hard in ſtrata of not more than a foot, in order to make it one complete body; the care in putting it in, and well ramming it, tends much to its preſervation. In a ſeaſon when ice is not to be had in ſufficient quantities ſnow may be ſubſtituted.

Ice may be preſerved in a dry place under ground, by covering it well with chaff, ſtraw, or reeds.

Great uſe is made of chaff in ſome places of Italy to preſerve ice: the ice houſe for this purpoſe need only be a deep hole dug in the ground on the ſide of a hill, from the bottom of which they can eaſily carry out a drain, to let out the water which is ſeparated at any time from the ice, that it may not melt and ſpoil the reſt. If the ground is tolerably dry, they do not line the ſides with any thing, but leave them naked, and only make a covering of thatch over the top of the hole: this pit they fill either with pure ſnow, or elſe with ice taken from the pureſt and cleareſt water; becauſe they do not uſe it as it is uſed in England, to ſet the bottles in, but really mix it with the wine. They firſt cover the bottom of the hole with chaff, and then lay in the ice, not letting it any where touch the ſides, but ramming in a large bed of chaff all the way between; they thus carry on the filling to the top, and then cover the ſurface with chaff; and in this manner it will keep as long as they pleaſe. When they take any of it out for uſe, they wrap the lump up in chaff, and it may then be carried to any diſtant place without waſte or running.

Ice-Iſland, a name given by ſailors to a great quantity of ice collected into one huge ſolid maſs, and floating about upon the ſeas near or within the Polar circles. —Many of theſe fluctuating iſlands are met with on the coaſts of Spitzbergen, to the great danger of the ſhipping employed in the Greenland fiſhery. In the midſt of thoſe tremendous maſſes navigators have been arreſted and frozen to death. In this manner the brave Sir Hugh Willoughby periſhed with all his crew in 1553; and in the year 1773, Lord Mulgrave, after every effort which the moſt finiſhed ſeaman could make to accompliſh the end of his voyage, was caught in the ice, and was near experiencing the ſame unhappy fate. See the account at large in *Phipps's Voyage to the North Pole*. As there deſcribed, the ſcene, diveſted of the horror from the eventful expectation of change, was the moſt beautiful and pictureſque:—Two large ſhips becalmed in a vaſt baſon, ſurrounded on all ſides by iſlands of various forms: the weather clear: the ſun gilding the circumambient ice, which was low, ſmooth, and even; covered with ſnow, excepting where the pools of water on part of the ſurface appeared cryſtalline with the young ice: the ſmall ſpace of ſea they were confined in perfectly ſmooth. After fruitleſs attempts to force a way through the fields of ice, their limits were perpetually contracted by its cloſing; till at length it beſet each veſſel till they became immoveably fixed. The ſmooth extent of ſurface was ſoon loſt: the preſſure of the pieces of ice, by the violence of the ſwell, cauſed them to pack; fragment roſe upon fragment, till they were in many places higher than the main-yard. The movements of the ſhips were tremendous and involuntary, in conjunction with the ſurrounding ice, actuated by the currents. The water ſhoaled to 14 fathoms. The grounding of the ice or of the ſhips would have been equally fatal: the force of the ice might have cruſhed them to atoms, or have lifted them out of the water and overſet them, or have left them ſuſpended on the ſummits of the pieces of ice at a tremendous height, expoſed to the fury of the winds, or to the riſk of being daſhed to pieces by the failure of their frozen dock. An attempt was made to cut a paſſage through the ice; after a perſeverance worthy of Britons, it proved fruitleſs. The commander, at all times maſter of himſelf, directed the boats to be made ready to be hauled over the ice, till they arrived at navigable water (a taſk alone of ſeven days) and in them to make their voyage to England. The boats were drawn progreſſively three whole days. At length the wind ſprung up, the ice ſeparated ſufficiently to yield to the preſſure of the full-ſailed ſhips, which, after labouring againſt the reſiſting fields of ice, arrived on the 10th of Auguſt in the harbour of Smeerinberg, at the weſt end of Spitzbergen, between it and Hackluyt's Headland.

The forms aſſumed by the ice in this chilling climate are extremely pleaſing to even the moſt incurious eye. The ſurface of that which is congealed from the ſea-water (for we muſt allow it two origins) is flat and even, hard, opake, reſembling white ſugar, and incapable of being ſlid on, like the Britiſh ice. The greater pieces, or fields, are many leagues in length: the leſſer are the meadows of the ſeals, on which thoſe animals at times frolic by hundreds. The motion of the leſſer pieces is as rapid as the currents: the greater, which are ſometimes 200 leagues long, and 60 or 80 broad, move ſlow and majeſtically; often fix for a time, immoveable by the power of the ocean, & then produce near the horizon that bright white appearance called the *blink*. The approximation of two great fields produces a moſt ſingular phenomenon; it forces the leſſer (if the term can be applied to pieces of ſeveral acres ſquare) out of the water, and adds them to their ſurface: a ſecond and often a third ſucceeds; ſo that the whole forms an aggregate of a tremendous height. Theſe float in the ſea like ſo many rugged mountains, and are ſometimes 500 or 600 yards thick; but the far greater part is concealed beneath the water. Theſe are continually increaſed in height by the freezing of the ſpray of the ſea, or of the melting of the ſnow, which falls on them. Thoſe which remain in this frozen clime receive continual growth; others are gradually wafted by the northern winds into ſouthern latitudes, and melt by degrees, by the heat of the ſun, till they waſte away, or diſappear in the boundleſs element.

The colliſion of the great fields of ice, in high latitudes, is often attended with a noiſe that for a time takes away the ſenſe of hearing any thing elſe; and the leſſer with a grinding of unſpeakable horror. The water which daſhes againſt the mountainous ice freezes into an infinite variety of forms; and gives the voyager ideal towns, ſtreets, churches, ſteeples, and every ſhape which imagination can frame.

Ice-Plant. See Meſembryanthemum.

ICEBERGS, are large bodies of ice filling the valleys between the high mountains in northern latitudes. Among the moſt remarkable are thoſe of the eaſt coaſt of Spitzbergen; (ſee Greenland, n° 10.) They are ſeven in number, but at conſiderable diſtances from each other: each fill the valleys for tracts unknown, in a region totally inacceſſible in the internal parts. The glaciers * of Switzerland ſeem contemptible to theſe; but preſent often a ſimilar front into ſome lower valley. The laſt exhibits over the ſea a front 300 feet high, emulating the emerald in colour: cataracts of melted ſnow precipitate down various parts, and black ſpiring mountains, ſtreaking with white, bound the ſides and riſe crag above crag, as far as eye can reach in the back ground. See Plate CCLI. At times immenſe fragments break off, and tumble into the water, with a moſt alarming daſhing. A piece of this vivid green ſubſtance has fallen, and grounded in 24 fathoms water, and ſpired above the ſurface 50 feet †. Similar icebergs are frequent in all the Arctic regions; and to their lapſes is owing the ſolid mountainous ice which infeſts thoſe ſeas.—Froſt ſports wonderfully with theſe icebergs, and gives them majeſtic as well as other moſt ſingular forms. Maſſes have been ſeen aſſuming the ſhape of a Gothic church, with arched windows and doors, and all the rich drapery of that ſtyle, compoſed of what an Arabian tale would ſcarcely dare to relate, of cryſtal of the richeſt ſapphirine blue: tables with one or more feet; and often immenſe flat-roofed temples like thoſe of Luxxor on the Nile, ſupported by round tranſparent columns of cœrulean hue, float by the aſtoniſhed ſpectator.—Theſe icebergs are the creation of ages, and receive annually additional height by the falling of ſnows and of rain, which often inſtantly freezes, and more than repairs the loſs occaſioned by the influence of the melting ſun.

ICELAND, a large iſland lying in the northern part of the Atlantic Ocean, between 63 and 68 degrees of north latitude, and between 10 and 26 degrees of weſt longitude, its greateſt length being about 700 miles, and its breadth 300.

1 General account of the country.

This country lying partly within the frigid zone, and being liable to be ſurrounded with vaſt quantities of ice which come from the polar ſeas, is on account of the coldneſs of the climate very inhoſpitable; but much more ſo for other reaſons. It is exceedingly ſubject to earthquakes; and ſo full of volcanoes, that the little part of it which appears fit for the habitation of man ſeems

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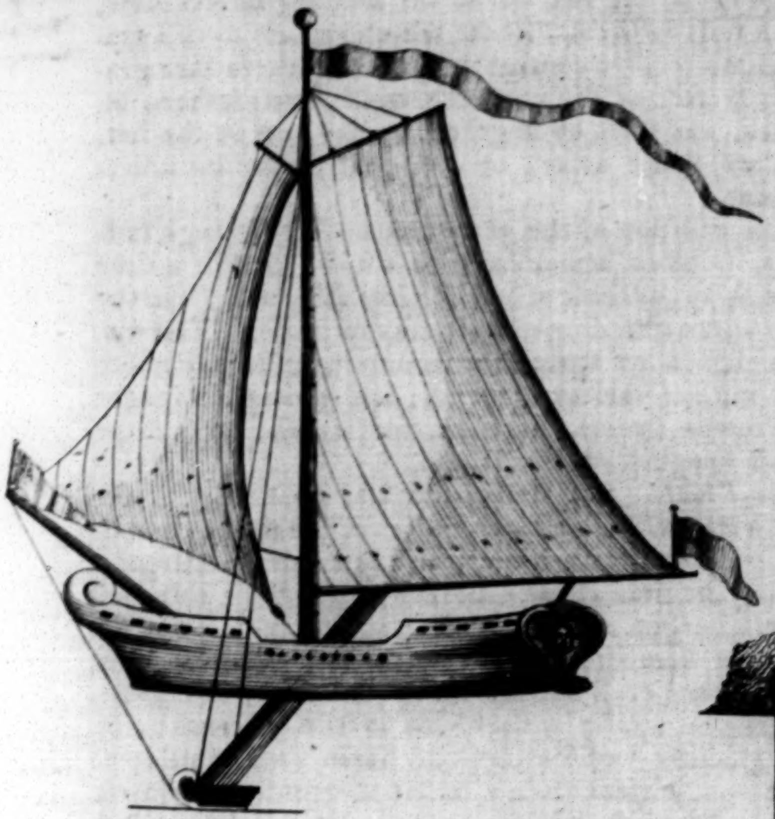
* See Glaciers.

† Phipps's Voyage, p. 70.

Plate CCL

Ice boat



Ice.

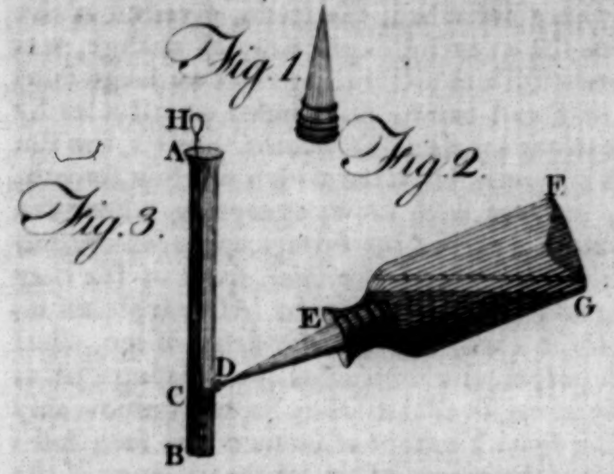


Fig. 1
Fig. 2
Fig. 3
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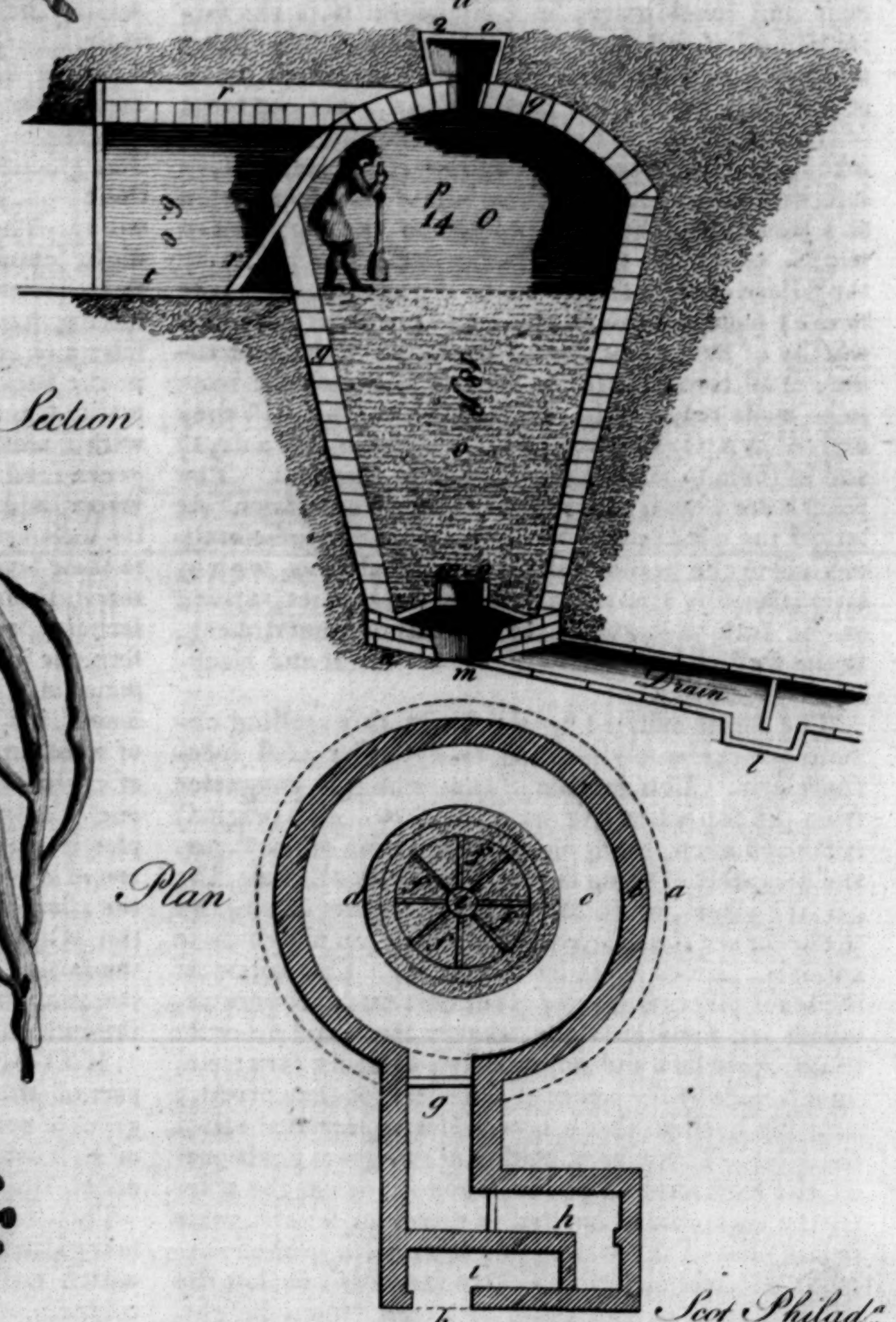
Ice house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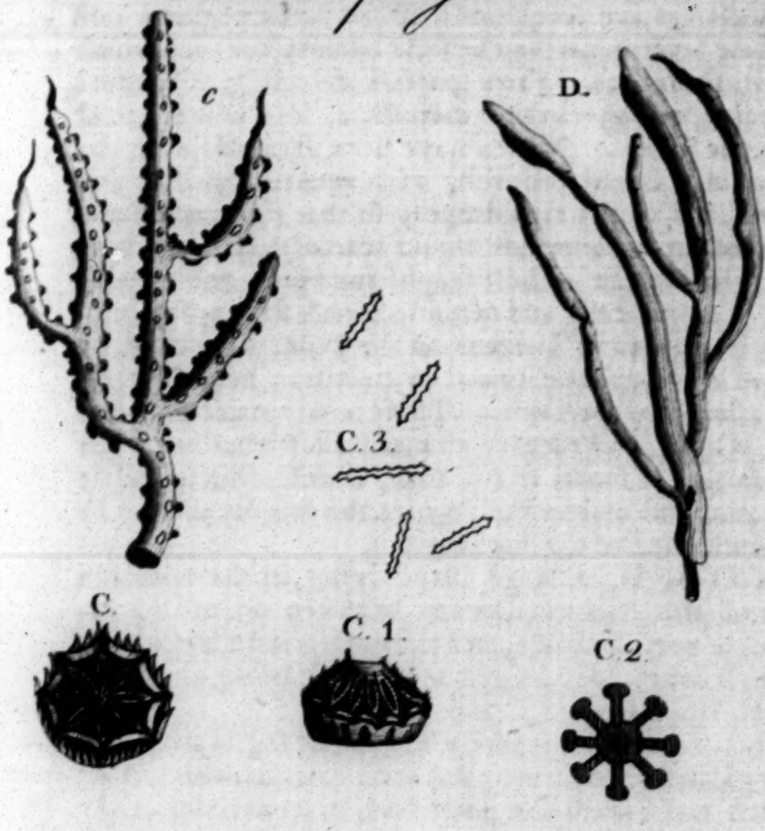
Keratophyta



Scot Philad^a.

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ſeems almoſt totally laid waſte by them. The beſt account that hath yet appeared of the iſland of Iceland is in a late publication intitled, "Letters on Iceland, &c. written by Uno Von Troil, D. D. firſt chaplain to his Swediſh majeſty." This gentleman ſailed from London on the 12th of July 1772, in company with Mr Banks, Dr Solander, and Dr James Lind of Edinburgh, in a ſhip for which L.100 Sterling was paid every month. After viſiting the weſtern iſles of Scotland, they arrived on the 28th of Auguſt at Iceland, where they caſt anchor at Beſſeſtedr or Beſſaſtadr, lying in about 64° 6′ N. Lat. in the weſtern part of the iſland. The country had to them the moſt diſmal appearance that can be conceived. "Imagine to yourſelf (ſays Dr Troil) a country, which from one end to the other preſents to your view only barren mountains, whoſe ſummits are covered with eternal ſnow, and between them fields divided by vitrified cliffs, whoſe high and ſharp points ſeem to vie with each other to deprive you of the ſight of a little graſs which ſcantily ſprings up among them. Theſe ſame dreary rocks likewiſe conceal the few ſcattered habitations of the natives, and no where a ſingle tree appears which might afford ſhelter to friendſhip and innocence. The proſpect before us, though not pleaſing, was uncommon and ſurpriſing. Whatever preſented itſelf to our view bore the marks of devaſtation; and our eyes, accuſtomed to behold the pleaſing coaſts of England, now ſaw nothing but the veſtiges of the operation of a fire, Heaven knows how ancient!

2 Account of the climate.

The climate of Iceland, however, is not unwholeſome or naturally ſubject to exceſſive colds, notwithſtanding its northwardly ſituation. There have been inſtances indeed of Fahrenheit's thermometer ſinking to 24° below the freezing point in winter, and riſing to 104° in ſummer. Since the year 1749, obſervations have been made on the weather; and the reſult of theſe obſervations hath been unfavourable, as the coldneſs of the climate is thought to be on the increaſe, and of conſequence the country is in danger of becoming unfit for the habitation of the human race. Wood, which formerly grew in great quantities all over the iſland, cannot now be raiſed. Even the hardy firs of Norway cannot be reared in this iſland. They ſeemed indeed to thrive till they were about two feet high; but then their tops withered, and they ceaſed to grow. This is owing chiefly to the ſtorms and hurricanes which frequently happen in the months of May and June, and which are very unfavourable to vegetation of every kind. In 1772, governor Thodal ſowed a little barly, which grow very briſkly; but a ſhort time before it was to be reaped, a violent ſtorm ſo effectually deſtroyed it, that only a few grains were found ſcattered about. Beſides theſe violent winds, this iſland lies under another diſadvantage, owing to the floating ice already mentioned, with which the coaſts are often beſet. This ice comes on by degrees, always with an eaſterly wind, and frequently in ſuch quantities as to fill up all the gulphs on the north-weſt ſide of the iſland, and even covers the ſea as far as the eye can reach; it alſo ſometimes drives to other ſhores. It generally comes in January, and goes away in March. Sometimes it only reaches the land in April: and, remaining there for a long time, does an incredible deal of miſchief. It conſiſts partly of mountains of ice, ſaid to be ſometimes 60 fathoms in height; and partly of field-ice, which is neither ſo thick nor ſo much dreaded. Sometimes theſe enormous maſſes are grounded in ſhoal water; and in theſe caſes they remain for many months, nay years, undiſſolved, chilling the atmoſphere for a great way round. When many ſuch bulky and lofty ice maſſes are floating together, the wood which is often found drifting between them, is ſo much chafed, and preſſed with ſuch violence together, that it ſometimes takes fire: which circumſtance has occaſioned fabulous accounts of the ice being in flames.

In 1753 and 1754, this ice occaſioned ſuch a violent cold, that horſes and ſheep dropped down dead by reaſon of it, as well as for want of food; horſes were obſerved to feed upon dead cattle, and the ſheep eat of each other's wool. In 1755, towards the end of the month of May, the waters were frozen over in one night to the thickneſs of an inch and five lines. In 1756, on the 26th of June, ſnow fell to the depth of a yard, and continued falling through the months of July and Auguſt. In the year following it froze very hard towards the end of May and beginning of June, in the ſouth part of the iſland, which occaſioned a great ſcarcity of graſs. Theſe froſts are generally followed by a famine, many examples of which are to be found in the Icelandic chronicles. Beſides theſe calamities, a number of bears annually arrive with the ice, which commit great ravages among the ſheep. The Icelanders attempt to deſtroy theſe intruders as ſoon as they get ſight of them. Sometimes they aſſemble together, and drive them back to the ice, with which they often float off again. For want of fire-arms, they are obliged to uſe ſpears on theſe occaſions. The government alſo encourage the deſtruction of theſe animals by paying a premium of 10 dols. for every bear that is killed, and purchaſing the ſkin from him who killed it.

Notwithſtanding this diſmal picture, however, taken from Von Troil's letters, ſome tracts of ground, *in high cultivation*, are mentioned as being covered by the great eruption of lava in 1783. It is poſſible, therefore, that the above may have been ſomewhat exaggerated.

Thunder and lightning are ſeldom heard in Iceland, except in the neighbourhood of volcanoes. Aurora Borealis is very frequent and ſtrong. It moſt commonly appears in dry weather; though there are not wanting inſtances of its being ſeen before or after rain, or even during the time of it. The lunar halo, which prognoſticates bad weather, is likewiſe very frequent here; as are alſo parhelions, which appear from one to nine in number at a time. Theſe parhelions are obſerved chiefly at the approach of the Greenland ice, when an intenſe degree of froſt is produced, and the frozen vapours fill the air. Fire-balls, ſometimes round and ſometimes oval, are obſerved, and a kind of *ignis fatuus* which attaches itſelf to men and beaſts; and comets are alſo frequently mentioned in their chronicles. This laſt circumſtance deſerves the attention of aſtronomers.

Iceland, beſides all the inconveniences already mentioned, has two very terrible ones, called by the natives *ſkrida* and *ſnioflodi*: the name of the firſt imports large pieces of a mountain tumbling down and deſtroying the lands and houſes which lie at the foot of it: this happened in 1554, when a whole farm was ruined, and 13 people buried alive. The other word ſignifies the effects of a prodigious quantity of ſnow, which covers the tops of the mountains, rolling down in immenſe maſſes, and doing a great deal of damage: of this there was an inſtance in 1699, during the night, when two farms were buried, with all their inhabitants and cattle. This laſt accident Iceland has in common with all very mountainous countries, particularly Switzerland.

3
Account of the hot ſprings of Iceland from *Von Troil's Letters.*

"Iceland abounds with hot and boiling ſprings, ſome of which ſpout up into the air to a ſurpriſing height. All the jets d'eau which have been contrived with ſo much art, and at ſuch an enormous expence, cannot by any means be compared with theſe wonders of nature in Iceland. The water-works at Harenhauſen throw up a ſingle column of water of half a quarter of a yard in circumference to a height of about 70 feet; thoſe at the Winterkaſten at Caſſel throw it up, but in a much thinner column, 130 feet; and the jet d'eau at St Cloud, which is thought the greateſt of all the French water-works, caſts up a thin column 80 feet into the air: but ſome ſprings in Iceland pour forth columns of water ſeveral feet in thickneſs to the height of many fathoms; and many affirm of ſeveral hundred feet.

"Theſe ſprings are unequal in their degrees of heat; but we have obſerved none under 188 degrees of Fahrenheit's thermometer; in ſome it is 192, 193, 212, and in one ſmall vein of water 213 degrees. From ſome the water flows gently, and the ſpring is then called *laug*, "a bath;" from others it ſpouts with a great noiſe, and is then called **Huer**, or *kittel*. It is very common for ſome of theſe ſpouting ſprings to cloſe up, and others to appear in their ſtead. All theſe hot waters have an encruſting quality; ſo that we very commonly find the exterior ſurface from whence it burſts forth covered with a kind of rind, which almoſt reſembles chaſed work, and which we at firſt took for lime, but which was afterwards found by Mr Bergman to be of a ſiliceous or flinty nature. In ſome places the water taſtes of ſulphur, in others not; but when drank as ſoon as it is cold, it taſtes like common boiled water. The inhabitants uſe it at particular times for dyeing; and were they to adopt proper regulations, it might be ſtill of greater uſe. Victuals may alſo be boiled in it, and milk held over its ſteam becomes ſweet; owing, moſt probably, to the exceſſive heat of the water, as the ſame effect is produced by boiling it a long time over the fire. They have begun to make ſalt by boiling ſea-water over it, which when it is refined, is very pure and good. The cows which drink this hot water yield a great deal of milk. Egbert Olafsen relates, that the water does not become turbid when alkali is thrown into it, nor does it change the colour of ſyrup of violets. Horrebow aſſerts, that if you fill a bottle at one of the ſpouting ſprings, the water will boil over two or three times while the ſpring throws forth its water; and if corked too ſoon, the bottle will burſt.

Plate CCXXXVI

4
A particular deſcription of one named *Geyſer.*

"Among the many hot ſprings to be met with in Iceland, ſeveral bear the name of *geyſer*: the following is a deſcription of the moſt remarkable of that name, and in the whole iſland. It is about two days journey from Hecla, near a farm called *Haukadal*: Here a poet would have an opportunity of painting whatever nature has of the beautiful and terrible, united in one picture, by delineating this ſurpriſing phenomenon. Repreſent to yourſelf a large field, where you ſee on one ſide, at a great diſtance, high mountains covered with ice, whoſe ſummits are generally wrapped in clouds, ſo that their ſharp and unequal points become inviſible. This loſs, however, is compenſated by a certain wind, which cauſes the clouds to ſink, and cover the mountain itſelf when its ſummit appears as it were to reſt on the clouds. On the other ſide Hecla is ſeen, with its three points covered with ice, riſing above the clouds, and, with the ſmoke which aſcends from it, forming other clouds at ſome diſtance from the real ones: and on another ſide is a ridge of high rocks, at the foot of which boiling water from time to time iſſues forth; and further on extends a marſh of about three Engliſh miles in circumference, where are 40 or 50 boiling ſprings, from which a vapour aſcends to a prodigious height.—In the midſt of theſe is the greateſt ſpring *geyſer*, which deſerves a more exact and particular account. In travelling to the place about an Engliſh mile and an half from the *hver*, from which the ridge of rocks ſtill divided us, we heard a loud roaring noiſe, like the ruſhing of a torrent precipitating itſelf from ſtupendous rocks. We aſked our guide what it meant; he anſwered, it was *geyſer* roaring; and we ſoon ſaw with our naked eyes what before ſeemed almoſt incredible.

"The depth of the opening or pipe from which the water guſhes cannot be well determined; for ſometimes the water ſunk down ſeveral fathoms, and ſome ſeconds paſſed before a ſtone which was thrown into the aperture reached the ſurface of the water. The opening itſelf was perfectly round, and 19 feet in diameter, and terminated in a baſon 59 feet in diameter. Both the pipe and the baſon were covered with a rough ſtalactic rind, which had been formed by the force of the water: the outermoſt border of the baſon is nine feet and an inch higher than the pipe itſelf. The water here ſpouted ſeveral times a-day, but always by ſtarts, and after certain intervals. The people who live in the neighbourhood told us, that they roſe higher in cold and bad weather than at other times; and Egbert Olafsen and ſeveral others affirm, that it has ſpouted to the height of 60 fathoms. Moſt probably they gueſſed only by the eye, and on that account their calculation may be a little extravagant; and indeed it is to be doubted whether the water was ever thrown up ſo high, though probably it ſometimes mounts higher than when we obſerved it. The method we took to obſerve the height was as follows. Every one in company wrote down, at each time that the water ſpouted, how high it appeared to him to be thrown, and we afterwards choſe the medium. The firſt column marks the ſpoutings of the water, in the order in which they followed one another; the ſecond, the time when theſe effuſions happened; the third, the height to which the water roſe; and the laſt, how long each ſpouting of water continued.

Nº	Time	Height	Duration
1	At VI 42 m.	30 feet	0 20 ſeconds
2	——— 51	6	0 20
3	— VII 16	6	0 10
4	——— 31	12	0 15
5	——— 51	60	0 6

N°	Time	Height	Duration.
6—VIII. 17	24	0 30
7 ——— 29	18	0 40
8 ——— 36	12	0 40

The pipe was now for the firſt time full of water, which ran ſlowly into the baſon.

9——IX. 25	48	1 10
10——X. 16	24	1 00

“At 35 minutes after twelve we heard as it were three diſcharges of a gun under ground, which made it ſhake: the water flowed over immediately, but inſtantly ſunk again. At eight minutes after two, the water flowed over the border of the baſon. At 15 minutes after three, we again heard ſeveral ſubterranean noiſes, though not ſo ſtrong as before. At 43 minutes after four, the water flowed over very ſtrongly during the ſpace of a minute. In ſix minutes after, we heard many loud ſubterraneous diſcharges, not only near the ſpring, but alſo from the neighbouring ridge of rocks where the water ſpouted. At 51 minutes after ſix, the fountain ſpouted up to the height of 92 feet, and continued to do ſo for four minutes. After this great effort, it ſunk down very low into the pipe, and was entirely quiet during ſeveral minutes; but ſoon began to bubble again: it was not, however, thrown up into the air, but only to the top of the pipe.

“The force of the vapours which throw up theſe waters is exceſſive; it not only prevents the ſtones which are thrown into the opening from ſinking, but even throws them up to a very great height, together with the water. When the baſon was full, we placed ourſelves before the ſun in ſuch a manner that we could ſee our ſhadows in the water; when every one obſerved round the ſhadow of his own head (though not round that of the heads of others,) a circle of almoſt the ſame colours which compoſe the rainbow, and round this another bright circle. This moſt probably proceeded from the vapours exhaling from the water.

“Not far from this place, another ſpring at the foot of the neighbouring ridge of rocks ſpouted water to the height of one or two yards each time. The opening through which this water iſſued was not ſo wide as the other: we imagined it poſſible to ſtop up the hole entirely by throwing large ſtones into it, and even flattered ourſelves that our attempts had ſucceeded: but, to our aſtoniſhment, the water guſhed forth in a very violent manner. We haſtened to the pipe, and found all the ſtones thrown aſide, and the water playing freely through its former channel. In theſe large ſprings the waters were hot in the higheſt degree, and taſted a little of ſulphur; but in other reſpects it was pure and clear. In the ſmaller ſprings of the neighbourhood the water was tainted: in ſome, it was as muddy as that of a clay-pit: in others, as white as milk; and in ſome few, as red as blood.

5
Account of the baſaltic pillars, &c.

“Iceland abounds with pillars of baſaltes, which the lower ſort of people imagine have been piled upon each other by the giants, who made uſe of ſupernatural force to effect it. They have generally from three to ſeven ſides; and are from four to ſix feet in thickneſs, and from 12 to 16 yards in length, without any horizontal diviſions. But ſometimes they are only from ſix inches to one foot in height, and they are then very regular, inſomuch that they are ſometimes made uſe of for windows and door-poſts. In ſome places they only peep out here and there among the lava, or more frequently among the tufa; in other places they are quite overthrown, and pieces of broken pillars only make their appearance. Sometimes they extend without interruption for two or three miles in length. In one mountain they have a ſingular appearance: on the top the pillars lie horizontally, in the middle they are ſloping; the loweſt are perfectly perpendicular; and in ſome parts they are bent into a ſemicircular figure. The matter of the Iceland baſaltes ſeems to be the ſame with that of STAFFA: though in ſome it is more porous, and inclines to a grey. Some we obſerved which were of a blackiſh grey, and compoſed of ſeveral joints. Another time we obſerved a kind of porous glaſſy ſtone, conſequently a lava, which was ſo indiſtinctly divided, that we were for ſome time at a loſs to determine whether it was baſaltes or not, though at laſt we all agreed that it was.”

Iron ore is found in ſome parts of the iſland, and that beautiful copper ore called *Malachites*. Horrebow ſpeaks of native ſilver. A ſtratum of ſulphur is found near Myvatu from nine inches to two feet in thickneſs; partly of a brown colour, and partly of a deep orange. Immediately over the ſulphur is a blue earth; above that a vitriolic and aluminous one; and beneath the ſulphur a reddiſh bole.

6
Hiſtory of the iſland.

At what time the iſland of Iceland was firſt peopled is uncertain. An Engliſh colony indeed is ſaid to have been ſettled there in the beginning of the fifth century; but of this there are not ſufficient proofs. There is, however, reaſon to ſuppoſe that the Engliſh and Iriſh were acquainted with this country under another name, long before the arrival of the Norwegians; for the celebrated Bede gives a pretty accurate deſcription of the iſland. But of theſe original inhabitants we cannot pretend to ſay any thing, as the Iceland chronicles go no farther back than the arrival of the Norwegians. What they relate is to the following purpoſe.

Naddodr, a famous pirate, was driven on the coaſt of Iceland in 861, and named the country *Snio-land*, “Snow-land,” on account of the great quantities of ſnow with which he perceived the mountains covered. He did not remain there long; but on his return extolled the country to ſuch a degree, that one Garder Snafarſon, an enterpriſing Swede, was encouraged by his account to go in ſearch of it in 864. He ſailed quite round the iſland, and gave it the name of *Gardalſholmur*, or Garder's-iſland. Having remained in Iceland during the winter, he returned in the ſpring to Norway, where he deſcribed the new-diſcovered iſland as a pleaſant well-wooded country. This excited a deſire in Floke, another Swede, reputed the greateſt navigator of his time, to undertake a voyage thither. As the compaſs was then unknown, he took three ravens on board to employ them on the diſcovery. By the way he viſited his friends at Ferro; and having ſailed farther to the northward, he let fly one of his ravens, which returned to Ferro. Some time after, he diſmiſſed the ſecond, which returned to the ſhip again, as he could find no land. The laſt trial proved more ſucceſsful; the third raven took his flight to Iceland, where the ſhip arrived a few days after. Floke ſtaid here the whole winter with his company; and, becauſe he found a great deal of floating ice on the north ſide, he gave the country the name of *Iceland*, which it has ever ſince retained.

When they returned to Norway in the following ſpring, Floke, and thoſe that had been with him, made a very different deſcription of the country. Floke deſcribed it as a wretched place; while one of his companions, named *Thorulfr*, praiſed it ſo highly, that he affirmed butter dropped from every plant; which extravagant commendation procured him the name of *Thorulfr-ſmior*, or Butter-Thorulfr.

From this time there are no accounts of any voyages to Iceland, till Ingolfr and his friend Leifr undertook one in 874. They ſpent the winter on the iſland, and determined to ſettle there for the future. Ingolfr returned to Norway, to provide whatever might be neceſſary for the comfortable eſtabliſhment of a colony, and Leifr in the mean time went to aſſiſt in the war in England. After an interval of four years, they again met in Iceland, the one bringing with him a conſiderable number of people, with the neceſſary tools and inſtruments for making the country habitable; and the other imported his acquired treaſures. After this period many people went there to ſettle; and, in the ſpace of 60 years, the whole iſland was inhabited. The tyranny of Harold king of Norway contributed not a little to the population of Iceland; and ſo great was the emigration of his ſubjects, that he was at laſt obliged to iſſue an order, that no one ſhould ſail from Norway to Iceland without paying four ounces of fine ſilver to the king.

Beſides the Norwegians, new colonies arrived from different nations, between whom wars ſoon commenced; and the Icelandic hiſtories are full of the accounts of their battles. To prevent theſe conflicts for the future, a kind of chief was choſen in 928, upon whom great powers were conferred. This man was the ſpeaker in all their public deliberations; pronounced ſentence in difficult and intricate caſes; decided all diſputes; and publiſhed new laws, after they had been received and approved of by the people at large; but he had no power to make laws without the approbation and conſent of the reſt. He therefore aſſembled the chiefs, whenever the circumſtances ſeemed to require it; and, after they had deliberated among themſelves, he repreſented the opinion of the majority to the people, whoſe aſſent was neceſſary before it could be conſidered as a law. His authority among the chiefs and leaders, however, was inconſiderable, as he was choſen by them, and retained his place no longer than while he preſerved their confidence.

This inſtitution did not prove ſufficient to reſtrain the turbulent ſpirit of the Icelanders. They openly waged war with each other; and, by their inteſtine conflicts, ſo weakened all parties, that the whole became at laſt a prey to a few arbitrary and enterpriſing men; who, as is too generally the caſe, wantonly abuſed their power to the oppreſſion of their countrymen, and the diſgrace of humanity. Notwithſtanding theſe troubles, however, the Icelanders remained free from a foreign yoke till 1261; when the greateſt part of them put themſelves under the protection of Hakans king of Norway, promiſing to pay him tribute upon certain conditions agreed on between them; and the reſt followed their example in 1264. Afterwards, Iceland, together with Norway, became ſubject to Denmark. For a long time the care of the iſland was committed to a governor, who commonly went there once a-year; though, according to his inſtructions, he ought to have reſided in Iceland. As the country ſuffered incredibly through the abſence of its governors, it was reſolved a few years ago that they ſhould reſide there, and have their ſeat at Beſſeſſtedr, one of the old royal domains. He has under him a bailiff, two laymen, a ſheriff, and 21 *ſyſſelmen*, or magiſtrates who ſuperintend ſmall diſtricts; and almoſt every thing is decided according to the laws of Denmark.

7
Manners, &c. of the Icelanders.

At the firſt ſettlement of the Norwegians in Iceland, they lived in the ſame manner as they had done in their own country, namely, by war and piracy. Their ſituation with regard to the kings of Norway, however, ſoon obliged them to apply to other ſtates, in order to learn as much of the knowledge of government and politics as was neceſſary to preſerve their colony from ſubjugation to a foreign yoke. For this purpoſe they often ſailed to Norway, Denmark, Sweden, England, and Scotland. The travellers, at their return, were obliged to give an account to their chiefs of the ſtate of thoſe kingdoms through which they paſſed. For this reaſon, hiſtory, and what related to ſcience, was held in high repute as long as the republican form of government laſted; and the great number of hiſtories to be met with in the country, ſhow at leaſt the deſire of the Icelanders to be inſtructed. To ſecure themſelves, therefore, againſt their powerful neighbours, they were obliged to enlarge their hiſtorical knowledge. They likewiſe took great pains in ſtudying perfectly their own laws, for the maintenance and protection of their internal ſecurity. Thus Iceland, at a time when ignorance and obſcurity overwhelmed the reſt of Europe was enabled to produce a conſiderable number of poets and hiſtorians. When the Chriſtian religion was introduced about the end of the 10th century, more were found converſant in the law than could have been expected, conſidering the extent of the country, and the number of its inhabitants. Fiſhing was followed among them; but they devoted their attention conſiderably more to agriculture, which has ſince entirely ceaſed.

Two things have principally contributed towards producing a great change both in their character and way of life, viz. the progreſs of the Chriſtian religion, and their ſubjection firſt to Norway, and afterwards to Denmark. For if religion, on one ſide, commanded them to deſiſt from their ravages and warlike expeditions; the ſecular power, on the other, deprived them of the neceſſary forces for the execution of them: and, ſince this time, we find no farther traces of their heroic deeds, except thoſe which are preſerved in their hiſtories.

The modern Icelanders apply themſelves to fiſhing and breeding of cattle. They are middle-ſized and well made, though not very ſtrong; and the women are in general ill-featured. Vices are much leſs common among them, than in other parts where luxury and riches have corrupted the morals of the people. Though their poverty diſables them from imitating the hoſpitality of their anceſtors in all reſpects, yet they continue to ſhow their inclination to it: they cheerfully give away the little they have to ſpare, and expreſs the utmoſt joy and ſatisfaction if you are pleaſed with their gift. They are uncommonly obliging and faithful, and extremely attached to government. They are very zealous in their religion. An Icelander never paſſes a river or any other dangerous place, without previouſly taking off his hat, and imploring the divine protection; and he is always thankful for the protection of the Deity when he has paſſed the danger in ſafety. They have an inexpreſſible attachment to their native country, and are no where ſo happy. An Icelander therefore rarely ſettles in Copenhagen, though ever ſuch advantageous terms ſhould be offered him. On the other hand, we cannot aſcribe any great induſtry or ingenuity to theſe people. They work on in the way to which they have all along been accuſtomed, without thinking of improvements. They are not cheerful in converſation, but ſimple and credulous; and have no averſion againſt a bottle, if they can find an opportunity. When they meet together, their chief paſtime conſiſts in reading their hiſtory. The maſter of the houſe makes the beginning, and the reſt continue in their turns when he is tired. Some of them know theſe ſtories by heart; others have them in print, and others in writing. Beſides this, they are great players at cheſs and cards, but only for their amuſement, ſince they never play for money: which, however, ſeems to have been formerly in uſe among them; ſince by one of their old laws, a fine is impoſed upon thoſe who play for money.

8 Their dreſs

The modern Icelanders have made very little alteration in their dreſs from what was formerly in uſe. The men all wear a linen ſhirt next to the ſkin, with a ſhort jacket, and a pair of wide breeches over it. When they travel, another ſhort coat is put over all. The whole is made of coarſe black cloth called *wadmal*; but ſome wear clothes of a white colour. On their head they wear large three-cornered hats, and on their feet Iceland ſhoes and worſted ſtockings. Some of them indeed have ſhoes from Copenhagen; but, as they are rather too dear for them, they generally make their own ſhoes, ſometimes of the hide of oxen, but more frequently of ſheep's leather. They make them by cutting a ſquare piece of leather, rather wider than the length of the foot; this they ſew up at the toes and behind at the heel, and tie it on with leather thongs. Theſe ſhoes are convenient enough where the country is level: but it would be very difficult for us who are not accuſtomed to walk with them amongſt the rocks and ſtones, though the Icelanders do it with great eaſe.

The women are likewiſe dreſſed in black wadmal. They wear a bodice over their ſhifts, which are ſewed up at the boſom; and above this a jacket laced before with long narrow ſleeves reaching down to the wriſts. In the opening on the ſide of the ſleeve, they have buttons of chaſed ſilver, with a plate fixed to each button; on which the lover, when he buys them in order to preſent them to his miſtreſs, takes care to have his name engraved along with hers. At the top of the jacket a little black collar is fixed, of about three inches broad, of velvet or ſilk, and frequently trimmed with gold cord. The petticoat is likewiſe of wadmal, and reaches down to the ankles. Round the top of it is a girdle of ſilver or ſome other metal, to which they faſten the apron, which is alſo of wadmal, and ornamented at top with buttons of chaſed ſilver. Over all this they wear an upper dreſs nearly reſembling that of the Swediſh peaſants; with this difference, that it is wider at bottom: this is cloſe at the neck and wriſts, and a hand's breadth ſhorter than the petticoat. It is adorned with a facing down to the bottom, which looks like cut velvet, and is generally wove by the Icelandic women. On their fingers they wear gold, ſilver, or braſs rings. Their head-dreſs conſiſts of ſeveral cloths wrapped round the head almoſt as high again as the face. It is tied faſt with a handkerchief, and ſerves more for warmth than ornament. Girls are not allowed to wear this head-dreſs till they are marriageable. At their weddings they are adorned in a very particular manner: the bride wears, cloſe to the face, round her head dreſs, a crown of ſilver gilt. She has two chains round her neck, one of which hangs down very low before, and the other reſts on her ſhoulders. Beſides theſe, ſhe wears a leſſer chain, from whence generally hangs a little heart, which may be opened to put ſome kinds of perfume in it. This dreſs is worn by all the Icelandic women without exception: only with this difference, that the pooreſt ſort have it of coarſe wadmal, with ornaments of braſs; and thoſe that are in eaſier circumſtances have it of broad cloth, with ſilver ornaments gilt.

9 Houſes.

The houſes of the Icelanders are very indifferent, but the worſt are ſaid to be on the ſouth ſide of the iſland. In ſome parts they are built of drift-wood, in others of lava, almoſt in the ſame manner as the ſtone-walls are made for incloſures, with moſs ſtuffed between the pieces of lava. In ſome houſes the walls are wainſcotted on the inſide. The roof is covered with ſods, laid over rafting, or ſometimes over the ribs of whales; the walls are about three yards high, and the entrance ſomewhat lower. Inſtead of glaſs, the windows are made of the chorion and amnios of ſheep, or the membranes which ſurround the womb of the ewe. Theſe are ſtretched on a hoop, and laid over a hole in the roof. In the poorer ſort of houſes they employ for the windows the inner membrane of the ſtomach of animals, which is leſs tranſparent than the others.

10 Diet.

As the iſland of Iceland produces no kind of grain, the inhabitants of conſequence have no bread but what is imported; and which being too dear for common uſe, is reſerved for weddings and other entertainments. The following liſt of their viands is taken from Troil's Letters.

"1. Flour of *fialgraſs*, (lichen iſlandicus, or rock-graſs. The plant is firſt waſhed, and then cut into ſmall pieces by ſome; though the greater number dry it by fire or in the ſun, then put it into a bag in which it is well beaten, and laſtly work it into a flour by ſtamping.

"2. Flour of *komſyrg*, (polygonum biſtorta), is prepared in the ſame manner, as well as the two other ſorts of wild corn *melur*(*Arundo arenaria*, and *Arundo foliorum lateribus convolutis*), by ſeparating it from the chaff, pounding, and laſtly grinding it.

"3. *Surt ſmoer*, (ſour butter). The Icelanders ſeldom make uſe of freſh or ſalt butter, but let it grow ſour before they eat it. In this manner it may be kept for 20 years, or even longer; and the Icelanders look upon it as more wholeſome and palatable than the butter uſed among other nations. It is reckoned better the older it grows; and one pound of it then is valued as much as two of freſh butter.

" 3. *String*, or whey boiled to the conſiſtence of ſour milk, and preſerved for the winter.

" 4. Fiſh of all kinds, both dried in the ſun and in the air, and either ſalted or frozen. Thoſe prepared in the laſt manner are preferred by many.

" 5. The fleſh of bears, ſheep, and birds, which is partly ſalted, partly hung or ſmoked, and ſome preſerved in caſks with ſour or fermented whey poured over it.

" 6. *Miſoſt*, or whey boiled to cheeſe, which is very good. But the art of making other kinds of good cheeſe is loſt, though ſome tolerably palatable is ſold in the eaſt quarter of Iceland.

" 7. *Biena ſtriug*, bones and cartilages of beef and mutton, and likewiſe bones of cod, boiled in whey till they are quite diſſolved: they are then left to ferment, and are eat with milk.

" 8. *Skyr*. The curds from which the whey is ſqueezed are preſerved in caſks or other veſſels; they are ſometimes mixed with black crow-berries or juniper-berries, and are likewiſe eat with new milk.

" 9. *Syra*, is ſour whey kept in caſks, and left to ferment: which, however, is not reckoned fit for uſe till a year old.

" 10. *Blanda*, is a liquor made of water, to which a twelfth part of ſyra is added. In winter, it is mixed with the juice of thyme and of the black crowberries.

" 11. They likewiſe eat many vegetables, ſome of which grow wild, and ſome are cultivated; alſo ſhell-fiſh and muſhrooms."

The Icelanders in general eat three meals a day, at ſeven in the morning, two in the afternoon, and nine at night. In the morning and evening they commonly eat curds mixed with new milk, and ſometimes with juniper or crow berries. In ſome parts, they only have pottage made of rock-graſs, which is very palatable, or curdled milk boiled till it becomes of a red colour, or new milk boiled a long time. At dinner, their food conſiſts of dried fiſh, with plenty of ſour butter; they alſo ſometimes eat freſh fiſh, and, when poſſible, a little bread and cheeſe with them. It is reported by ſome that they do not eat any fiſh till it is quite rotten; this report perhaps proceeds from their being fond of it when a little tainted: they however frequently eat fiſh which is quite freſh, though in the ſame manner as the reſt of their food, often without ſalt.

Their common beverage is milk, either warm from the cow or cold, and ſometimes boiled: they likewiſe uſe butter-milk with or without water. On the coaſts they generally drink blanda and ſour milk; which is ſold after it is ſkimmed at two-fifths of a rixdollar per caſk: ſome likewiſe ſend for beer from Copenhagen, and ſome brew their own. A few of the principal inhabitants alſo have claret and coffee. The common people ſometimes drink a kind of tea, which they make from the leaves of the *dryas octopetala*, and the *veronica officiualis*.

11 Employment, manufactures, &c.

On the coaſts the men employ themſelves in fiſhing, both ſummer and winter. On their return home, when they have drawn and cleaned their fiſh, they give them to their wives, whoſe care it is to dry them. In the winter, when the inclemency of the weather prevents them from fiſhing, they are obliged to take care of their cattle, and ſpin wool. In ſummer they mow the graſs, dig turf, provide fuel, go in ſearch of ſheep and goats that were gone aſtray, and kill cattle. They prepare leather with the *ſpiraca ulmaria* inſtead of bark. Some few work in gold and ſilver; and others are inſtructed in mechanics, in which they are tolerable proficients. The women prepare the fiſh, take care of the cattle, manage the milk and wool, ſew, ſpin, and gather eggs and down. When they work in the evening, they uſe, inſtead of an hour-glaſs, a lamp with a wick made of epilobium dipt in train-oil, which is contrived to burn four, ſix, or eight hours.

Among the common people of Iceland, time is not reckoned by the courſe of the ſun, but by the work they have done, and which is preſcribed by law. According to this preſcription, a man is to mow as much hay in one day as grows on 30 fathoms of manured ſoil, or 40 fathoms of land which has not been manured; or he is to dig 700 pieces of turf eight feet long and three broad. If as much ſnow falls as reaches to the horſes bellies, a man is required daily to clear a piece of ground ſufficient for 100 ſheep. A woman is to rake together as much hay as three men can mow, or to weave three yards of wadmal a-day.

The wages of a man are fixed at four dollars and 12 yards of wadmal; and thoſe of a woman at two dollars and five yards of wadmal. When men are ſent a fiſhing out of the country, there is allowed to each man, by law, from the 25th of September to the 14th of May, ſix pounds of butter, and 18 pounds of dried fiſh every week. This may ſeem to be too great an allowance; but it muſt be remembered that they have nothing elſe to live upon. When they are at home, and can get milk, &c. every man receives only five pounds of dried fiſh and three quarters of a pound of butter a-week.

12 Diſeaſes.

The food and manner of life of the Icelanders by no means contribute to their longevity. It is very rare indeed to ſee an inhabitant of Iceland exceed the age of 50 or 60; and the greater part are attacked by grievous diſeaſes before middle age. Of theſe the ſcurvy and elephantiaſis or leproſy are the worſt. They are alſo ſubject to the gout in their hands, owing to their frequent employment in fiſhing, and handling the wet fiſhing-tackle in cold weather. St Anthony's fire, the jaundice, pleuriſy, and lowneſs of ſpirits, are frequent complaints in this country. The ſmall-pox alſo is exceedingly fatal, and not long ago deſtroyed 16,000 perſons. By theſe diſeaſes, and the frequent famines with which the country has been afflicted, the inhabitants are reduced to a much ſmaller number than they formerly were, inſomuch that it is computed they do not in all exceed 60,000.

13 Commerce and revenue.

The exports of Iceland conſiſt of dried fiſh, ſalted mutton and lamb, beef, butter, tallow, train-oil, coarſe woollen cloth, ſtockings, gloves, raw wool, ſheep-ſkins, lamb-ſkins, fox-furs of various colours, eider down, feathers, and formerly ſulphur; but there is no longer a demand for this mineral. On the other hand, the Icelanders import timber, fiſhing lines and hooks, tobacco, bread, horſe-ſhoes, brandy, wine, ſalt, linen, a little ſilk, and a few other neceſſaries, as well as ſuperfluities for the better ſort. The whole trade of Iceland is engroſſed by a monopoly of Danes, indulged with an excluſive charter. This company maintains factories at all the harbours of Iceland, where they exchange their foreign goods for the merchandize of the country; and as the balance is in favour of the Icelanders, pay the overplus in Daniſh money, which is the only current coin in this iſland. All their accounts and payments are adjuſted according to the number of fiſh: two pounds of fiſh are worth two ſkillings in ſpecie, and 48 fiſh amount to one rix dollar. A Daniſh crown is computed at 30 fiſh: what falls under the value of 12 fiſh cannot be paid in money; but muſt be bartered either for fiſh or roll-tobacco, an ell of which is equal to one fiſh. The weights and meaſures of the Icelanders are nearly the ſame with thoſe uſed in Denmark. The Icelanders being neither numerous nor warlike, and altogether unprovided with arms, ammunition, garriſons, or fleets, are in no condition to defend themſelves from invaſion, but depend entirely on the protection of his Daniſh majeſty, to whom they are ſubject. The revenues which he draws from this iſland conſiſt of the income of divers eſtates, as royal demeſne, amounting to about 8000 dollars per annum; of the money paid by the company for an excluſive trade, to the value of 20,000 dollars; and of a fixed proportion in the tythes of fiſh paid in ſome particular diſtricts.

14 Volcanoes of Iceland;

Iceland is noted for the volcanoes with which it abounds, as already mentioned, and which ſeem to be more furious than any yet diſcovered in the other parts of the globe. Indeed, from the lateſt accounts, it would ſeem that this miſerable country were little other than one continued volcano. Mount Hecla has been commonly ſuppoſed to be the only burning mountain, or at leaſt the principal one, in the iſland: (ſee HECLA). It has indeed been more taken notice of than many others of as great extent, partly from its having had more frequent eruptions than any ſingle one, and partly from its ſituation, which expoſes it to the ſight of ſhips ſailing to Greenland and North-America. But in a liſt of eruptions publiſhed in the appendix to Pennant's Arctic Zoology, it appears, that out of 51 remarkable ones, only one third have proceeded from Hecla, the other mountains it ſeems being no leſs active in the work of deſtruction than this celebrated one. Theſe eruptions take place in the mountains covered with ice, which the inhabitants call *Jokuls*. Some of theſe, as appears from a large map of Iceland made by order of his Daniſh Majeſty in 1734, have been ſwallowed up. Probably the great lakes met with in this country may have been occaſioned by the ſinking of ſuch mountains, as ſeveral inſtances of a ſimilar nature are to be met with in other parts of the world. The great Icelandic lake called *Myvatu* may probably have been one. Its bottom is entirely formed of lava, divided by deep cracks, which ſhelter during winter the great quantity of trouts which inhabit this lake. It is now only 30 feet deep; but originally was much deeper; being nearly filled up in the year 1728 by an eruption of the great mountain *Kraſle*. The fiery ſtream took its courſe towards *Myvatu*, and ran into it with an horrid noiſe, which continued till the year 1730.

"The mountains of Iceland (ſays Mr. Pennant) are of two kinds, primitive and poſterior. The former conſiſts of ſtrata uſually regular, but ſometimes confuſed. They are formed of different ſorts of ſtone without the leaſt appearance of fire. Some are compoſed of ſand and free ſtone, petroſilex or chirt ſlaty or fiſſile ſtone, and various kinds of earth or bole, and ſteatitæ; different ſorts of *breccia* or conglutinated ſtones; jaſpers of different kinds, Iceland cryſtal; the common rhomboid ſpathum, chalcedonies ſtratified, & *botryoid*; zeolites of the moſt elegant kinds; cryſtals, and various other ſubſtances that have no relation to volcanoes. Theſe primitive mountains are thoſe called *Jokuls*, and are higher than the others. One of them, called *Æſian* or *Rias*, is 6000 feet high. It ſeems to be compoſed of great and irregular rocks of a dark grey colour, piled on each other. Another, called *Enneberg*, is about 3000 feet high; the *Snæfeld Jokul*, 2287 yards; the *Snæfieldnas* or promontory of *Snæfield* is from 300 to 400 fathoms. *Hornſtrand* or the coaſt by the north Cape Nord is very high, from 300 to 400 fathoms. The rocks of *Drango* are ſeven in number, of a pyramidal figure, riſing out of the ſea at a ſmall diſtance from the cliffs, four of which are of a vaſt height, and have a moſt magnificent appearance.

"Eaſtward from the *Snæfield* begins the Eiſberge, ſoaring to a vaſt height; many parts of which have felt the effects of fire, and in ſome of the melted rocks are large cavities. *Budda-lekkur*, a rock at one end of this mountain, is alſo volcanic, and has in it a great cavern hung with *ſtalactitæ*. The name of *Solvahamar* is given to a tremendous range of volcanic rocks, compoſed entirely of flags, and covered in the ſeaſon with ſea-fowl. It would be endleſs, however, to mention all the places which bear the marks of fire in various forms, either by having been vitrified, changed into a fiery colour, ragged and black, or bear the marks of having run for miles in a ſloping courſe towards the ſea."

Theſe volcanoes, though ſo dreadful in their effects, ſeldom begin to throw out fire without giving warning. A ſubterraneous rumbling noiſe heard at a conſiderable diſtance, as in other volcanoes, precedes the eruption for ſeveral days, with a roaring and cracking in the place from whence the fire is about to burſt forth; many fiery meteors are obſerved, but generally unattended with any violent concuſſion of the earth, though ſometimes earthquakes, of which ſeveral inſtances are recorded, have accompanied theſe dreadful conflagrations. The drying up of ſmall lakes, ſtreams, and rivulets, is alſo conſidered as a ſign of an impending eruption; and it is thought to haſten the eruption when a mountain is ſo covered with ice, that the holes are ſtopped up through which the exhalations formerly found a free paſſage. The immediate ſign is the burſting of the maſs of ice with a dreadful noiſe; flames then iſſue forth from the earth, and lightning and fire balls from the ſmoke; ſtones, aſhes, &c. are thrown out to vaſt diſtances. Egbert Olaffsen relates, that, in an eruption of *Kattle giaa* in 1755, a ſtone weighing 290 pounds was thrown to the diſtance of 24 Engliſh miles. A quantity of white pumice ſtone is thrown up by the boiling waters; and it is conjectured with great probability, that the latter proceeds from the ſea, as a quantity of ſalt, ſufficient to load ſeveral horſes, has frequently been found after the mountain has ceaſed to burn.

To enumerate the ravages of ſo many dreadful volcanoes, which from time immemorial have contributed to render this dreary country ſtill leſs habitable than it is from the climate, would greatly exceed our limits. It will be ſufficient to give an account of that which happened in 1783, and which from its violence ſeems to have been unparalleled in hiſtory.

15 The country almoſt deſolated by an eruption in 1783.

Its firſt ſigns were obſerved on the firſt of June by a trembling of the earth in the weſtern part of the province of *Shapterſiall*. It increaſed gradually to the 11th, and became at laſt ſo great that the inhabitants quitted their houſes, and lay at night in tents on the ground. A continual ſmoke or ſteam was perceived riſing out of the earth in the northern and uninhabited parts of the country. Three *fire-ſpouts*, as they were called, broke out in different places, one in *Ulſarſdal*, a little to the eaſt of the river *Skapta*; the other two were a little to the weſtward of the river called *Ilwerſisſliot*. The river *Skapta* takes its riſe in the northeaſt, and running firſt weſtward, it turns to the ſouth, and falls into the ſea in a ſoutheaſt direction. Part of its channel is confined for about 24 Engliſh miles in length, and is in ſome places 200 fathoms deep, in others 100 or 150, and its breadth in ſome places 100, 50, or 40 fathoms. Along the whole of this part of its courſe the river is very rapid, though there are no conſiderable cataracts or falls. There are ſeveral other ſuch confined channels in the country, but this is the moſt conſiderable.

The three fire-ſpouts, or ſtreams of lava, which had broke out, united into one, after having riſen a conſiderable height into the air, arriving at laſt at ſuch an amazing altitude as to be ſeen at the diſtance of more than 200 Engliſh miles; the whole country, for double that diſtance, being covered with a ſmoke or ſteam not to be deſcribed.

On the 8th of June this fire firſt became viſible, vaſt quantities of ſand, aſhes, and other volcanic matters were ejected, and ſcattered over the country by the wind, which at that time was very high. The atmoſphere was filled with ſand, brimſtone, and aſhes, in ſuch a manner as to occaſion continual darkneſs; and conſiderable damage was done by the pumice ſtones which fell, red hot in great quantities. Along with theſe a tenacious ſubſtance like pitch fell in vaſt quantity; ſometimes rolled up like balls, at other times like rings or garlands, which proved no leſs deſtructive to vegetation than the other. This ſhower having continued for three days, the fire become very viſible, and at laſt arrived at the amazing height already mentioned. Sometimes it appeared in a continued ſtream, at others in flaſhes or flames ſeen at the diſtance of 30 or 40 Daniſh miles (180 or 240 of ours), with a continual noiſe like thunder, which laſted the whole ſummer.

The ſame day that the fire broke out there fell a vaſt quantity of rain, which running in ſtreams on the hot ground tore it up in large quantities, and brought it down upon the lower lands. This rain water was much impregnated with acid and other ſalts, ſo as to be highly corroſive, and occaſion a painful ſenſation when it fell on the hands or face. At a greater diſtance from the fire the air was exceſſively cold. Snow lay upon the ground three feet deep in ſome places; and in others there fell great quantities of hail, which did very much damage to the cattle and every thing without doors. Thus the graſs and every kind of vegetation in thoſe places neareſt the fire was deſtroyed, being covered with a thick cruſt of a ſulphureous and ſooty matter. Such a quantity of vapour was raiſed by the conteſt of the two adverſe elements, that the ſun was darkened and appeared like blood, the whole face of nature ſeemed to be changed; and this obſcurity ſeems to have reached as far as that iſland of Britain; for during the whole ſummer of 1783, an obſcurity reigned throughout all parts of this iſland; the atmoſphere appearing to be covered with a continual haze, which prevented the ſun from appearing with his uſual ſplendor.

The dreadful ſcene above deſcribed laſted in Iceland for ſeveral days; the whole country was laid waſte, and the inhabitants fled every where to the remoteſt parts of their miſerable country, to ſeek for ſafety from the fury of this unparalleled tempeſt.

On the firſt breaking out of the fire, the river *Skapta* was conſiderably augmented, on the eaſt ſide of which one of the fire ſpouts was ſituated; and a ſimilar overflow of water was obſerved at the ſame time in the great river *Piorſa*, which runs into the ſea a little to the eaſtward of a town called *Orrebakka*, and into which another called *Tuna*, after having run through a large tract of barren and uncultivated land, empties itſelf. But on the 11th of June the waters of the Skapta were leſſened, and in leſs than 24 hours totally dried up. The day following, a prodigious ſtream of liquid and red-hot lava, which the fire ſpout had diſcharged, ran down the channel of the river. This burning torrent not only filled up the deep channel abovementioned, but overflowing the banks of it, ſpread itſelf over the whole valley, covering all the low gronds in its neighbourhood; and not having any ſufficient outlet to empty itſelf by, it roſe to a vaſt height, ſo that the whole adjacent country was overflowed, inſinuating itſelf between the hills, and covering ſome of the lower ones. The hills here are not continued in a long chain or ſeries, but are ſeparated from one another, and detached, and between them run little rivulets or brooks; ſo that, beſides filling up the whole valley in which the river Skapta ran, the fiery ſtream ſpread itſelf for a conſiderable diſtance on each ſide, getting vent between the above mentioned hills, and laying all the neighbouring country under fire.

The ſpouts ſtill continuing to ſupply freſh quantities of inflamed matter, the lava took its courſe up the channel of the river, overflowing all the grounds above, as it had done thoſe below the place whence it iſſued. The river was dried up before it, until at laſt it was ſtopped by the hill whence the Skapta takes its riſe. Finding now no proper outlet, it roſe to a prodigious height and overflowed the village of Buland, conſuming the houſes, church, and every thing that ſtood in its way; though the high ground on which this village ſtood ſeemed to enſure it from any danger of this kind.

The fiery lake ſtill increaſing, ſpread itſelf out in length and breadth for about 36 Engliſh miles; and having converted all this tract of land into a ſea of fire, it ſtretched itſelf towards the ſouth, and getting vent again by the river Skapta ruſhed down its channel with great impetuoſity. It was ſtill confined between the narrow banks of that river for about ſix miles (Engliſh); but coming at laſt into a more open place, it poured forth in prodigious torrents with amazing velocity and force; ſpreading itſelf now towards the ſouth, tearing up the earth, and carrying on its ſurface flaming woods and whatſoever it met with. In its courſe it laid waſte another large diſtrict of land. The ground where it came was cracked, and ſent forth great quantities of ſteam long before the fire reached it: and every thing near the lake was either burnt up or reduced to a fluid ſtate. In this ſituation matters remained from the 12th of June to the 13th of Auguſt; after which the fiery lake no longer ſpread itſelf, but nevertheleſs continued to burn; and when any part of the ſurface acquired a cruſt by cooling, it was quickly broken by the fire from below; and this tumbling down among the melted ſubſtance, was rolled and toſſed about with prodigious noiſe and crackling; and in many parts of its ſurface, ſmall ſpouts or at leaſt ebulitions were formed, which continued for ſome length of time.

In other directions this dreadful inundation proved no leſs deſtructive. Having run through the narrow part of the channel of *Skapta* as early as the 12th of June, it ſtretched out itſelf towards the weſt and ſouthweſt, overflowing all the flat country, and its edge being no leſs than 70 fathoms high at the time it got out of the channel of the river. Continuing its deſtructive courſe, it overflowed a number of villages, running in every direction where it could find a vent. In one place it came to a great cataract of the river Skapta, about 14 fathoms in height, over which it was precipitated with tremendous noiſe, and thrown in great quantities to a very conſiderable diſtance. In another place it ſtopped up the channel of a large river, filled a great valley, and deſtroyed two villages by approaching only within 100 fathoms of them. Others were overflowed by inundations of water proceeding from the rivers which had been ſtopped in their courſes; until at laſt all the paſſages on the ſouth, eaſt, and weſt, being ſtopped, and the ſpouts ſtill ſending up incredible quantities of freſh lava, it burſt out to the north and northeaſt, ſpreading over a tract of land 48 miles long and 36 broad. Here it dried up the rivers *Tuna* and *Axaſyrdi*; but even this vaſt effuſion being inſufficient to exhauſt the ſubterraneous reſources of liquid fire, a new branch took its courſe for about eight miles down the channel of the river *Ilwerfisfliot*, when coming again to an open country, it formed what our author calls a *ſmall* lake of fire, about twelve miles in length and ſix in breadth. At laſt, however, this branch alſo ſtopped on the 16th of Auguſt; the fiery fountains ceaſed to pour forth new ſupplies, and this moſt aſtoniſhing eruption came to a period.

The whole extent of ground covered by this dreadful inundation was computed at no leſs than 90 miles long and 42 in breadth; the depth of the lava being from 16 to 20 fathoms. Twelve rivers were dried up, 20 or 21 villages were deſtroyed, and 224 people loſt their lives. The extent above mentioned, however, is that only on the ſouth, eaſt, and weſt; for that towards the north being over uninhabited land, where no body cared to venture themſelves, was not exactly known. Some hills were covered by this lava; others were melted down by its heat; ſo that the whole had the appearance of a ſea of red-hot and melted metal.

After this eruption two new iſlands were thrown up from the bottom of the ſea. One, about three miles in circumference, and about a mile in height, made its appearance in the month of February 1784, where there was formerly 100 fathoms of water. It was about 100 miles ſouthweſt from Iceland, and 48 from a cluſter of ſmall iſlands called *Cierſugla*. It continued for ſome time to burn with great violence, ſending forth prodigious quantities of pumice ſtones, ſand, &c. like other volcanoes. The other lay to the northweſt, between Iceland and Greenland. It burnt day and night without intermiſſion for a conſiderable time; and was alſo very high, and larger than the former. Since that time, however, one or both of theſe iſlands have been ſwallowed up.

All the time of this great eruption, and for a conſiderable time after, the whole atmoſphere was loaded with ſmoke, ſteam, and ſulphureous vapours. The ſun was ſometimes wholly inviſible; and when it could be ſeen was of a reddiſh colour. Moſt of the fiſheries were deſtroyed; the banks where the fiſh uſed to reſort being ſo changed, that the fiſhermen could not know them again; and the ſmoke was ſo thick, that they could not go far out to ſea. The rain water, falling through this ſmoke and ſteam, was ſo impregnated with ſalt and ſulphureous matter, that the hair and even the ſkin of the cattle were deſtroyed; and the whole graſs of the iſland was ſo covered with ſoot and pitchy matter, that what had eſcaped the deſtructive effects of the fire became poiſonous; ſo that the cattle died for want of food, or periſhed by eating thoſe unwholeſome vegetables. Nor were the inhabitants in a much better ſituation; many of them having loſt their lives by the poiſonous qualities of the ſmoke and ſteam with which the whole atmoſphere was filled; particularly old people, and ſuch as had any complaint in the breaſt and lungs.

Before the fire broke out in Iceland, there is ſaid to have been a very remarkable eruption in the uninhabited parts of Greenland; and that in the northern parts of Norway, oppoſite to Greenland, the fire was viſible for a long time. It was alſo related, that when the wind was in the north, a great quantity of aſhes, pumice, and brimſtone, fell upon the north and weſt coaſts of Iceland, which continued for the whole ſummer whenever the wind was in that quarter; and the air was always very much impregnated with a thick ſmoke and ſulphureous ſmell.

During the fall of the ſharp rain formerly mentioned, there was obſerved at Trondheim, and other places in Norway, and likewiſe at Faw, an uncommon fall of ſharp and ſalt rain, which totally deſtroyed the leaves of the trees, and every vegetable it fell upon, by ſcorching them up, and cauſing them to wither. A conſiderable quantity of aſhes, ſand, and other volcanic matters, fell at Faro, which covered the whole ſurface of the ground whenever the wind blew from Iceland, though the diſtance between the two places is not leſs than 430 miles. Ships that were ſailing betwixt Copenhagen and Norway were frequently covered with aſhes and ſulphureous matter, which ſtuck to the maſts, ſails, and decks, beſmearing them all over with a black and pitchy ſubſtance. In many parts of Holland, Germany, and other northern countries, a ſulphureous vapour was obſerved in the air, accompanied with a thick ſmoke, and in ſome places a light grey-coloured ſubſtance fell upon the earth every night; which, by yielding a bluiſh flame when thrown into the fire, evidently ſhowed its ſulphureous nature. On thoſe nights in which this ſubſtance fell in any quantity, there was little or no dew obſerved. Theſe appearances continued more or leſs, all the months of July, Auguſt, and September.

19 Vhorkelyn's account of the ancient ſtate of this iſland.

Some curious particulars relative to the ancient ſtate of this iſland have lately been publiſhed by a Mr Vhorkelyn, a native of the country. From this work it appears that Iceland, for a very conſiderable ſpace of time, viz. from the beginning of the 10th to the middle of the 13th century, was under a republican form of government. At firſt the father, or head of every family, was an abſolute ſovereign; but in the progreſs of population and improvement, it became neceſſary to form certain regulations for the ſettlement of diſputes concerning the frontiers of different eſtates. For this purpoſe the heads of the families concerned aſſembled themſelves, and formed the outlines of a republic. In the mean time they carried on a proſperous trade to different parts; ſending ſhips even to the Levant, and to Conſtantinople, at that time celebrated as the only ſeat of literature and humanity in the world. Deputies were likewiſe ſent from this iſland over land to that capital, for the improvement of their laws and civilization; and this a whole century before the firſt cruſade. In theſe ancient Icelandic laws, therefore, we meet with evident traces of thoſe of the Greeks and Romans. For example, beſides a body of written laws which were written every third year to the people, they had two men choſen annually by the heads of families, with conſular power, not only to enforce the laws then in being, but when theſe proved deficient, to act as neceſſity required.

Theſe laws do not appear to have inflicted capital puniſhments upon any perſon. Murderers were baniſhed to the *wood*; that is, to the interior and uncultivated parts of the iſland; where no perſon was allowed to approach them within a certain number of fathoms. In caſes of baniſhment for leſſer crimes, the friends of the offender were allowed to ſupply him with neceſſaries. The culprit, however, might be killed by any perſon who found him without his bounds; and he might even be hunted and deſtroyed in his ſanctuary, provided he did not withdraw himſelf from the iſland within a twelvemonth after his ſentence, which it was ſuppoſed he might accompliſh by means of the annual arrival and departure of ſhips. Every man's perſon was free until he had forfeited his rights by ſome crime againſt ſociety; and ſo great was their reſpect for independence, that great indulgence was allowed for the power of paſſion. If any provoking word or behaviours had been uſed, no puniſhment was inflicted on the party who reſented it, even though he ſhould have killed his adverſary.

By the laws of Iceland, the poor were committed to the protection of their neareſt kindred, who had a right to their labour as far as they were able to work, and afterwards to indemnification if the poor perſon ſhould acqurie any property. Children were obliged to maintain their parents in their old age; but if the latter had neglected to give them good education, they were abſolved from this duty.

While the republic of Iceland continued free and independent, ſhips were ſent from the iſland to all parts of the world. Till very lately, however, not a ſhip belonged to it, the little commerce it enjoyed being monopolized by a Daniſh company, until in 1786 it was laid open to all the ſubjects of Denmark. "There is at preſent (ſays Mr Pennant*) a revival of the cod fiſhery on the coaſt of Iceland from our kingdom. About a dozen of veſſels have of late ſailed from the iſle of Thanet, and a few from other parts of Great Britain. They are either ſloops or brigs from 50 to 80 tons burden. A lugſail boat, ſuch as is uſed in the herring-fiſhery, ſailed laſt ſeaſon from Yarmouth thus equipped. The crew conſiſted of five men from the town, and five more taken in at the Orkneys. They had twelves lines of 120 fathoms each, and 200 or 300 hooks; ſix heading knives, twelve gutting and twelve ſplitting knives. They take in 18 tons of ſalt at Leith, at the rate of three tons to every thouſand fiſh; of which ſix or ſeven thouſand is a load for a veſſel of this kind. They go to ſea about the middle of April, return by the Orkneys to land the men, and get into their port in the latter end of Auguſt or beginning of September. Pytheas ſays, that Iceland lies ſix days ſailing from Great Britain. A veſſel from Yarmouth was, in the laſt year exactly that time in its voyage from the Orkneys to Iceland. With a fair wind it might be performed in far leſs time; but the winds about the Ferroe iſles are generally changeable.

Iceland Agate; a kind of precious ſtone met with in the iſlands of Iceland and Aſcenſion, employed by the jewellers as an agate, though too ſoft for the purpoſe. It is ſuppoſed to be a volcanic production; being ſolid, black, and of a glaſſy texture. When held between the eye and the light, it is ſemitranſparent and greeniſh like the glaſs bottles which contain much iron. In the iſlands which produce it, ſuch large pieces are met with that they cannot be equalled in any glaſs-houſe.

ICELAND (or *Iſland*) *Cryſtal*. See CRYSTAL (*Iceland.*)

ICENI, the ancient name of the people of Suffolk, Norfolk, Cambridgeſhire, and Huntingdonſhire, in England.

ICH-DIEN. See HERALDRY, chap. iv. ſect 2.

ICHNEUMON in zoology. See VIVERRA.

ICHNEUMON, is alſo the name of a genus of flies of the hymenoptera order. The mouth is armed with jaws, without any tongue; the antennæ have above 30 joints; the abdomen is generally petiolated, joined to the body by a pedicle or ſtalk; the tail is armed with a ſting, which is incloſed in a double-valved cylindrical ſheath; the wings are lanceolated and plain. This genus is exceedingly numerous. In Gmelin's or the 13th edit. of the *Syſtema Naturæ*, no fewer than 415 ſpecies are enumerated. They are divided into fa-

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* *Appendix to Arctic Zoology*, p. 19.

Ichneumon

families, from the colour of their ſcutellum and antennæ, as follow: 1. Thoſe with a whitiſh ſcutcheon, and antennæ annulated with a whitiſh band. 2. Thoſe which have a white eſcutcheon, and antennæ entirely black. 3. With a ſcutcheon of the ſame colour as the thorax; the antennæ encompaſſed with a fillet. 4. With a ſcutcheon of the ſame colour as the thorax; and antennæ black and ſetaceous. 5. With ſetaceous clay-coloured antennæ. 6. With ſmall filiform antennæ, and the abdomen oval and ſlender.

One diſtinguiſhing and ſtriking character of theſe ſpecies of flies is the almoſt continual agitation of their antennæ. The name of *Ichneumon* has been applied to them, from the ſervice they do us by deſtroying caterpillars, plant-lice, and other inſects; as the ichneumon or mangouſte deſtroys the crocodiles. The variety to be found in the ſpecies of ichneumons is prodigious: among the ſmaller ſpecies there are males who perform their amorous preludes in the moſt paſſionate and gallant manner. The poſterior part of the females is armed with a wimble, viſible in ſome ſpecies, no ways diſcoverable in others; and that inſtrument, though ſo fine, is able to penetrate through mortar and plaſter: the ſtructure of it is more eaſily ſeen in the long-wimbled fly. The food of the family to be produced by this fly is the larva of waſps or maſon-bees: for it no ſooner eſpies one of thoſe neſts, but it fixes on it with its wimble, and bores through the mortar of which it is built. The wimble itſelf, of an admirable ſtructure, conſiſts of three pieces; two collateral ones, hollowed out into a gutter, ſerve as a ſheath, and contain a compact, ſolid, dentated ſtem, along which runs a groove that conveys the egg from the animal, who ſupports the wimble with its hinder legs, leſt it ſhould break, and by a variety of movements, which it dexterouſly performs, it bores through the building, and depoſits one or more eggs, according to the ſize of the ichneumon, though the largeſt drop but one or two. Some agglutinate their eggs upon caterpillars; others penetrate through the caterpillar's eggs, though very hard, and depoſit their own in the inſide. When the larva is hatched, its head is ſo ſituated, that it pierces the caterpillar, and penetrates to its very entrails. Theſe larvæ pump out the nutritious juices of the caterpillar, without attacking the vitals of the creature; who appears healthy, and even ſometimes transforms itſelf to a chryſalis. It is not uncommon to ſee thoſe caterpillars fixed upon trees, as if they were ſitting upon their eggs, and it is afterwards diſcovered that the larvæ, which were within their bodies, have ſpun their threads, with which, as with chords, the caterpillars are faſtened down, and ſo periſh miſerably. The ichneumons performed ſpecial ſervice, in the years 1731 and 1732; by multiplying in the ſame proportion as did the caterpillars, their larvæ deſtroyed more of them than could be effected by human induſtry. Thoſe larvæ, when on the point of turning into chryſalids, ſpin a ſilky cod. Nothing is more ſurpriſing and ſingular, than to ſee thoſe cods leap when placed on the table or hand. Plant-lice, the larvæ of the curculiones, and ſpider's eggs, are alſo ſometimes the cradle of the ichneumon-fly. Carcaſes of plant-lice, void of motion, are often found on roſe tree leaves; they are the habitation of a ſmall larva, which, after having eaten up the entrails, deſtroys the ſprings and inward economy of the plant-louſe, performs its metamorphoſis under ſhelter of the pellicle which enfolds it, contrives itſelf a ſmall circular outlet, and ſallies forth into open air. There are ichneumons in the woods, who dare atttack ſpiders, run them through with their ſting, tear them to pieces, and thus avenge the whole nation of flies of ſo formidable a foe: others, deſtitute of wings (and thoſe are females), depoſit their eggs in ſpiders neſts. The ichneumon of the bedeguar, or ſweet-briar ſponge, and that of the roſe-tree, perhaps only depoſit their eggs in thoſe places, becauſe they find other inſects on which they feed. The genus of the ichneumon-flies might with propriety be termed a race of diminutive canibals.

Ichnography
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Ichthyocolla.

ICHNOGRAPHY, in perſpective, the view of any thing cut off by a plane, parallel to the horizon, juſt at the baſe of it.—The word is derived from the Greek ιχνος *footſteep*, and γραφω *I write*, as being a deſcription of the footſteps or traces of a work.

Among painters it ſignifies a deſcription of images or of ancient ſtatues of marble and copper, of buſts and ſemi-buſts, of paintings in freſco, moſaic works, and ancient pieces of miniature.

ICHOGLANS, the grand ſignior's pages ſerving in the ſeraglio. Theſe are the children of Chriſtian parents, either taken in war, purchaſed, or ſent in preſents from the viceroys and governors of diſtant provinces; they are the moſt ſprightly, beautiful, and well-made that can be met with; and are always reviewed and approved of by the grand ſignior himſelf before they are admitted into the ſeraglios of Pera, Conſtantinople, or Adrianople, being the three colleges where they are educated, or fitted for employments, according to the opinion the court entertains of them.

ICHOR, properly ſignifies a thin watery humour like ſerum; but is ſometimes uſed for a thicker kind flowing from ulcers, called alſo *ſanies*.

ICHTHYOCOLLA, ISINGLASS, a preparation from the fiſh known by the name of *huſo*. See ACCIPENSER. The word is Greek, formed of ιχθυς *fiſh*, and κολλα *glue*.—The method of making Iſinglaſs was long a ſecret in the hands of the Ruſſians; but hath lately been diſcovered, and the following account of it publiſhed by Humphrey Jackſon, Eſq; in the 63d volume of the Philoſophical Tranſactions.

"All authors who have hitherto delivered proceſſes for making ichthyocolla, fiſh-glue, or iſinglaſs, have greatly miſtaken both its conſtituent matter and preparation.

"To prove this aſſertion, it may not be improper to recite what Pomet, ſays upon the ſubject, as he appears to be the principal author whom the reſt have copied. After deſcribing the fiſh, and referring to a cut engraved from an original in his cuſtody, he ſays: 'As to the manner of making the iſinglaſs, the ſinewy parts of the fiſh are boiled in water till all of them be diſſolved that will diſſolve; then the gluey liquor is ſtrained, and ſet to cool. Being cold, the fat is carefully taken off, and the liquor itſelf boiled to a juſt conſiſtency, then cut to pieces, and made into a twiſt, bent in a form of a creſcent, as commonly ſold; then hung upon a ſtring, and carefully dried.'

"From this account, it might be rationally concluded, Ichthyocolla.

cluded, that every ſpecies of fiſh which contained gelatinous principles would yield iſinglaſs; and this parity of reaſoning ſeems to have given riſe to the haſty concluſions of thoſe who ſtrenuouſly vouch for the extraction of iſinglaſs from ſturgeon; but as that fiſh is eaſily procurable, the negligence of aſcertaining the fact by experiment ſeems inexcuſable.

" In my firſt attempt to diſcover the conſtituent parts and manufacture of iſinglaſs, relying too much upon the authority of ſome chemical authors whoſe veracity I had experienced in many other inſtances, I found myſelf conſtantly diſappointed. Glue, not iſinglaſs, was the reſult of every proceſs; and although, in the ſame view, a journey to Ruſſia, proved fruitleſs, yet a ſteady perſeverance in the reſearch proved not only ſucceſsful as to this object, but, in the purſuit, to diſcover a reſinous matter plentifully procurable in the Britiſh fiſheries, which has been found by ample experience to anſwer ſimilar purpoſes. It is now no longer a ſecret, that our (A) lakes and rivers in North America are ſtocked with immenſe quantities of fiſh, ſaid to be of the ſame ſpecies with thoſe in Muſcovy, and yielding the fineſt iſinglaſs; the fiſheries whereof, under due encouragement, would doubtleſs ſupply all Europe with this valuable article.

" No artificial heat is neceſſary to the production of iſinglaſs, neither is the matter diſſolved for this purpoſe; for, as the continuity of its fibres would be deſtroyed by ſolution, the maſs would become brittle in drying, and ſnap ſhort aſunder, which is always the caſe with glue, but never with iſinglaſs. The latter, indeed, may be reſolved into glue with boiling water; but its fibrous recompoſition would be found impracticable afterwards, and a fibrous texture is one of the moſt diſtinguiſhing characteriſtics of genuine iſinglaſs.

" A due conſideration that an imperfect ſolution of iſinglaſs, called *fining* by the brewers, poſſeſſed a peculiar property of clarifying malt-liquors, induced me to attempt its analyſis in cold ſubacid menſtruums. One ounce and an half of good iſinglaſs, ſteeped a few days in a gallon of ſtale beer, was converted into good fining, of a remarkably thick conſiſtence: the ſame quantity of glue, under ſimilar treatment, yielded only a mucilaginous liquor, reſembling diluted gum-water, which, inſtead of clarifying beer, increaſed both its tenacity and turbidneſs, and communicated other properties in no reſpect correſponding with thoſe of genuine fining. On commixing three ſpoonfuls of the ſolution of iſinglaſs with a gallon of malt liquor, in a tall cylindrical glaſs, a vaſt number of curdly maſſes became preſently formed, by the reciprocal attraction of the particles of iſinglaſs and the feculencies of the beer, which, increaſing in magnitude and ſpecific gravity, arranged themſelves accordingly, and fell in a combined ſtate to the bottom, through the well-known laws of gravitation; for, in this caſe, there is no elective attraction, as ſome have imagined, which bears the leaſt affinity with what frequently occurs in chemical decompoſitions.

" If what is commercially termed *long* or *ſhort ſtapled iſinglaſs* be ſteeped a few hours in cold water, the entwiſted membranes will expand, and reſume their original beautiful (B) hue, and, by a dexterous addreſs, may be perfectly unfolded. By this ſimple operation, we find that iſinglaſs is nothing more than certain membranous parts of fiſhes, diveſted of their native mucoſity, rolled and twiſted into the forms abovementioned, and dried in open air.

" The ſounds, or air-bladders, of freſh water fiſh in general, are preferred for this purpoſe, as being the moſt tranſparent, flexible, delicate ſubſtances. Theſe conſtitute the fineſt ſorts of iſinglaſs; thoſe called *book* and *ordinary ſtaple*, are made of the inteſtines, and probably of the peritonæum of the fiſh. The belluga yields the greateſt quantity, as being the largeſt and moſt plentiful fiſh in the Muſcovy rivers; but the ſounds of all freſh-water fiſh yield, more or leſs, fine iſinglaſs, particularly the ſmaller ſorts, found in prodigious quantities in the Caſpian Sea, and ſeveral hundred miles beyond Aſtracan, in the Wolga, Yaik, Don, and even as far as Siberia, where it is called *kle* or *kla* by the natives, which implies a glutinous matter; it is the baſis of the Ruſſian glue, which is preferred to all other kinds for its ſtrength.

" The ſounds, which yield the finer iſinglaſs, conſiſt of parallel fibres, and are eaſily rent longitudinally; but the ordinary ſorts are found compoſed of double membranes, whoſe fibres croſs each other obliquely, reſembling the coats of a bladder: hence the former are more readily pervaded and divided with ſubacid liquors; but the latter, through a peculiar kind of interwoven texture, are with great difficulty torn aſunder, and long reſiſt the power of the ſame menſtruum; yet, when duly reſolved, are found to act with equal energy in clarifying liquors.

" Iſinglaſs receives its different ſhapes in the following manner:

" The parts of which it is compoſed, particularly the ſounds, are taken from the fiſh while ſweet and freſh, ſlit open, waſhed from their ſlimy *ſordes*, diveſted of every thin membrane which envelopes the ſound, and then expoſed to ſtiffen a little in the air. In this ſtate, they are formed into rolls about the thickneſs of a finger, and in length according to the intended ſize of the ſtaple: a thin membrane is generally ſelected for the centre of the roll, round which the reſt are folded alternately, and about half an inch of each extremity

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(A) As the lakes of North America lie nearly in the ſame latitude with the Caſpian Sea, particularly lake Superior, which is ſaid to be of greater extent, it was conjectured they might abound with the ſame ſorts of fiſh; and in conſequence of public advertiſements diſtributed in various parts of North America, offering premiums for the ſounds of ſturgeon and other fiſh, for the purpoſe of making iſinglaſs, ſeveral ſpecimens of fine iſinglaſs, the produce of fiſh taken in theſe parts, have been lately ſent to England, with proper atteſtations as to the unlimited quantity which may be procured.

(B) If the tranſparent iſinglaſs be held in certain poſitions to the light, it frequently exhibits beautiful priſmatic colours.

tremity of the roll is turned inwards. The due dimenſions being thus obtained, the two ends of what is called *ſhort ſtaple* are pinned together with a ſmall wooden peg; the middle of the roll is then preſſed a little downwards, which gives it the reſemblance of a heart-ſhape; and thus it is laid on boards, or hung up in the air to dry. The ſounds, which compoſe the long-ſtaple, are longer than the former; but the operator lengthens this ſort at pleaſure, by interfolding the ends of one or more pieces of the ſound with each other. The extremities are faſtened with a peg, like the former; but the middle part of the roll is bent more conſiderably downwards; and, in order to preſerve the ſhape of the three obtuſe angles thus formed, a piece of round ſtick, about a quarter of an inch diameter, is faſtened in each angle with ſmall wooden pegs, in the ſame manner as the ends. In this ſtate, it is permitted to dry long enough to retain its form, when the pegs and ſticks are taken out, and the drying completed; laſtly, the pieces of iſinglaſs are colligated in rows, by running packthread through the peg-holes, for convenience of package and exportation.

“ The membranes of the *book* ſort, being thick and refractory, will not admit a ſimilar formation with the preceding; the pieces, therefore, after their ſides are folded inwardly, are bent in the centre, in ſuch manner, that the oppoſite ſides reſemble the cover of a book, from whence its name; a peg being run acroſs the middle, faſtens the ſides together, and thus it is dried like the former. This ſort is interleaved, and the pegs run acroſs the ends, the better to prevent its unfolding.

“ That called *cake-iſinglaſs* is formed of the bits and fragments of the ſtaple ſorts, put into a flat metalline pan, with a very little water, and heated juſt enough to make the parts cohere like a pancake when it is dried; but frequently it is overheated, and ſuch pieces, as before obſerved, are uſeleſs in the buſineſs of fining. Experience has taught the conſumers to reject them.

“ Iſinglaſs is beſt made in the ſummer, as froſt gives it a diſagreeable colour, deprives it of weight, and impairs its gelatinous principles; its faſhionable forms are unneceſſary, and frequently injurious to its native qualities. It is common to find oily putrid matter, and *exuviæ* of inſects, between the implicated membranes, which, through the inattention of the cellar-man, often contaminate wines and malt-liquors in the act of clarification. Theſe peculiar ſhapes might, probably, be introduced originally with a view to conceal and diſguiſe the real ſubſtance of iſinglaſs, and preſerve the monopoly; but, as the maſk is now taken off, it cannot be doubted to anſwer every purpoſe more effectually in its native ſtate, without any ſubſequent manufacture whatever, eſpecially to the principal conſumers, who hence will be enabled to procure ſufficient ſupply from the Britiſh colonies. Until this laudable end can be fully accompliſhed, and as a ſpecies of iſinglaſs, more eaſily produceable from the marine fiſheries, may probably be more immediately encouraged, it may be manufactured as follows;

“ The ſounds of cod and ling bear great analogy with thoſe of the *accipenſer* genus of Linnæus and Artedi: and are in general ſo well known as to require no particular deſcription. The Newfoundland and Iceland fiſhermen ſplit open the fiſh as ſoon as taken, and throw the back bones, with the ſounds annexed, in a heap; but previous to incipient putrefaction, the ſounds are cut out, waſhed from their ſlimes, and ſalted for uſe. In cutting out the ſounds, the intercoſtal parts are left behind, which are much the beſt; the Iceland fiſhermen are ſo ſenſible of this, that they beat the bone upon a block with a thick ſtick, till the pockets, as they term them, come out eaſily, and thus preſerve the ſound entire. If the ſounds have been cured with ſalt, that muſt be diſſolved by ſteeping them in water before they are prepared for iſinglaſs; the freſh ſound muſt then be laid upon a block of wood, whoſe ſurface is a little elliptical, to the end of which a ſmall hair-bruſh is nailed, and with a ſaw-knife the membranes on each ſide of the ſound muſt be ſcraped off. The knife is rubbed upon the bruſh occaſionally, to clear its teeth; the pockets are cut open with ſciſſars, and perfectly cleanſed of the mucous matter with a coarſe cloth; the ſounds are afterwards waſhed a few minutes in lime-water in order to abſorb their oily principle, and laſtly in clear water. They are then laid upon nets to dry in the air: but if intended to reſemble the foreign iſinglaſs, the ſounds of cod will only admit of that called *book*, but thoſe of ling both ſhapes. The thicker the ſounds are, the better the iſinglaſs, colour excepted; but that is immaterial to the brewer, who is its chief conſumer.

“ This iſinglaſs reſolves into fining, like the other ſorts, in ſubacid liquors, as ſtale beer, cyder, old hock, &c. and in equal quantities produces ſimilar effects upon turbid liquors, except that it falls ſpeedier and cloſer to the bottom of the veſſel, as may be demonſtrated in tall cylindrical glaſſes; but foreign iſinglaſs retains the conſiſtency of fining preferably in warm weather, owing to the greater tenacity of its native mucilage.

“ Vegetable acids are, in every reſpect, beſt adapted to fining; the mineral acids are too corroſive, and even inſalubrious, in common beverage.

“ It is remarkable, that, during the converſion of iſinglaſs into fining, the acidity of the menſtruum ſeems greatly diminiſhed, at leaſt to taſte; not on account of any alkaline property in the iſinglaſs, probably, but by its inveloping the acid particles. It is likewiſe reducible into jelly with alkaline liquors, which indeed are ſolvents of all animal matters; even cold lime-water diſſolves it into a pulpous *magma*. Notwithſtanding this is inadmiſſible as fining, on account of the menſtruum, it produces admirable effects in other reſpects: for, on commixture with compoſitions of plaſter, lime, &c. for ornamenting walls expoſed to viciſſitudes of weather, it adds firmneſs and permanency to the cement; and if common brick mortar be worked up with this jelly, it ſoon becomes almoſt as hard as the brick itſelf: but, for this purpoſe, it is more commodiouſly prepared, by diſſolving it in cold water, acidulated with vitriolic acid, in which caſe, the acid quits the jelly, and forms with the lime a *ſelenitic* maſs, while at the ſame time, the jelly being deprived in ſome meaſure of its moiſture, through the formation of an indiſſoluble concrete amongſt its parts, ſoon dries, and hardens into a firm body; whence its ſuperior ſtrength and durability are eaſily comprehended.

"It has long been a prevalent opinion, that ſturgeon, on account of its cartilaginous nature, would yield great quantities of iſinglaſs; but on examination, no part of this fiſh, except the inner coat of the ſound, promiſed the leaſt ſucceſs. This being full of *rugæ*, adheres ſo firmly to the external membrane, which is uſeleſs, that the labour of ſeparating them ſuperſedes the advantage. The inteſtines, however, which in the larger fiſh extend ſeveral yards in length, being cleanſed from their mucus, and dried, were found ſurpriſingly ſtrong and elaſtic, reſembling cords made with the inteſtines of other animals, commonly called *cat-gut*, and from ſome trials, promiſed ſuperior advantages, when applied to mechanic operations."

Iſinglaſs is ſometimes uſed in medicine; and may be given in a thin acrimonious ſtate of the juices, after the ſame manner as the vegetable gums and mucilages, regard being had to their different diſpoſition to putreſcence.

ICHTHYOLOGY, the ſcience of fiſhes, or that part of zoology which treats of fiſhes. See Fish.

Fiſhes form the fourth claſs of animals in the Linnæan ſyſtem. This claſs is there arranged into ſix orders, under three great diviſions; none of which, however, include the cetaceous tribes, or the whale, dolphin, &c. theſe forming an order of the claſs Mammalia in the ſame ſyſtem. See Zoology.

1 Claſſification of fiſhes.

Mr Pennant, in his Britiſh Zoology, makes a different and very judicious arrangement, by which the cetæ are reſtored to their proper rank. He diſtributes fiſh into three diviſions, comprehending ſix orders. His diviſions are, into *Cetaceous*, *Cartilaginous*, and *Bony*.

Div. I. *Cetaceous Fiſh*; the characters of which are the following: No gills; an orifice on the top of the head; through which they breathe and eject water; a flat or horizontal tail; exemplified in Plate CCLI. (lower compartment), fig. 1. by the Beaked Whale, borrowed from Dale's Hiſt. Harw. 411. Tab. xiv.—This diviſion comprehends three genera; the Whale, Cachalot, and Dolphin.

Div. II. *Cartilaginous Fiſh*; the characters of which are: Breathing through certain apertures, generally placed on each ſide the neck; but in ſome inſtances beneath, in ſome above, and from one to ſeven in number on each part, except in the pipe-fiſh, which has only one; the muſcles ſupported by cartilages inſtead of bones. Example, the Picked Dog-fiſh, fig. 2. *a*, The lateral apertures.—The genera are, the Lamprey, Skate, Shark, Fiſhing-frog, Sturgeon, Sun-fiſh, Lump-fiſh, Pipe-fiſh.

Div. III. *Bony Fiſh*; includes thoſe whoſe muſcles are ſupported by bones or ſpines, which breathe thro' gills covered or guarded by thin bony plates, open on the ſide, and dilatable by means of a certain row of bones on their lower part, each ſeparated by a thin webb; which bones are called the *radii branchioſtegi*, or the *gill covering rays*. The tails of all the fiſh that form this diviſion are placed in a ſituation perpendicular to the body; and this is an invariable character.

The great ſections of the Bony Fiſh into the *Apodal*, *Thoracic*, *Jugular*, and *Abdominal*, he copies from Linnæus: who founds this ſyſtem on a compariſon of the ventral fins to the feet of land-animals or reptiles; and either from the want of them, or their particular ſituation in reſpect to the other fins, eſtabliſhes his ſections.—In order to render them perfectly intelligible, it is neceſſary to refer to thoſe ſeveral organs of movement, and ſome other parts, in a perfect fiſh, or one taken out of the three laſt ſections. In fig. 4. (the Haddock), *a*, is the pectoral fins; *b*, ventral fins; *c*, anal fins; *d*, caudal fin, or the tail; *e*, *e*, *e*, dorſal fins: *f*, bony plates that cover the gills; *g*, branchioſtegous rays and their membranes; *h*, lateral or ſide line.

Sect. 1. Apodal: The moſt imperfect, wanting the ventral fins; illuſtrated by the Conger, fig. 3. This alſo expreſſes the union of the dorſal and anal fins with the tail, as is found in ſome few fiſh.—Genera: The Eel, Wolf-fiſh, Launce, Morris, Sword-fiſh.

Sect. 2. Jugular: The ventral fins *b*, placed before the pectoral fins *a*, as in the Haddock, fig. 4.—Genera: The Dragonet, Weever, Codfiſh, Blenny.

Sect. 3. Thoracic: The ventral fins *a*, placed beneath the pectoral fins *b*, as in the Father Laſher fig. 5.—Genera: The Goby, Bull-head, Doree, Flounder, Gilt-head, Wraſſe, Perch, Stickleback, Mackarel, Surmullet, Gurnard.

Sect. 4. Abdominal: The ventral fins placed behind the pectoral fins, as in the Minow, fig. 6.—Genera: The Loche, Salmon, Pike, Argentine, Atherine, Mullet, Flying-fiſh, Herring, Carp.

2 Shape of fiſhes admirably fitted for ſwift motion.

Naturaliſts obſerve an exceeding great degree of wiſdom in the ſtructure of fiſhes, and in their conformation to the element in which they are to live. Moſt of them have the ſame external form, ſharp at either end, and ſwelling in the middle, by which they are enabled to traverſe the fluid in which they reſide with greater velocity and eaſe. This ſhape is in ſome meaſure imitated by men in thoſe veſſels which they deſign to ſail with the greateſt ſwiftneſs; but the progreſs of the ſwifteſt ſailing ſhip is far inferior to that of fiſhes. Any of the large fiſhes overtake a ſhip in full ſail with the greateſt eaſe, play round it as though it did not move at all, and can get before it at pleaſure.

3 Uſes of the fins and tails of fiſhes.

The chief inſtruments of a fiſh's motion have been ſuppoſed to be the fins; which in ſome are much more numerous than in others. A fiſh completely fitted for ſwimming with rapidity, is generally furniſhed with two pair of fins on the ſides, and three ſingle ones, two above and one below. But it does not always happen that the fiſh which has the greateſt number of fins is the ſwifteſt ſwimmer. The ſhark is thought to be one of the ſwifteſt fiſhes, and yet it has no fins on its belly; the haddock ſeems to be more completely fitted for motion, and yet it does not move ſo ſwiftly. It is even obſervable, that ſome fiſhes which have no fins at all, ſuch as lobſters, dart forward with prodigious rapidity, by means of their tail; and the inſtrument of progreſſive motion, in all fiſhes is now found to be the tail. The great uſe of the fins is to keep the body *in equilibrio*: and if the fins are cut off, the fiſh can ſtill ſwim; but will turn upon its ſides or its back, without being able to keep itſelf in an erect poſture as before. If the fiſh deſires to turn, a blow from the tail ſends it about in an inſtant; but if the tail ſtrikes both ways then the motion is progreſſive.

All fiſhes are furniſhed with a ſlimy glutinous matter, which defends their bodies from the immediate contact of the ſurrounding fluid, and which likewiſe, in all probability aſſiſts their motion through the water. Beneath this, in many kinds, is found a ſtrong covering of ſcales, which like a coat of mail, defends it ſtill more powerfully: and under that before we come to the muſcular parts of the body, lies an oily ſubſtance, which alſo tends to preſerve the requiſite warmth and vigour.

1
Arguments for the inferiority of fiſhes to land animals.

By many naturaliſts fiſhes are conſidered as of a nature very much inferior to land animals, whether beaſts or birds. Their ſenſe of feeling, it is thought muſt be very obſcure on account of the ſcaly coat of mail in which they are wrapped up. The ſenſe of ſmelling alſo, it is ſaid they can have only in a very ſmall degree. All fiſhes, indeed, have one or more noſtrils; and even thoſe that have not the holes perceptible without, yet have the bones within, properly formed for ſmelling. But as the air is the only medium we know proper for the diſtribution of odours, it cannot be ſuppoſed that theſe animals which reſide conſtantly in the water can be affected by them. As to taſting, they ſeem to make very little diſtinction. The palate of moſt fiſhes is hard and bony, and conſequently incapable of the powers of reliſhing different ſubſtances; and accordingly theſe voracious animals have often been obſerved to ſwallow the fiſherman's plummet inſtead of the bait. Hearing is generally thought to be totally deficient in fiſhes, notwithſtanding the diſcoveries of ſome anatomiſts who pretend to have found out the bones deſigned for the organ of hearing in their heads. They have no voice, it is ſaid, to communicate with each other, and conſequently have no need of an organ for hearing. Sight ſeems to be that ſenſe of which they are poſſeſſed in the greateſt degree; and yet even this ſeems obſcure if we compare it with that of other animals. The eye, in almoſt all fiſhes, is covered with the ſame tranſparent ſkin which covers the reſt of the head, and which probably ſerves to defend it in the water, as they are without eyelids. The globe is more depreſſed anteriorly, and is furniſhed behind with a muſcle which ſerves to lengthen or flatten it as there is occaſion. The cryſtalline humour, which in quadrupeds is flat, and of the ſhape of a button-mould, or like a very convex lens, in fiſhes is quite round or ſometimes oblong like an egg. Hence it is thought that fiſhes are extremely near ſighted; and that even in the water they can perceive objects only at a very ſmall diſtance. Hence ſay they it is evident how far fiſhes are below terreſtrial animals in their ſenſations and conſequently in their enjoyments. Even their brain, which is by ſome ſuppoſed to be of a ſize with every creatures underſtanding, ſhows that fiſhes are very much inferior to birds in this reſpect.

5
Objections to theſe arguments.

Others argue differently with regard to the nature of fiſhes.—With reſpect to the ſenſe of feeling, ſay they, it cannot be juſtly argued that fiſhes are deficient, merely becauſe they are covered with ſcales as it is poſſible theſe ſcales may be endued with as great a power of ſenſation as we can imagine. The ſenſe of feeling is not properly connected with *ſoftneſs* in any organ more than with *hardneſs* in it. A ſimilar argument may be uſed with regard to ſmelling; for though we do not know how ſmells can be propagated in water; that is by no means a proof that they are not ſo. On the contrary, as water is found to be capable of abſorbing putrid effluvia from the air nothing is more probable than that theſe putrid effluvia when mixed with the water would affect the olfactory organs of fiſhes, as well as they affect ours when mixed with the air.—With regard to taſte, it certainly appears, that fiſhes are able to diſtinguiſh their proper food from what is improper as well as other animals. Indeed, no voracious animal ſeems to be endued with much ſenſibility in this reſpect; nor would it probably be conſiſtent with that way of promiſcuouſly devouring every creature that comes within its reach, without which theſe kind of animals could not ſubſiſt.

6
Senſe of hearing.

With reſpect to the hearing of fiſhes, it is urged, that when, kept in a pond, they may be made to anſwer at the call of a whiſtle or the ringing of a bell; and they will even be terrified at any ſudden and violent noiſe ſuch as thunder, the firing of guns, &c. and ſhrink to the bottom of the water. Among the ancients, many were of opinion that fiſhes had the ſenſe of hearing, though they were by no means ſatisfied about the ways or paſſages by which they heard. Placentini afterwards diſcovered ſome bones in the head of the pikes, which had very much the appearance of being organs of hearing, though he could never diſcover any external paſſages to them. Klein affirmed, from his own experiments and obſervations, that all fiſhes have the organs of hearing; and have alſo paſſages from without to theſe organs, though in many ſpecies they are difficult to be ſeen; and that even the moſt minute and obſcure, of theſe are capable of communicating a tremulous motion to thoſe organs, from ſounds iſſuing from without. This is likewiſe aſſerted by M. Geoffroy †, who gives a particular deſcription of the organs of hearing belonging to ſeveral ſpecies. Theſe organs are a ſet of little bones extremely hard, and white like fine porcelain, which are to be found in the heads of all fiſhes: The external auditory paſſages are very ſmall; being ſcarce ſufficient to admit a hog's briſtle; though with care they may be diſtinguiſhed in almoſt all fiſhes. It can by no means be thought that the water is an improper medium of ſound, ſeeing daily experience ſhows us that ſounds may be conveyed not only through water, but through the moſt ſolid bodies ‡. It ſeems indeed very difficult to determine the matter by experiment. Mr Gouan, who kept ſome gold fiſhes in a vaſe, informs, us that whatever noiſe he made, he could neither terrify nor diſturb them; he halloo'd as loud as he could putting a piece of paper between his mouth and the water, to prevent the vibration from affecting the ſurface and the fiſhes ſtill ſeemed inſenſible; but when the paper was removed, and the ſound had its full effect on the water, the caſe was then altered, and the fiſhes inſtantly ſunk to the bottom. This experiment, however, or others ſimilar to it, cannot prove that the fiſhes did not hear the ſounds before the paper was removed; it only ſhows that they were not alarmed till a ſenſible vibration was introduced into the water. The call of a whiſtle may alſo be ſuppoſed to affect the water in a fiſh pond with a vibratory motion; but this certainly muſt be very obſcure; and if fiſhes can be aſſembled in this manner when

† *Diſſertation ſur l'organe de l'ouie*, p. 97. et ſeq.

‡ See *Acouſtics*.

when no perſon is in ſight it amounts to a demonſtration that they actually do hear. See Comparative Anatomy, nº 167.

The arguments uſed againſt the ſight of fiſhes are the weakeſt of all. Many inſtances which daily occur, ſhow that fiſhes have a very acute ſight, not only of objects in the water, but of thoſe in the air. Their jumping out of the water in order to catch flies is an abundant proof of this; and this they will continue to do in a fine ſummer evening, even after it is ſo dark that we cannot diſtinguiſh the inſects they attempt to catch.

7
Fiſhes cannot live without air.

Though fiſhes are formed for living entirely in the water, yet they cannot ſubſiſt without air. On this ſubject Mr Hawkſbee made ſeveral experiments, which are recorded in the Philoſophical Tranſactions. The fiſhes he employed were gudgeons; a ſpecies that are very lively in the water, and can live a conſiderable time out of it. Three of them were put into a glaſs veſſel with about three pints of freſh water, which was deſigned as a ſtandard to compare the others by. Into another glaſs, to a like quantity of water, were put three more gudgeons, and thus the water filled the glaſs to the very brim. Upon this he ſcrewed down a braſs plate with a leather below, to prevent any communication between the water and the external air; and that it might the better reſemble a pond frozen over, he ſuffered as little air as poſſible to remain on the ſurface of the water. A third glaſs had the ſame quantity of water put into it; which firſt by boiling, and then by continuing it a whole night *in vacuo*, was purged of its air as well as poſſible; and into this alſo were put three gudgeons. In about half an hour, the fiſhes in the water from whence the air had been exhauſted, began to diſcover ſome ſigns of uneaſineſs by a more than ordinary motion in their mouths and gills. Thoſe who had no communication with the external air, would at this time alſo frequently aſcend to the top, and ſuddenly ſwim down again; and in this ſtate they continued for a conſiderable time without any ſenſible alteration. About five hours after this obſervation, the fiſhes in the exhauſted water were not ſo active as before, upon ſhaking the glaſs that contained them. In three hours more the included fiſhes lay all at the bottom of the glaſs with their bellies upwards; nor could they be made to ſhake their fins or tail by any motion given to the glaſs. They had a motion with their mouths, however, which ſhowed that they were not perfectly dead. On uncovering the veſſel which contained them, they revived in two or three hours, and were perfectly well next morning; at which time thoſe in the exhauſted water were alſo recovered. The veſſel containing theſe laſt being put under the receiver of an air pump, and the air exhauſted, they all inſtantly died. They continued at top while the air remained exhauſted, but ſunk to the bottom on the admiſſion of the atmoſphere.

8
Motion of the gills of fiſhes analogous to our breathing.

The uſe of air to fiſhes is very difficult to be explained; and indeed their method of obtaining the ſupply of which they ſtand conſtantly in need, is not eaſily accounted for. The motion in the gills in fiſhes is certainly analogous to our breathing; and ſeems to be the operation by which they ſeparate the air from the water. Their manner of breathing is as follows: The fiſh firſt takes a quantity of water by the mouth which is driven to the gills; theſe cloſe, and keep the water which is ſwallowed from returning by the mouth while the bony covering of the gills prevents it from going through them till the animal has drawn the proper quantity of air from it; then the bony covers open, and give it a free paſſage; by which means alſo the gills are again opened, and admit a freſh quantity of water. If the fiſh is prevented from the free play of its gills, it ſoon falls into convulſions, and dies. But though this is a pretty plauſible explanation of the reſpiration of fiſhes, it remains a difficulty not eaſily ſolved what is done with this air. There ſeems to be no receptacle for containing it, except the air-bladder or ſwim; which by the generality of modern philoſophers, is deſtined not to anſwer any vital purpoſe, but only to enable the fiſh to riſe or ſink at pleaſure

9
Of the uſe of the air-bladder in fiſhes;

The air-bladder is a bag filled with air, compoſed ſometimes of one, ſometimes of two, and ſometimes of three diviſions, ſituated towards the back of the fiſh, and opening into the maw or the gullet. The uſe of this in raiſing or depreſſing the fiſh is proved by the following experiment. A carp being put into the air pump and the air exhauſted, the bladder is ſaid to burſt by the expanſion of the air contained in it: after which the fiſh can no more riſe to the top, but ever afterwards crawls at the bottom. The ſame thing alſo happens when the air bladder is pricked or wounded in ſuch a manner as to let the air out; in theſe caſes alſo the fiſh continues at the bottom without a poſſibility of riſing to the top. From this it is inferred. that the uſe of the air-bladder is, by ſwelling at the will of the animal to increaſe the ſurface of the fiſh's body and thence diminiſhing its ſpecific gravity, to enable it to riſe to the top of the water, and to keep there at pleaſure. On the contrary, when the fiſh wants to deſcend, it is thought to contract the air-bladder; and being thus rendered ſpecifically heavier it deſcends to the bottom.

The ancients were of opinion, that the air-bladder in fiſhes ſerved for ſome purpoſes eſſentially neceſſary to life: and Dr Prieſtley alſo conjectures, that the raiſing or depreſſing of the fiſh is not the only uſe of theſe air bladders, but that they may alſo ſerve ſome other purpoſes in the œconomy of fiſhes. There are many arguments indeed to be uſed on this ſide of the queſtion; the moſt concluſive of which is, that all the cartilaginous kind of fiſhes want air bladders, and yet they riſe to the top or ſink to the bottom of the water without any difficulty; and though moſt of the eel-kind have air bladders, yet they cannot raiſe themſelves in the water without great difficulty.

10
Longevity of fiſhes,

Fiſhes are remarkable for their longevity. "Moſt of the diſorders incident to mankind (ſays Bacon) ariſe from the changes and alterations in the atmoſphere but fiſhes reſide in an element litttle ſubject to change: theirs is an uniform exiſtence; their movements are without effort, and their life without labour. Their bones, alſo, which are united by cartilages, admit of indefinite extenſion; and the different ſizes of animals of the ſame kind, among fiſhes is very various. They ſtill keep growing: their bodies inſtead of ſuffering the rigidity of age, which is the cauſe of the natural decay of land-animals, ſtill continue increaſing with freſh ſupplies; and as the body grows, the conduits of life furniſh their ſtores in greater abundance. How long a fiſh, that ſeems to have ſcarce any bounds put to its growth, continues to live, is not aſcertained; perhaps the life of a man would not be ſufficient to meaſure that of the ſmalleſt."—There have been two methods fallen upon for determining the age of fiſhes; the one is by the circles of the ſcales, the other by the tranſverſe ſection of the back bone. When a fiſh's ſcale is examined by a microſcope, it is found to conſiſt of a number of circles one within another, in ſome meaſure reſembling thoſe which appear on the tranſverſe ſection of a tree, and is ſuppoſed to give the ſame information. For, as in trees, we can tell their age by the number of their circles; ſo, in fiſhes, we can tell theirs by the number of circles in every ſcale reckoning one ring for every year of the animal's exiſtence.—The age of fiſhes that want ſcales may be known by the other method, namely, by ſeparating the joints of the back-bone, and then minutely obſerving the number of rings which the ſurface, where it was joined, exhibits.

11 Methods of determining their age.

12 Extreme voracity of fiſhes.

Fiſhes are, in general, the moſt voracious animals in nature. In moſt of them, the maw is placed next the mouth; and, though poſſeſſed of no ſenſible heat, is endowed with a very ſurpriſing faculty of digeſtion. Its digeſtive power ſeems, in ſome meaſure, to increaſe in proportion to the quantity of food with which the fiſh is ſupplied. A ſingle pike has been known to devour 100 roaches in three days. Whatever is poſſeſſed of life, ſeems to be the moſt deſirable prey for fiſhes. Some that have very ſmall mouths, feed upon worms, and the ſpawn of other fiſh; others, whoſe mouths are larger, ſeek larger prey; it matters not of what kind, whether of their own ſpecies, or any other. Thoſe with the largeſt mouths purſue almoſt every thing that hath life; and often meeting each other in fierce oppoſition, the fiſh with the largeſt ſwallow comes off with the victory, and devours its antagoniſt.—As a counterbalance to this great voracity, however, fiſhes are incredibly prolific. Some bring forth their young alive, others produce only eggs; the former are rather the leaſt fruitful; yet even theſe produce in great abundance. The viviparous blenny, for inſtance, brings forth 200 or 300 at a time. Thoſe which produce eggs, which they are obliged to leave to chance, either on the bottom where the water is ſhallow, or floating on the ſurface where it is deeper, are all much more prolific, and ſeem to proportion their ſtock to the danger there is of conſumption.—Lewenhoeck aſſures us, that the cod ſpawns above nine millions in a ſeaſon. The flounder commonly produces above one million, and the mackarel above 500,000. Scarce one in 100 of theſe eggs, however, brings forth an animal; they are devoured by all the leſſer fry that frequent the ſhores, by water-fowl in ſhallow waters, and by the larger fiſhes in deep waters. Such a prodigious increaſe, if permitted to come to maturity, would overſtock nature; even the ocean itſelf would not be able to contain, much leſs provide for, one half of its inhabitants. But two wiſe purpoſes are anſwered by this amazing increaſe; it preſerves the ſpecies in the midſt of numberleſs enemies, and ſerves to furniſh the reſt with a ſuſtenance adapted to their nature.

13 Their amazing increaſe.

14 Generation of fiſhes.

With reſpect to the generation of many kinds of fiſhes the common opinion is, that the female depoſits her ſpawn or eggs, and that the male afterwards ejects his ſperm or male ſemen upon it in the water. The want of the organs of generation in fiſhes gives an apparent probability to this: but it is ſtrenuouſly oppoſed by Linnæus. He affirms, that there can be no poſſibility of impregnating the eggs of any animal out of its body. To confirm this, the general courſe of nature, not only in birds, quadrupeds, and inſects, but even in the vegetable world, has been called in to his aſſiſtance, as proving that all impregnation is performed while the egg is in the body of its parent; and he ſupplies the want of the organs of generation by a very ſtrange proceſs, affirming, that the males eject their ſemen always ſome days before the females depoſit their ova or ſpawn; and that the females ſwallow this, and thus have their eggs impregnated with it. He ſays, that he has frequently ſeen, at this time, three or four females gathered about a male, and greedily ſnatching up into their mouths the ſemen he ejects. He mentions ſome of the eſcoes, ſome pearch, and ſome of the cyprini, in which he had ſeen this proceſs. But ſee *Comparative Anatomy*, n° 154.

Many opinions have been ſtarted in order to account how it happens that fiſhes are found in pools, and ditches, on high mountains, and elſewhere. But Gmelin obſerves, that the duck-kind ſwallow the eggs of fiſhes; and that ſome of theſe eggs go down, and come out of their bodies unhurt, and ſo are propagated juſt in the ſame manner as has been obſerved of plants.

For a more particular view of the ſtructure of fiſhes, ſee *Comparative Anatomy*, n° 146—167.

ICHTHYOPHAGI, FISH-EATERS, a name given to a people, or rather to ſeveral different people, who lived wholly on fiſhes. The word is Greek, compounded of *ιχθυς piſcis*, "fiſh," and *φαγειν edere*, "to eat."

The ichthyophagi ſpoken of by Ptolemy are placed by Sanſon in the provinces of Nanquin and Xantong. Agatharcides calls all the inhabitants between Carmania and Gedroſia by the name *Ichthyophagi*.

From the accounts given us of the Ichthyophagi by Herodotus, Strabo, Solinus, Plutarch, &c. it appears indeed that they had cattle, but that they made no uſe of them, excepting to feed their fiſh withal. They made their houſes of large fiſh-bones, the ribs of whales ſerving them for their beams. The jaws of theſe animals ſerved them for doors; and the mortars wherein they pounded their fiſh, and baked it at the ſun, were nothing elſe but their vertebræ.

ICHTHYPERIA, in natural hiſtory, a name given by Dr Hill to the bony palates and mouths of fiſhes, uſually met with either foſſile, in ſingle pieces, or in fragments. They are of the ſame ſubſtance with the bufonitæ; and are of very various figures, ſome broad and ſhort, others longer and ſlender; ſome very gibboſe, and others plainly arched. They are likewiſe of various ſizes, from the tenth of an inch to two inches in length, and an inch in breadth.

ICKENILD-STREET, is that old Roman highway, denominated from the Icenians, which extended from Yarmouth in Norfolk, the eaſt part of the kingdom of the Iceni, to Barley in Hertfordſhire, giving name in the way to ſeveral villages, as Ickworth, Icklingham, and Ickleton in that kingdom. From Barley to Royſton it divides the counties of Cambridge and Hertford

ford. From Ickleford it runs by Tring, croſſes Bucks and Oxfordſhire, paſſes the Thames at Goring, and extends to the weſt part of England.

ICOLMKIL. See Iona.

ICONIUM, at preſent Cogni, formerly the capital city of Lycaonia in Aſia Minor. St Paul coming to Iconium (Acts xiii. 51. xiv. 1. &c.) in the year of Chriſt 45, converted many Jews and Gentiles there. It is believed, that in his firſt journey to this city, he converted St Thecla, ſo celebrated in the writings of the ancient fathers. But ſome incredulous Jews excited the Gentiles to riſe againſt Paul and Barnabas ſo that they were upon the point of offering violence to them, which obliged St Paul and St Barnabas to fly for ſecurity to the neighbouring cities. St Paul undertook a ſecond journey to Iconium in the year 51; but we know no particulars of his journey, which relate peculiarly to Iconium.

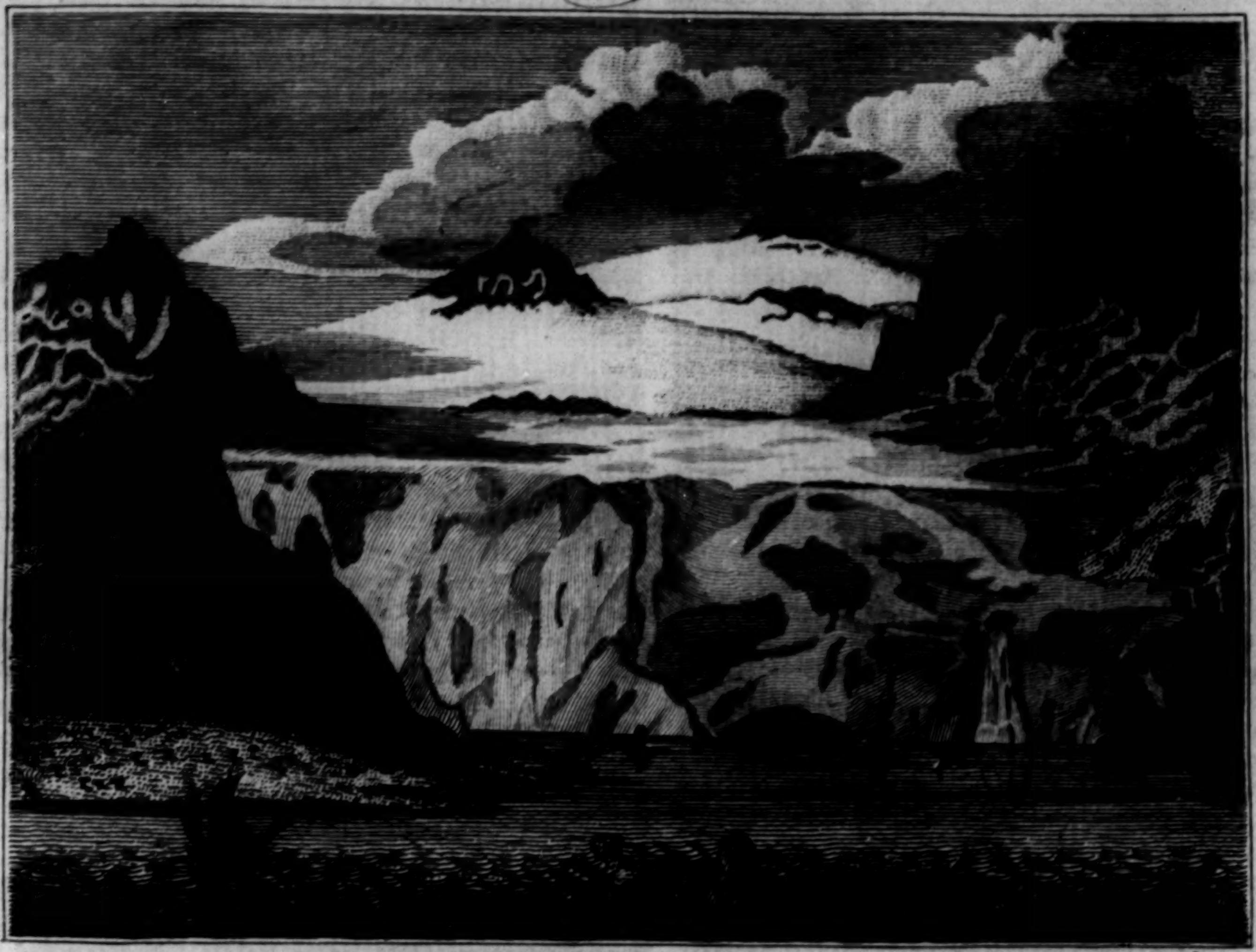
ICONOCLASTES, or Iconoclastæ, breakers of images; a name which the church of Rome gives to all who reject the uſe of images in religious matters.—The word is Greek, formed from εικων *imago*, and κλαϛειν *rumpere*, "to break."

In this ſenſe, not only the reformed, but ſome of the eaſtern churches, are called *Iconoclaſtes*, and eſteemed by them heretics, as oppoſing the worſhip of the images of God and the ſaints, and breaking their figures and repreſentations in churches.

The oppoſition to images bogan in Greece under the reign of Bardanes, who was created emperor of the Greeks a little after the commencement of the eighth century, when the worſhip of them became common. See Image. But the tumults occaſioned by it were quelled by a revolution, which, in 713, deprived Bardanes of the imperial throne. The diſpute, however, broke out with redoubled fury under Leo the Iſaurian, who iſſued out an edict in the year 726, abrogating, as ſome ſay, the worſhip of images, and ordering all the images, except that of Chriſt's crucifixion, to be removed out of the churches; but according to others, this edict only prohibited the paying to them any kind of adoration or worſhip. This edict occaſioned a civil war, which broke out in the iſlands of the Archipelago, and by the ſuggeſtions of the prieſts and monks, ravaged a part of Aſia, and afterwards reached Italy. The civil commotions and inſurrections in Italy were chiefly promoted by the Roman pontiffs, Gregory I. and II. Leo was excommunicated, and his ſubjects in the Italian provinces violated their allegiance, and riſing in arms either maſſacred or baniſhed all the emperor's deputies and officers. In conſequence of theſe proceedings, Leo aſſembled a council at Conſtantinople in 730, which degraded Germanus, the biſhop of that city, who was a patron of images; and he ordered all the images to be publicly burnt, and inflicted a variety of ſevere puniſhments upon ſuch as were attached to that idolatrous worſhip. Hence aroſe two factions; one of which adopted the adoration and worſhip of images, and on that account were called *iconoduli* or *iconolatræ*; and the other maintained that ſuch worſhip was unlawful, and that nothing was more worthy the zeal of Chriſtians than to demoliſh and deſtroy thoſe ſtatues and pictures which were the occaſion of this groſs idolatry; and hence they were diſtinguiſhed by the titles of *iconomachi*, (from εικων *image*, and μαχω *I contend*,) and *iconoclaſtæ*. The zeal of Gregory II. in favour of image-worſhip, was not only imitated, but even ſurpaſſed by his ſucceſſor Gregory III. in conſequence of which the Italian provinces were torn from the Grecian empire.

Conſtantine, called *Copronymus*, from κοπρος "ſtercus," and ονομα "name," becauſe he was ſaid to have defiled the ſacred font at his baptiſm, ſucceded his father Leo in 741, and in 754 convened a council at Conſtantinople, regarded by the Greeks as the ſeventh œcumenical council, which ſolemnly condemned the worſhip and uſe of images. Thoſe who, notwithſtanding this decree of the council, raiſed commotions in the ſtate, were ſeverely puniſhed; and new laws were enacted, to ſet bounds to the violence of monaſtic rage. Leo IV. who was declared emperor in 775, purſued the ſame meaſures and had recourſe to the coercive influence of penal laws, in order to extirpate idolatry out of the Chriſtian church. Irene, the wife of Leo, poiſoned her huſband in 780; aſſumed the reins of empire during the minority of her ſon Conſtantine, and in 786 ſummoned a council at Nice in Bithynia, known by the name of the *ſecond Nicene council*, which abrogated the laws and decrees againſt the new idolatry, reſtored the worſhip of images and of the croſs, and denounced ſevere puniſhments againſt thoſe who maintained that God was the only object of religious adoration. In this conteſt, the Britons, Germans, and Gauls, were of opinion, that images might be lawfully continued in churches, but they conſidered the worſhip of them as highly injurious and offenſive to the Supreme Being. Charlemagne diſtinguiſhed himſelf as a mediator in this controverſy: he ordered four books concerning images to be compoſed, refuting the reaſons urged by the Nicene biſhops to juſtify the worſhip of images which he ſent to Adrian the Roman pontiff in 790, in order to engage him to withdraw his approbation of the decrees of the laſt council of Nice. Adrian wrote an anſwer; and in 794, a council of 300 biſhops, aſſembled by Charlemagne at Francfort on the Maine, confirmed the opinion contained in the four books, and ſolemnly condemned the worſhip of images. In the Greek church, after the baniſhment of Irene, the controverſy concerning images broke out anew, and was carried on by the contending parties, during the half of the ninth century, with various and uncertain ſucceſs. The emperor Nicephorus appears upon the whole to have been an enemy to this idolatrous worſhip. His ſucceſſor, Michael Curopalates, ſurnamed *Rhangabe*, patronized and encouraged it. But the ſcene changed on the acceſſion of Leo the Armenian to the empire; who aſſembled a council at Conſtantinople in 814, that aboliſhed the decrees of the Nicene council. His ſucceſſor Michael, ſurnamed *Balbus*, diſapproved the worſhip of images, and his ſon Theophilus treated them with great ſeverity. However, the empreſs Theodora, after his death, and during the minority of her ſon, aſſembled a council at Conſtantinople in 842, which reinſtated the decrees of the ſecond Nicene council, and encouraged image worſhip by a law. The council held at the ſame place under Photius, in 879, and reckoned by the Greeks the eighth general council, confirmed and renewed the Nicene decrees. In commemoration of this council, a feſtival was inſtituted by the ſuperſtitious Greeks, called the *feaſt of orthodoxy*. The Latins were generally

Iceberg. **Plate CCLI.**



ICHTHYOLOGY.

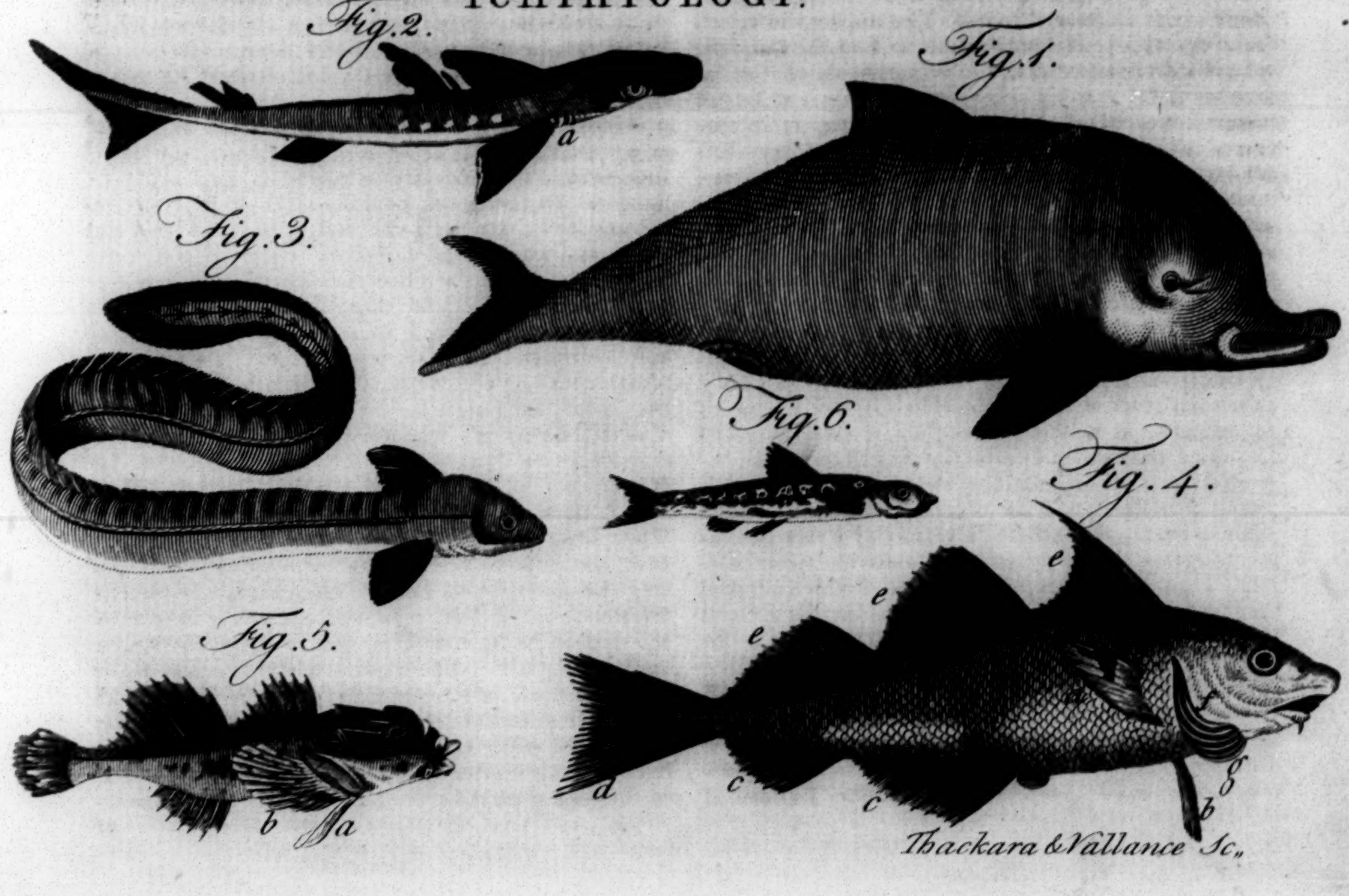


Fig. 2.
a
Fig. 1.
Fig. 3.
Fig. 6.
Fig. 4.
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e
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Fig. 5.
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of opinion, that images might be ſuffered as the means of aiding the memory of the faithful, and of calling to their remembrance the pious exploits and virtuous actions of the perſons whom they repreſented; but they deteſted all thoughts of paying them the leaſt marks of religious homage or adoration. The council of Paris, aſſembled in 824 by Louis the Meek, reſolved to allow the uſe of images in the churches, but ſeverely prohibited rendering them religious worſhip. Nevertheleſs, towards the concluſion of this century, the Gallican clergy began to pay a kind of religious homage to the images of ſaints, and their example was followed by the Germans and other nations. However, the iconoclaſtes ſtill had their adherents among the Latins; the moſt eminent of whom was Claudius biſhop of Turin, who, in 823, ordered all images and even the croſs, to be caſt out of the churches, and committed to the flames; and he wrote a treatiſe, in which he declared both againſt the uſe and worſhip of them. He condemned relics, pilgrimages to the holy land, and all voyages to the tombs of ſaints; and to his writings and labours it was owing, that the city of Turin, and the adjacent country, was, for a long time after his death, much leſs infected with ſuperſtition than the other parts of Europe. The controverſy concerning the ſanctity of images was again revived by Leo biſhop of Chalcedon, in the 11th century, on occaſion of the emperor Alexius's converting the figures of ſilver that adorned the portals of the churches into money in order to ſupply the exigencies of the ſtate. The biſhop obſtinately maintained that he had been guilty of ſacrilege; and publiſhed a treatiſe, in which he affirmed, that in theſe images there reſided an inherent ſanctity, and that the adoration of Chriſtians ought not to be confined to the perſons repreſented by theſe images, but extended to the images themſelves. The emperor aſſembled a council at Conſtantinople, which determined, that the images of Chriſt and of the ſaints were to be honoured only with a relative worſhip; and that invocation and worſhip were to be addreſſed to the ſaints only as the ſervants of Chriſt, and on account of their relation to him, as their maſter. Leo, diſſatisfied even with theſe abſurd and ſuperſtitious deciſions, was ſent into baniſhment. In the weſtern church, the worſhip of images was diſapproved and oppoſed by ſeveral conſiderable parties, as the Petrobruſſians, Albigenſes, Waldenſes, &c. till at length this idolatrous practice was entirely aboliſhed in many parts of the Chriſtian world by the Reformation. See Image.

ICONOGRAPHIA (derived from εικων "image," and γραφω "I deſcribe), the deſcription of images or ancient ſtatues of marble and copper; alſo of buſts and ſemi-buſts, penates, paintings in freſco, moſaic works, and ancient pieces of miniature.

ICONOLATRÆ, or Iconolaters (from εικων and λατρευω "I worſhip,") or Iconoduli (from εικων and δȣλοω "I ſerve);" thoſe who worſhip images: A name which the iconoclaſtes give to thoſe of the Romiſh communion, on account of their adoring images, and of rendering to them the worſhip only due to God. See Iconoclasts and Image.

ICOSAHEDRON, in geometry, a regular ſolid, conſiſting of 20 triangular pyramids, whoſe vertexes meet in the centre of a ſphere ſuppoſed to circumſcribe it; and therefore have their height and baſes equal: wherefore the ſolidity of one of theſe pyramids multiplied by 20, the number of baſes gives the ſolid contents of the icoſahedron.

ICOSANDRIA (from εικοσι "twenty," and ανηρ "a man or huſband"); the name of the 12th claſs in Linnæus's ſexual method, conſiſting of plants with hermaphrodite flowers, which are furniſhed with 20 or more ſtamina, that are inſerted into the inner ſide of the calyx or petals. See Botany, p. 430.

ICTINUS, a celebrated Greek architect who lived about 430 B. C. built ſeveral magnificent temples, and among others that of Minerva at Athens.

IDA (anc. geog.), a mountain ſituated in the heart of Crete where broadeſt; the higheſt of all in the iſland; round, and in compaſs 60 ſtadia (Strabo); the nurſing place of Jupiter, and where his tomb was viſited in Varro's time.—Another *Ida*, a mountain of Myſia, or rather a chain of mountains (Homer, Virgil), extending from Zeleia on the ſouth of the territory of Cyzicus to Lectum the utmoſt promontory of Troas. The abundance of its waters became the ſource of many rivers, and particularly of the Simois, Scamander, Æſepus, Granicus, &c. It was covered with green wood, and the elevation of its top opened a fine extenſive view of the Helleſpont and the adjacent countries; from which reaſon it was frequented by the gods during the Trojan war, according to Homer. The top was called *Gargara* (Homer, Strabo); and celebrated by the poets for the judgment of Paris on the beauty of the three goddeſſes, Minerva, Juno, and Venus, to the laſt of whom he gave the preference.

IDALIUM (anc. geog.), a promontory on the eaſt ſide of Cyprus. Now *Capo di Griego*; with a high rugged eminence riſing over it, in the form of a table. It was ſacred to Venus; and hence the epithet *Idalia* given her by the poets. The eminence was covered with a grove; and the grove was a little town, in Pliny's time extinct. *Idalia*, according to Bochart, denotes the place or ſpot ſacred to the goddeſs.

IDEA, the reflex perception of objects, after the original perception or impreſſion has been felt by the mind. See Metaphysics, *paſſim*; and Logic, Part I.

IDENTITY, denotes that by which a thing is itſelf, and not any thing elſe; in which ſenſe *identity* differs from *ſimilitude*, as well as *diverſity*. See Metaphysics.

IDES, in the ancient Roman kalendar, were eight days in each month; the firſt of which fell on the 15th of March, May, July, and October; and on the 13th day of the other months.—The origin of the word is conteſted. Some will have it formed from ειδω "to ſee;" by reaſon the full moon was commonly ſeen on the days of the ides: others from ειδος "ſpecies, figure," on account of the image of the full moon then viſible: others from *iduſium* or *ovis idulis*, a name given by the Hetrurians to a victim offered on that day to Jupiter; others from the Hetrurian word *iduo*, i. e. *divido*; by reaſon the ides divided the moon into two nearly equal parts.

The ides came between the Kalends and the Nones; and were reckoned backwards. Thus they called the 14th day of March, May, July, and October, and the 12

12th of the other months, the *pridie idus*, or the day before the ides; the next preceding day they called the *tertia idus*; and ſo on, reckoning always backwards till they came to the Nones. This method of reckoning time is ſtill retained in the chancery of Rome, and in the kalendar of the Breviary—The ides of May were conſecrated to Mercury: the ides of March were ever eſteemed unhappy, after Cæſar's murder on that day: the time after the ides of June was reckoned fortunate for thoſe who entered into matrimony; the ides of Auguſt were conſecrated to Diana, and were obſerved as a feaſt-day by the ſlaves. On the ides of September, auguries were taken for appointing the magiſtrates, who formerly entered into their offices on the ides of May, afterwards on thoſe of March.

IDIOCY, a defect of underſtanding. Both idiocy and Lunacy excuſe from the guilt of crimes; (ſee Crime, *par. ult.*) For the rule of law as to lunatics, which alſo may be eaſily adapted to idiots, is, that *furioſus furore ſolum punitur*. In criminal caſes, therefore, idiots and lunatics are not chargeable for their own acts, if committed when under theſe incapacities: no, not even for treaſon itſelf. Alſo, if a man in his ſound memory commits a capital offence, and before arraignment for it he becomes mad, he ought not to be arraigned for it: becauſe he is not able to plead to it with that advice and caution that he ought. And if, after he has pleaded, the priſoner becomes mad, he ſhall not be tried: for how can he make his defence? If, after he be tried and found guilty, he loſes his ſenſes before judgment, judgment ſhall not be pronounced; and if, after judgment, he becomes of nonſane memory, execution ſhall be ſtayed: for peradventure, ſays the humanity of the Engiſh law, had the priſoner been of ſound memory, he might have alleged ſomething in ſtay of judgment or execution. Indeed, in the bloody reign of Henry VIII. a ſtatute was made, which enacted, that if a perſon, being *compos mentis*, ſhould commit high treaſon, and after fall into madneſs, he might be tried in his madneſs, and ſhould ſuffer death, as if he were of perfect memory. But this ſavage and inhuman law was repealed by the ſtatute 1 & 2 Ph. & M. c. 10. For, as is obſerved by Sir Edward Coke, "the execution of an offender is for example, *ut pœna ad paucos, metus ad omnes per veniat*: but ſo it is not when a madman is executed; but ſhould be a miſerable ſpectacle, both againſt law, and of extreme inhumanity and cruelty, and can be no example to others." But if there be any doubt whether the party be *compos* or not, this ſhall be tried by a jury. And if he be ſo found, a total idiocy, or abſolute inſanity, excuſes from the guilt, and of courſe from the puniſhment, of any criminal action committed under ſuch deprivation of the ſenſes: but if a lunatic hath lucid intervals of underſtanding, he ſhall anſwer for what he does in thoſe intervals, as if he had no deficiency. Yet, in the caſe of abſolute madmen, as they are not anſwerable for their actions, they ſhould not be permitted the liberty of acting unleſs under proper control; and, in particular, they ought not to be ſuffered to go looſe, to the terror of the king's ſubjects. It was the doctrine of our ancient law, that perſons deprived of their reaſon might be confined till they recovered their ſenſes, without waiting for the forms of a commiſſion or other ſpecial authority from the crown: and now, by the vagrant acts, a method is chalked out for impriſoning, chaining, and ſending them to their proper homes.

Blackſt. Comment.

The matrimonial contract likewiſe cannot take place in a ſtate of idiocy. It was formerly adjudged, that the iſſue of an idiot was legitimate, and his marriage valid. A ſtrange determination! ſince conſent is abſolutely requiſite to matrimony, and neither idiots nor lunatics are capable of conſenting to any thing. And therefore the civil law judged much more ſenſibly, when it made ſuch deprivations of reaſon a previous impediment, though not a cauſe of divorce if they happened after marriage. And modern reſolutions have adhered to the ſenſe of the civil law, by determining that the marriage of a lunatic, not being in a lucid interval, was abſolutely void. But as it might be difficult to prove the exact ſtate of the party's mind at the actual celebration of the nuptials, upon this account (concurring with ſome private family reaſons[*]), the ſtatute 15 Geo. II. c. 30. has provided, that the marriage of lunatics and perſons under phrenzies (if found lunatics under a commiſſion, or committed to the care of truſtees under any act of parliament) before they are declared of ſound mind by the lord chancellor, or the majority of ſuch truſtees, ſhall be totally void.

Idiots and perſons of nonſane memory, as well as infants and perſons under dureſs, are not totally diſabled either to convey or purchaſe, but *ſub modo* only. For their conveyances and purchaſes are voidable, but not actually void. The king, indeed, on behalf of an idiot, may avoid his grants or other acts. But it hath been ſaid, that a *non compos* himſelf, though he be afterwards brought to a right mind, ſhall not be permitted to allege his own inſanity in order to avoid ſuch grant: for that no man ſhall be allowed to ſtupify himſelf, or plead his own diſability. The progreſs of this notion is ſomewhat curious. In the time of Edward I. *non compos* was a ſufficient plea to avoid a man's own bond: and there is a writ in the regiſter for the alienor himſelf to recover lands aliened by him during his inſanity; *dum fuit non compos mentis ſuæ, ut dicit*, &c. But under Edward III. a ſcruple began to ariſe, whether a man ſhould be permitted to *blemiſh* himſelf, by pleading his own inſanity: and, afterwards, a defendant in aſſize having pleaded a releaſe by the plaintiff ſince the laſt continuance, to which the plaintiff replied (*ore tenus*, as the manner then was) that he was out of his mind when he gave it, the court adjourned the aſſize; doubting, whether as the plaintiff was ſane both then and at the commencement of the ſuit, he ſhould be permitted to plead an intermediate deprivation of reaſon; and the queſtion was aſked, how he came to remember to releaſe, if out of his ſenſes when he gave it? Under Henry VI. this way of reaſoning (that a man ſhall not be allowed to diſable himſelf, by pleading his own incapacity, becauſe he cannot know what he did under ſuch a ſituation) was ſeriouſly adopted by the judges in argument; upon a queſtion, whether the heir was barred of his right of entry by the feoffment of his inſane anceſtor? And from theſe looſe authorities, which Fitzherbert does not ſcruple to reject as being contrary to reaſon, the maxim that a man ſhall not ſtultify himſelf, hath been handed down as ſettled law: though later opinions, feeling the inconvenience of the rule, have in many points endeavoured to reſtrain it. And, clearly, the next heir, or other perſon intereſted, may, after the death of the idiot or *non compos*, take advantage of his incapacity and avoid the grant. And ſo too, if he purchaſes under this diſability, and does not afterwards upon recovering his ſenſes agree to the purchaſe, his heir may either waive or accept the eſtate at his option. In like manner, an infant may waive ſuch purchaſe or conveyance, when he comes to full age; or, if he does not then actually agree to it, his heirs may waive it after him. Perſons alſo, who purchaſe or convey under dureſs, may affirm or avoid ſuch tranſaction, whenever the dureſs is ceaſed. For all theſe are under the protection of the law; which will not ſuffer them to be impoſed upon through the imbecility of their preſent condition; ſo that their acts are only binding, in caſe they be afterwards agreed to when ſuch imbecility ceaſes. Yet the guardians or committees of a lunatic, by the ſtatute 11 Geo. III. c. 20. are empowered to renew in his right, under the directions of the court of chancery, any leaſe for lives or years, and apply the profits of ſuch renewal for the benefit of ſuch lunatic, his heirs, or executors. See LUNACY.

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[*] See Private Acts. 23 Geo. c. 6.

IDIOM, among grammarians, properly ſignifies the peculiar genius of each language, but is often uſed in a ſynonymous ſenſe with dialect. The word is Greek, Ιδιωμα "propriety;" formed of ιδιος "proper, own."

IDIOPATHY, in phyſic, a diſorder peculiar to a certain part of the body, and not ariſing from any preceding diſeaſe; in which ſenſe it is oppoſed to ſympathy. Thus, an epilepſy is idiopathic when it happens merely through ſome fault in the brain; and ſympathetic when it is the conſequence of ſome other diſorder.

IDIOSYNCRASY, among phyſicians, denotes a peculiar temperament of body, whereby it is rendered more liable to certain diſorders than perſons of a different conſtitution uſually are.

IDIOT, or IDEOT, in our laws, denotes a natural fool, or a fool from his birth. See IDIOCY.

The word is originally Greek, ιδιωτης, which primarily imports a *private perſon*, or one who leads a private life, without any ſhare or concern in the government of affairs.

A perſon who has underſtanding enough to meaſure a yard of cloth, number twenty rightly, and tell the days of the week, &c. is not an idiot in the eye of the law. But a man who is born deaf, dumb, and blind, is conſidered by the law in the ſame ſtate as an idiot.

IDIOT is alſo uſed, by ancient writers, for a perſon ignorant or unlearned; anſwering to *illiteratus* or *imperitus*. In this ſenſe, Victor tells us, in his Chronicon, that in the conſulſhip of Meſſala, the Holy Goſpels, by command of the emperor Anaſtaſius, were corrected and amended, as having been written by idiot evangeliſts: *Tanquam ab idiotis evangeliſtis compoſita.*

IDLENESS, a reluctancy in people to be employed in any kind of work.

Idleneſs in any perſon whatſoever is a high offence againſt the public economy. In China it is a maxim, that if there be a man who does not work, or a woman that is idle, in the empire, ſomebody muſt ſuffer cold or hunger: the produce of the lands not being more than ſufficient, with culture, to maintain the inhabitants; and therefore, though the idle perſon may ſhift off the want from himſelf, yet it muſt in the end fall ſomewhere. The court alſo of Areopagus at Athens puniſhed idleneſs, and exerted a right of examining every citizen in what manner he ſpent his time; the intention of which was, that the Athenians, knowing they were to give an account of their occupations, ſhould follow only ſuch as were laudable, and that there might be no room left for ſuch as lived by unlawful arts. The civil law expelled all ſturdy vagrants from the city: and, in our own law, all idle perſons or vagabonds, whom our ancient ſtatutes deſcribe to be "ſuch as wake on the night, and ſleep on the day, and haunt cuſtomable taverns and ale-houſes, and routs about; and no man wot from whence they come, ne whether they go;" or ſuch as are more particularly deſcribed by ſtatute 17 Geo. II. c. 5. and divided in to three claſſes, *idle* and *diſorderly* perſons, *rogues* and *vagabonds*, and *incorrigible rogues*;—all theſe are offenders againſt the good order, and blemiſhes in the government of any ſtate. They are therefore all puniſhed, by the ſtatute laſt mentioned; that is to ſay, idle and diſorderly perſons with one month's impriſonment in the houſe of correction; rogues and vagabonds with whipping, and impriſonment not exceeding ſix months; and incorrigible rogues with the like diſcipline, and confinement not exceeding two years: the breach and eſcape from ſuch confinement in one of an inferior claſs, ranks him among incorrigible rogues; and in a rogue (before incorrigible) makes him a felon, and liable to be tranſported for ſeven years. Perſons harbouring vagrants are liable to a fine of forty ſhillings, and to pay all expences brought upon the pariſh thereby: in the ſame manner as, by our ancient laws, whoever harboured any ſtranger for more than two nights, was anſwerable to the public for any offence that ſuch his inmate might commit.

Blackſt. Comment.

IDOL, in pagan theology, an image, or fancied repreſentation of any of the heathen gods.—This image, of whatever materials it conſiſted, was, by certain ceremonies, called *conſecration*, converted into a god. While under the artificer's hands, it was only a mere ſtatue. Three things were neceſſary to turn it into a god; proper ornaments, conſecration, and oration. The ornaments were various, and wholly deſigned to blind the eyes of the ignorant and ſtupid multitude, who are chiefly taken with ſhow and pageantry. Then followed the conſecration and oration, which were performed with great ſolemnity among the Romans. See IMAGE.

IDOLATRY, or the worſhip of idols, may be diſtinguiſhed into two ſorts. By the firſt, men adore the works of God, the ſun, the moon, the ſtars, angels, dæmons, men, and animals: by the ſecond, men worſhip the work of their own hands, as ſtatues, pictures, and the like: and to theſe may be added a third, that by which men have worſhipped the true God under ſenſible figures and repreſentations. This indeed may have been the caſe with reſpect to each of the above kinds of idolatry; and thus the Iſraelites adored God under the figure of a calf.

The ſtars were the firſt objects of idolatrous worſhip, on account of their beauty, their influence on the productions of the earth, and the regularity of their motions, particularly the ſun and moon, which are conſidered as the moſt glorious and reſplendent images of the deity: afterwards, as their ſentiments became more corrupted, they began to form images, and to entertain the opinion, that by virtue of conſecration, the gods were called down to inhabit or dwell in their ſtatues. Hence Arnobius takes occaſion to rally the pagans for guarding ſo carefully the ſtatues of their gods, who, if they were really preſent in their images, might ſave their worſhippers the trouble of ſecuring them from thieves and robbers.

As to the adoration which the ancient pagans paid to the ſtatues of their gods, it is certain, that the wiſer and more ſenſible heathens conſidered them only as ſimple repreſentations or figures deſigned to recal to their minds the memory of their gods. This was the opinion of Varro and Seneca: and the ſame ſentiment is clearly laid down in Plato, who maintains, that images are inanimate, and that all the honour paid to them has reſpect to the gods whom they repreſent. But as to the vulgar, they were ſtupid enough to believe the ſtatues themſelves to be gods, and to pay divine worſhip to ſtocks and ſtones.

Soon after the flood, idolatry ſeems to have been the prevailing religion of all the world; for wherever we caſt our eyes at the time of Abraham, we ſcarcely ſee any thing but falſe worſhip and idolatry. And it appears from ſcripture, that Abraham's forefathers, and even Abraham himſelf, were for a time idolators.

The Hebrews were indeed expreſsly forbidden to make any repreſentation of God; they were not ſo much as to look upon an idol: and from the time of the Maccabees to the deſtruction of Jeruſalem, the Jews extended this precept to the making the figure of any man: by the law of Moſes, they were obliged to deſtroy all the images they found, and were forbidden to apply any of the gold or ſilver to their own uſe, that no one might receive the leaſt profit from any thing belonging to an idol. Of this the Jews, after they had ſmarted for their idolatry, were ſo ſenſible, that they thought it unlawful to uſe any veſſel that had been employed in ſacrificing to a falſe god, to warm themſelves with the wood of a grove after it was cut down, or to ſhelter themſelves under its ſhade.

But the preaching of the Chriſtian religion, wherever it prevailed, entirely rooted out idolatry; as did alſo that of Mahomet, which is built on the worſhip of one God. It muſt not, however, be forgotten, that the Proteſtant Chriſtians charge thoſe of the church of Rome with paying an idolatrous kind of worſhip to the pictures or images of ſaints and martyrs: before theſe, they burn lamps and wax-candles; before theſe, they burn incenſe, and, kneeling, offer up their vows and petitions: they, like the Pagans, believe that the ſaint to whom the image is dedicated, preſides in a particular manner about its ſhrine, and works miracles by the intervention of its image; and that if the image was deſtroyed or taken away, the ſaint would no longer perform any miracle in that place.

IDOMENEUS (fab. hiſt.), ſucceeded his father Deucalion on the throne of Crete. He accompanied the Greeks to the Trojan war with a fleet of 90 ſhips. During this celebrated war he rendered himſelf famous by his valour, and ſlaughtered many of the enemy. At his return from the Trojan war, he made a vow to Neptune in a dangerous tempeſt, that if he eſcaped from the fury of the ſeas and ſtorms, he would offer to the god whatever living creature firſt preſented itſelf to his eye on the Cretan ſhore. This was no other than his ſon who came to congratulate his father upon his ſafe return. Idomeneus performed his promiſe to the god; and the inhumanity and raſhneſs of this ſacrifice rendered him ſo odious in the eyes of his ſubjects, that he left Crete, and migrated in queſt of a ſettlement. He came to Italy and founded a city on the coaſt of Calabria, which he called *Salentum*. He died in an extreme old age, after he had had the ſatisfaction of ſeeing his new kingdom flouriſh, and his ſubjects happy. According to the Greek ſcholiaſt of Lycophron, v. 1217, Idomeneus, during his abſence in the Trojan war, entruſted the management of his kingdom to Leucos, to whom he promiſed his daughter Cliſithere in marriage at his return. Leucos at firſt governed with moderation, but he was perſuaded by Nauplius king of Eubœa to put to death Meda the wife of his maſter, with her daughter Cliſithere, and to ſeize the kingdom. After theſe violent meaſures he ſtrengthened himſelf on the throne of Crete, and Idomeneus at his return found it impoſſible to expel the uſurper.

IDUMÆA. See EDOM.

JEALOUSY, in ethics, is that peculiar uneaſineſs which ariſes from the fear that ſome rival may rob us of the affection of one whom we greatly love, or ſuſpicion that he has already done it. The firſt ſort of jealouſy is inſeparable from love, before it is in poſſeſſion of its object: the latter is often unjuſt, generally miſchievous, always troubleſome.

Waters of JEALOUSY. See WATERS.

IDYLLION, in ancient poetry, is only a diminutive of the word EIDOS, and properly ſignifies any poem of moderate extent, without conſidering the ſubject. But as the collection of Theocritus's poems were called *idyllia*, and the paſtoral pieces being by far the beſt in that collection, the term *idyllion* ſeems to be now appropriated to paſtoral pieces.

JEARS or GEERS, in the ſea-language, an aſſemblage of tackles, by which the lower yards of a ſhip are hoiſted along the maſts to their uſual ſtation, or lowered from thence as occaſion requires; the former of which operations is called *ſwaying*, and the latter *ſtriking*.

JEBUSÆI, one of the ſeven ancient people of Canaan, deſcended of Jebuſi, Canaan's ſon; ſo warlike and brave, as to have ſtood their ground, eſpecially in Jebus, afterwards called *Jeruſalem*, down to the time of David. Judges i. 21. 1 Sam. v. 6.

JEDBURGH, a parliament-town of Scotland, capital of Tiviotdale or Roxburghſhire, is ſituated nearly in the middle of the county, on the banks of the river *Jed*, whence it derives its name. It is well built and populous, and has a good market for corn and cattle. On the weſt ſide of the river, near its junction with the Teviot, ſtand the beautiful ruins of an abbey founded by David I. a part of which ancient pile ſtill ſerves

ſerves for a pariſh-church.—Jedburgh is the ſeat of the ſheriff's court and preſbytery; and is a barony in the family of Lothian, whoſe eldeſt ſon is called Earl of Ancrum.

JEDDO, the capital town or city of the iſlands of Japan, where the emperor reſides. It is open on all ſides, having neither walls nor ramparts; and the houſes are built with earth, and boarded on the outſide to prevent the rain from deſtroying the walls. In every ſtreet there is an iron gate, which is ſhut up in the night; and a kind of cuſtom-houſe or magazine, to put merchandizes in. It is a large place, being nine miles in length and ſix in breadth, and contains 1,000,000 of inhabitants. A fire happened in 1658, which, in the ſpace of 48 hours, burnt down 100,000 houſes, and in which a vaſt number of inhabitants periſhed. The emperor's palace and all the reſt were reduced to aſhes; but they are all built again. The royal palace is in the middle of the town; and is defended with walls, ditches, towers, and baſtions. Where the emperor reſides, there are three towers nine ſtories high, each covered with plates of gold; and the hall of audience is ſaid to be ſupported by pillars of maſſy gold. Near the palace are ſeveral others, where the relations of the emperor live. The empreſs has a palace of her own, and there are 20 ſmall ones for the concubines. Beſides, all the vaſſal kings have each a palace in the city, with a handſome garden, and ſtables for 2000 horſes. The houſes of the common ſort are nothing but a ground-floor, and the rooms are parted by folding-ſcreens; ſo that they can make the rooms larger or ſmaller at pleaſure. It is ſeated in an agreeable plain, at the bottom of a fine bay; and the river, which croſſes it, is divided into ſeveral canals. E. Long. 140. 0. N. Lat. 35. 32.

JEFFERY. See GEOFFROY.

JEFFREYS (Sir George), baron Wem, commonly called *Judge Jeffreys*, was the ſixth ſon of John Jeffreys, Eſq; of Acton in Denbighſhire; and was educated at Weſtminſter-ſchool, whence he removed to the Inner Temple, where he applied himſelf to the ſtudy of law. Alderman Jeffreys, who was probably related to him, introduced him among the citizens of London; and he being a merry bottle companion, ſoon came into great buſineſs, and was choſen their recorder. He was afterwards choſen ſolicitor to the duke of York; and in 1680 was knighted, and made chief-juſtice of Cheſter. At length, reſigning the recorderſhip, he obtained the poſt of chief-juſtice of the king's bench, and, ſoon after the acceſſion of James II. the great ſeal. During the reign of king Charles II. he ſhowed himſelf a bitter enemy to thoſe diſſenting miniſters who, in that time of perſecution, were tried by him: he was one of the greateſt adviſers and promoters of all the oppreſſions and arbitrary meaſures carried on in the reign of James II; and his ſanguinary and inhuman proceedings againſt Monmouth's unhappy adherents in the weſt will ever render his name infamous. Whenever the priſoner was of a different party, or he could pleaſe the court by condemning him, inſtead of appearing according to the duty of his office, as his counſel, he would ſcarce allow him to ſpeak for himſelf; but would load him with the groſſeſt and moſt vulgar abuſe, browbeat, inſult, and turn to ridicule the witneſſes that ſpoke in his behalf; and even threaten the jury with fines and impriſonment, if they made the leaſt heſitation about bringing in the priſoner guilty. Yet it is ſaid, that when he was in temper, and matters perfectly indifferent came before him, no one became a ſeat of juſtice better. Nay, it even appears, that, when he was under no ſtate-influence, he was ſometimes inclined to protect the natural and civil rights of mankind, of which the following inſtance has been given:—The mayor and aldermen of Briſtol had been uſed to tranſport convicted criminals to the American plantations, and ſell them by way of trade. This turning to good account, when any pilferers or petty rogues were brought before them, they threatened them with hanging; and then ſome officers who attended, earneſtly perſuaded the ignorant intimidated creatures to beg for tranſportation, as the only way to ſave them; and in general their advice was followed. Then, without more form, each alderman in courſe took one, and ſold him for his own benefit; and ſometimes warm diſputes aroſe between them about the next turn. This infamous trade, which had been carried on many years, coming to the knowledge of the lord chief juſtice, he made the mayor deſcend from the bench, and ſtand at the bar in his ſcarlet and furr, with his guilty brethren the aldermen, and plead as common criminals. He then obliged them to give ſecurities to anſwer informations; but the proceedings were ſtopped by the Revolution.—However, the brutality Jeffreys commonly ſhowed on the bench, where his voice and viſage were equally terrible, at length expoſed him to a ſevere mortification. A ſcrivener of Wapping having a cauſe before him, one of the opponent's counſel ſaid he was a ſtrange fellow, and ſometimes went to church, and ſometimes to conventicles; and it was thought he was a trimmer. At this the chancellor fired: "A trimmer? (ſaid he); I have heard much of that monſter, but never ſaw one. Come forth, Mr Trimmer, and let me ſee your ſhape." He then treated the poor fellow ſo roughly, that, on his leaving the hall, he declared he would not undergo the terrors of that man's face again to ſave his life, and he ſhould certainly retain the frightful impreſſions of it as long as he lived. Soon after, the prince of Orange coming, the lord chancellor, dreading the public reſentment, diſguiſed himſelf in a ſeaman's dreſs, in order to leave the kingdom; and was drinking in a cellar, when this ſcrivener coming into the cellar, and ſeeing again the face which had filled him with ſuch horror, ſtarted; on which Jeffreys, fearing he was known, feigned a cough, and turned to the wall with his pot of beer in his hand. But Mr Trimmer going out, gave notice that he was there; and the mob ruſhing in, ſeized him, and carried him before the lord-mayor, who ſent him with a ſtrong guard to the lords of the council, by whom he was committed to the Tower, where he died in 1689.—It is remarkable, that the late counteſs of Pomfret met with very rude inſults from the populace on the weſtern road, only becauſe ſhe was granddaughter of the inhuman Jeffreys.

JEHOVAH, one of the ſcripture-names of God, ſignifying the Being who is ſelf-exiſtent and gives exiſtence to others.

So great a veneration had the Jews for this name, that they left off the cuſtom of pronouncing it, whereby its true pronunciation was forgotten. They call it *tetragrammaton*, or "the name with four letters; and believe, that whoever knows the true pronunciation of it cannot fail to be heard by God.

JEJUNE ſtyle. See Style.

JEJUNUM, the ſecond of the ſmall guts: thus called from the Latin *jejunus*, "hungry;" becauſe always found empty. See Anatomy, n° 93.

JELLALÆAN, or Gelalæan *Calendar, epocha, and year.* See Calendar, Epocha, and Year.

JELLY, a form of food, or medicine, prepared from the juices of ripe fruits boiled to a proper conſiſtence with ſugar, or the ſtrong decoctions of the horns, bones, or extremities of animals, boiled to ſuch a height as to be ſtiff and firm when cold, without the addition of any ſugar.—The jellies of fruits are cooling, ſaponaceous, and aceſcent, and therefore are good as medicines in all diſorders of the primæ viæ, ariſing from alkaleſcent juices, eſpecially when not given alone, but diluted with water. On the contrary, the jellies made from animal ſubſtances are all alkaleſcent, and are therefore good in all caſes in which an acidity of the humours prevails: the alkaleſcent quality of theſe is, however, in a great meaſure taken off, by the adding lemon juice and ſugar to them. There were formerly a ſort of jellies much in uſe, called *compound jellies*; theſe had the reſtorative medicinal drugs added to them, but they are now ſcarce ever heard of.

Jelly-Oat, a preparation of common oats, recommended by many of the German phyſicians in all hectic diſorders, to be taken with broth of ſnails or crayfiſh.—It is made by boiling a large quantity of oats, with the huſk taken off, with ſome hartſhorn ſhavings, and currants together, with a leg of veal cut to pieces, and with the bones all broken; theſe are to be ſet over the fire with a large quantity of water, till the whole is reduced to a ſort of jelly; which when ſtrained and cold will be very firm and hard. A few ſpoonfuls of this are to be taken every morning, diluted with a baſon of either of the abovementioned broths, or any other warm liquor.

JEMPTERLAND, a province of Sweden, bounded on the north by Angermania, on the eaſt by Medalpadia, on the ſouth by Helſingia, and on the weſt by Norway. It is full of mountains; and the principal towns are Reſſundt, Lich, and Docra.

JENA, a ſtrong town of Germany, in the circle of Upper Saxony, and in Thuringia, with an univerſity. It is ſeated on the river Sala in E. Long. 2. 59. N. Lat. 51. 0.

JENCAPORE, a town of Aſia, in Indoſtan, and in the dominions of the Great Mogul, capital of a territory of the ſame name. It is ſeated on the river Chaul, in E. Long. 76. 25. N. Lat. 30. 30.

JENISA, a river of the Ruſſian empire, that runs from north to ſouth through Siberia, and falls into the Frozen Ocean.

JENISKOI, a town of the Ruſſian empire, in Siberia, ſeated on the river Jeniſa. It is large, populous, and pretty ſtrong; and there are villages for ſeveral miles round it. It is ſubject to the Tunguſians, who are pagans, and chiefly live on the above river. They pay a tribute to the emperor for every bow, reckoning a man and a woman for one. The climate is extremely cold; and no other fruits grow there but black and red currants, ſtrawberries, and gooſeberries. Corn, butchers meat, and wild fowls, are very cheap. E. Long. 86. 25. N. Lat. 58. 40.

JENCOPING, a town of Sweden, in the province of Smaland, ſeated on the ſouth ſide of the lake Werter, with a ſtrong citadel. The houſes are all built with wood. E. Long. 14. 20. N. Lat. 57. 22.

JENKIN (Robert), a learned Engliſh divine in the 18th century, was bred at Cambridge, became maſter of St John's college, and wrote ſeveral books much eſteemed, *viz.* 1. An hiſtorical examination of the authority of General Councils, 4to. 2. The reaſonableneſs and certainty of the Chriſtian religion, 2 vols 8vo. 3. *Defenſio S. Auguſtini.* This book is written againſt M. Le Clerc. 4. Remarks on ſome books lately publiſhed, *viz.* Mr Whiſton's eight Sermon's, Locke's paraphraſe, &c. 5. A tranſlation from the French of the life of Apollonius Tyaneus.

JENKINS (Henry). See Longevity.

Jenkins (Sir Leoline), a learned civilian and able ſtateſman of the laſt century, born in Glamorganſhire about the year 1623. Being rendered obnoxious to the parliament during the civil war by adhering to the king's cauſe, he conſulted his ſafety by flight; but returning on the reſtoration, he was admitted an advocate in the court of arches, and ſucceeded Dr Exton as judge. When the queen-mother Henrietta died in 1669 at Paris, her whole eſtate, real and perſonal, was claimed by her nephew Louis XIV.: upon which Dr Jenkins's opinion being called for and approved, he went to Paris, with three others joined with him in a commiſſion, and recovered her effects; for which he received the honour of knighthood. He officiated as one of the mediators at the treaty of Nimeguen, in which tedious negociation he was engaged about four years and a half; and was afterwards made a privy counſellor and ſecretary of ſtate. He died in 1685; and as he never married, bequeathed his whole eſtate to charitable uſes: he was ſo great a benefactor to Jeſus college Oxford, that he is generally looked on as the ſecond founder. All his letters and papers were collected and printed in 1724, in 2 vols folio.

JENNY wren, a name given by writers on ſong-birds to the wren. See Wren.

JENTACULUM was, amongſt the Romans, a morning refreſhment like our breakfaſt. It was exceedingly ſimple, conſiſting, for the moſt part, of bread alone; labouring people indeed had ſomething more ſubſtantial to enable them to ſupport the fatigues of their employment. What has been here ſaid may be obſerved of the Jews and Grecians alſo. The Greeks diſtinguiſhed this morning-meal by the ſeveral names of αριϛον, ακρατισμος or ακρατισμα, though αριϛον is generally applied to dinner. See Eating and Dinner.

JEOFAILE, (compounded of three French words, *J'ay faille*, "I have failed"), a term in law, uſed for an overſight in pleading or other proceedings at law.

The ſhowing of theſe defects or overſights was formerly often practiſed by the council; and when the jury came into court in order to try the iſſue, they ſaid, This inqueſt you ought not to take; and after verdict they would ſay to the court, To judgment you ought not to go. But ſeveral ſtatutes have been made to avoid the delays occaſioned by ſuch ſuggeſtions; and a judgment is not to be ſtayed after verdict for miſtaking the Chriſtian or ſurname of either of the parties, or in a ſum of money, or in the day, month, year, &c. where the ſame are rightly named in any preceding record.

JEPHTHAH, judge of Iſrael, and ſucceſſor to Jaïr in the government of the people, was a native of Miſpeh, and the ſon of one Gilead by a harlot. This Gilead having married a lawful wiſe, and had children by her, theſe children drove Jephthah from his father's houſe, ſaying, that he ſhould not be heir with them. Jephthah retired into the land of Tob, and there he became captain of a band of thieves and ſuch other people as he had picked up together. At that time, the Iſraelites beyond Jordan, ſeeing themſelves preſſed by the Ammonites, came to deſire aſſiſtance from Jephthah; and that he would take upon him the command of them. Jephthah at firſt reproached them with the injuſtice which they had done him, or at leaſt which they had not prevented, when he was forced from his father's houſe. But as theſe people were very earneſt in their requeſt, he told them, that he would ſuccour them, provided that at the end of the war they would acknowledge him for their prince. This they conſented to, and promiſed with an oath.

Jephthah, in the year of the world 2817, having been acknowledged prince of the Iſraelites in an aſſembly of the people, was filled with the ſpirit of God, and began to get his troops together; to that end, he went over all the land which the children of Iſrael poſſeſſed beyond Jordan. At the ſame time he made a vow to the Lord, that if he were ſucceſsful againſt the Ammonites, he would offer up for a burnt-offering whatever ſhould firſt come out of his houſe to meet him. The battle being fought, Jephthah remained conqueror, and ravaged all the land of Ammon. But as he returned to his houſe, his only daughter came out to meet him with timbrels and with dances: whereupon Jephthah tore his clothes, and ſaid, "Alas, my daughter, thou haſt brought me very low: for I have made a vow unto the Lord, and cannot fail in the performance of it." His daughter anſwered, "My father, if thou haſt made a vow unto the Lord, do with me as thou haſt promiſed; grant me only the favour that I may be at liberty to go up to the mountains, and there, for two months bewail my virginity with my companions." Jephthah granted her this liberty; and at the end of two months, he offered up his daughter, who died a virgin, a burnt-offering, agreeable to his vow, according to the opinion of moſt commentators. In the mean time, the Ephraimites, jealous of the victory obtained by Jephthah over the Ammonites, paſſed the river Jordan in a tumultuous manner, came and complained to Jephthah that he had not invited them to this war, and threatened to ſet fire to his houſe. Jephthah anſwered them that he had ſent to deſire their aſſiſtance; but obſerving that they did not come, he put his life in his hands and hazarded a battle. The Ephraimites not being ſatisfied with theſe reaſons, Jephthah aſſembled the people of Gilead, gave them battle, and defeated them; ſo that there were two and forty thouſand men of the tribe of Ephraim killed that day. We know nothing more in particular concerning the life of Jephthah, only that he judged Iſrael ſix years, and was buried in a city of Gilead.

St. Paul (Heb. xi. 32.) places Jephthah among the ſaints of the Old Teſtament, the merit of whoſe faith diſtinguiſhed them. But it muſt be obſerved, that there is ſomething ſo extraordinary in Jephthah's vow, that notwithſtanding the ſcripture ſpeaks of it in very plain and clear terms, yet ſuch difficulties ariſe concerning it as perplex the commentators. Some maintain, that this daughter of Jephthah was not ſacrificed, as that would have been a violation of the law of Moſes; and eſpecially, when by the ſame law he might have redeemed his daughter for ten ſhekels of ſilver: therefore they contend, that it was ſomething elſe Jephthah did to his daughter, ſuch as devoting her to a ſtate of celibacy, or dedicating her to the ſervice of God.—On the other hand, thoſe who maintain the affirmative, or that Jephthah's daughter was actually ſacrificed, urge, that the times wherein Jephthah lived were ſadly addicted to idolatry; alſo the manner wherein he lived before he was called to the aſſiſtance of his country; but above all, the clear, evident, and expreſs meaning of the text. They obſerve, that vows of perpetual virginity are inſtitutions of a modern date; and had there been no more in it, there would have been little occaſion for rending his clothes, and bemoaning himſelf as he did; beſides the bitter lamentations made by herſelf, and by all the daughters of Iſrael in ſucceeding times. But if ſhe was ſacrificed, we may ſafely and confidently aver with Joſephus, who ſays that ſhe was, that this ſacrifice was neither lawful nor acceptable to God; but, on the contrary, an abominable crime, that might, notwithſtanding, have proceeded from a miſtaken principle of religion.

JERBOA. See Mus.

JEREMIAH (*the Prophecy of*), a canonical book of the Old Teſtament. This divine writer was of the race of the prieſts, the ſon of Hilkia of Anathoth, of the tribe of Benjamin. He was called to the prophetic office when very young, about the 13th year of Joſiah, and continued in the diſcharge of it about 40 years. He was not carried captive to Babylon with the other Jews, but remained in Judea to lament the deſolation of his country. He was afterwards a priſoner in Egypt with his diſciple Baruch, where it is ſuppoſed he died in a very advanced age. Some of the Chriſtian fathers tell us he was ſtoned to death by the Jews, for preaching againſt their idolatry; and ſome ſay he was put to death by Pharaoh Hophrah, becauſe of his prophecy againſt him. Part of the prophecy of Jeremiah relates to the time after the captivity of Iſrael, and before that of Judah, from the firſt chapter to the 44th; and part of it was in the time of the latter captivity, from the 44th chapter to the end. The prophet lays open the ſins of Judah with great freedom and boldneſs, and reminds them of the ſevere judgments which had befallen the ten tribes for the ſame offences. He paſſionately laments their misfortune, and recommends a ſpeedy reformation to them. Afterwards he predicts the grievous calamities that were approaching, particularly the 70 years captivity in Chaldea. He likewiſe foretels their deliverance and happy return, and the recompence which Babylon, Moab, and other enemies of the Jews, ſhould meet with in due time. There are likewiſe ſeveral intimations in this prophecy concerning the kingdom of the Meſſiah; alſo ſeveral remarkable viſions, and types, and hiſtorical paſſages relating to thoſe times. The 52d chapter does not belong to the prophecy of Jeremiah, which probably was added by Ezra, and contains a narrative of the taking

king of Jeruſalem, and of what happened during the captivity of the Jews, to the death of Jechonias. St Jerom has obſerved upon this prophet, that his ſtyle is more eaſy than that of Iſaiah and Hoſea; that he retains ſomething of the ruſticity of the village where he was born; but that he is very learned and majeſtic, and equal to thoſe two prophets in the ſenſe of his prophecy.

JERICHO, or Hiericus (anc. geog.), a city of Judea; ſituated between Jordan and Jeruſalem, at the diſtance of 150 ſtadia from the latter, and 60 from the former. Joſephus ſays, "the whole ſpace from Jeruſalem is deſart and rocky, and equally barren and uncultivated from Jericho to the lake Aſphaltites; yet the places near the town and above it are extremely fertile and delicious, ſo that it may be juſtly called a *divine plain*, ſurpaſſing the reſt of the land of Canaan, no unfruitful country, and ſurrounded by hills in the manner of an amphitheatre. It produces opobalſamum myrobalans, and dates; from the laſt of which it is called the *city of palm-trees*, by Moſes. The place is now called *Raha*; and is ſituated, M. Volney informs us, "in a plain ſix or ſeven leagues long, by three wide, around which are a number of barren mountains, that render it extremely hot. Here formerly was cultivated the balm of Mecca. From the deſcription of the Hadjes, this is a ſhrub ſimilar to the pomegranate-tree, with leaves like thoſe of rue: it bears a pulpy nut, in which is contained a kernel that yields the reſinous juice we call *balm* or *balſam*. At preſent there is not a plant of it remaining at Raha; but another ſpecies is to be found there, called *Zakkoun*, which produces a ſweet oil, alſo celebrated for healing wounds. This zakkoun reſembles a plumtree; it has thorns four inches long, with leaves like thoſe of the olive-tree, but narrower and greener, and prickly at the end; its fruit is a kind of acorn, without a calyx, under the bark of which is a pulp, and then a nut, the kernel of which gives an oil that the Arabs ſell very dear: this is the ſole commerce of Raha, which is no more than a ruinous village.

JERIMOTH. See Jarimuth.

JEROME (St), in Latin *Hieronymus*, a famous doctor of the church, and the moſt learned of all the Latin fathers, was the ſon of Euſebius; and was born at Stridon, a city of the ancient Pannonia, about the year 340. He ſtudied at Rome under Donatus, the learned grammarian. After having received baptiſm, he went into Gaul, and there tranſcribed St Hilary's book *de Synodis*. He then went into Aquileia, where he contracted a friendſhip with Heliodorus, who prevailed on him to travel with him into Thrace, Pontus, Bithynia, Galatia, and Cappadocia. In 372 St Jerome retired into a deſart in Syria, where he was perſecuted by the orthodox of Melitius's party, for being a Sabellian, becauſe he made uſe of the word *Hypoſtaſis*, which had been uſed by the council of Rome in 369. This obliged him to go to Jeruſalem; where he applied himſelf to the ſtudy of the Hebrew language, in order to receive a more perfect knowledge of the Holy Scriptures; and about this time he conſented to be ordained, on condition that he ſhould not be confined to any particular church. In 381, he went to Conſtantinople to hear St Gregory of Nazianzen; and the following year returned to Rome, where he was made ſecretary to pope Damaſus. He then inſtructed many Roman ladies in piety and the knowledge of the ſciences, which expoſed him to the calumnies of thoſe whom he zealouſly reproved for their irregularities; and Pope Siricius not having all the eſteem for him which his learning and virtue juſtly intitled him to, this learned doctor left Rome, and returned to the monaſtery of Bethlehem, where he employed himſelf in writing againſt thoſe whom he called *heretics*, eſpecially againſt Vigilantius and Jovinian. He had a quarrel with John of Jeruſalem and Rufinus about the Origeniſts. He was the firſt who wrote againſt Pelagius; and died on the 30th of September 420, at about 80 years of age. There have been ſeveral editions of his works; the laſt, which is that of Verona, is in 11 vols folio. His principal works are, 1. A Latin verſion of the Holy Scriptures, diſtinguiſhed by the name of the *Vulgate*. 2. Commentaries on the Prophets, Eccleſiaſtes, St Matthew's Goſpel, and the Epiſtle to the Galatians, Epheſians, Titus, and Philemon. 3. Polemical treatiſes againſt Montanus, Helvidius, Jovinian, Vigilantius, and Pelagius. 4. Several letters. 5. A treatiſe on the lives and writings of the eccleſiaſtical authors who had flouriſhed before his time.—St Jerome's ſtyle is lively and animated, and ſometimes ſublime.

Jerome of Prague, ſo called from the place of his birth, in Bohemia. He was neither a monk nor clergyman, but had a learned education. Having embraced the opinions of John Huſs, he began to propagate them in the year 1480. In the mean time the council of Nice kept a watchful eye over him, and conſidering him as a dangerous perſon, cited him to appear before them and give an account of his faith. In obedience to this citation, he went to Conſtance; but on his arrival, in 1415, finding Huſs in priſon, he ſet out for his own country. Being ſeized however on the way, impriſoned, and examined, he was ſo intimidated, that he retracted, and pretended to approve of the condemnation of Wickliff's and Huſs's opinions; but on the 26th of May 1416, he condemned that recantation in theſe terms: "I am not aſhamed to confeſs here publicly my weakneſs. Yes, with horror I confeſs my baſe cowardice. It was only the dread of the puniſhment by fire which drew me to conſent, againſt my conſcience, to the condemnation of the doctrine of Wickliff and Huſs." Accordingly ſentence was paſſed on him; in purſuance of which he was delivered to the ſecular arm, and burnt in 1416. He was a perſon of great parts, learning, and elocution.

JERONYMITES, or Hieronymites, a denomination given to divers orders or congregations of religious; otherwiſe called *Hermits of St Jerom*.

JERSEY, an iſland in the Engliſh channel, believed to be the iſland called in the Itinerary *Cæſarea*, in ſucceeding times *Augia*, by us *Gerſey*, more frequently *Jerſey*. It is ſituated in the Engliſh channel, 18 miles to the weſt of Normandy, and 84 to the ſouth of Portland in Dorſetſhire, and in the time of the Romans was called *Cæſarea*. It is not above 12 miles in length, nor much above 6 where broadeſt, which is at the two extremities. It is defended by rocks and dangerous quickſands. On the north ſide the cliffs riſe 40 or 50 fathoms high, which render it inacceſſible on that ſide; but on the ſouth the ſhore is almoſt level with the water. In the weſt part of the iſland is a large tract of land once cultivated and very fertile, but now a barren deſart, cauſed by the weſterly winds throwing up ſand from the bottom to the top of the higheſt cliffs. The higher lands are diverſified by gritty, gravelly, ſtony, and fine mould; the lower by a deep, rich, and heavy ſoil. The middle part of the iſland is ſomewhat mountainous, and ſo thick planted with trees, that at a diſtance it reſembles one entire foreſt, though in walking through it there is hardly a thicket or any other thing to be ſeen but hedge-rows and orchards of apple-trees. The valleys under the hills are finely watered by brooks, and have plenty of cattle and ſmall ſheep, with very fine wool, and very ſweet meat, which is aſcribed to the ſhortneſs of the graſs. The horſes are good for draught; but few fit for the ſaddle. The iſland produces variety of trees, roots, and herbs; but not corn enough for the inhabitants, who therefore ſend for it to England and France, and ſometimes to Dantzic. The fields are incloſed by great mounds of earth, raiſed from 6 to 8 or 10 feet high, proportionably thick and ſolid, planted with quickſets and trees. As the air of this iſland is very healthy, thoſe of the inhabitants who are temperate live to a great age: but the coaſt is very ſubject to ſtorms by weſterly winds, from which they have no land to ſhelter them nearer than North America; and there is a vaſt chain of rocks about the iſland, among which the tides and currents are ſo ſtrong and rapid, that the navigation is dangerous to thoſe who are not perfectly acquainted with the coaſt. The buildings of this iſland are generally of rag-ſtone; but ſome of the wealthy inhabitants have their houſes fronted with a reddiſh white ſtone, capable of being poliſhed like marble, and of which there is a rich quarry on a hill called *Montmado*. The ordinary dwellings are thatched. The churches are very plain buildings, moſt of them with ſquare ſteeples; and the communion table is not at the eaſt end, as in the Engliſh churches, but placed juſt under the pulpit. The ſtaple manufacture is knit ſtockings and caps, many thouſand pair of which are weekly ſold at St Helier to the merchants; alſo cyder, of which 25,000 hogſheads have been made here in one year. Their principal foreign trade is to Newfoundland; whither, particularly in 1732, they ſent 24 ſhips; theſe proceed from thence to the Mediterranean to diſpoſe of their fiſh.

On the ſouth of the iſland the ſea ſeems to have encroached upon the land (which, as we have before obſerved, declines on that ſide), and to have ſwallowed upwards of ſix ſquare miles, making a very beautiful bay of about three miles broad, and near the ſame in depth. In the eaſt corner of this bay ſtands the town of St Helier, very happily ſituated, But the principal haven is in the weſtern corner of the bay, which receives its name from it, being called *St Aubin's*. There are, beſides theſe, ſeveral other havens of leſs note; as, St Brelade's Bay, at the back of St Aubin's; the great bay of St Ouen, which takes in the greateſt part of the weſt ſide of the iſland, where the largeſt ſhips may ride in 12 and 15 fathoms, ſafe from all but eaſt winds. La Crevaſſe is a port only for boats; Greve de Lecq and Port St John are alſo ſmall havens on the north ſide, where is likewiſe Bonnenuit. On the eaſt there is the bay of St Catherine, and the harbour of Roſel. To the ſouth-weſt lies the haven de la Chauſſée. The laſt we ſhall mention is the port de Pas, a very little to the eaſtward of St Aubin's Bay.

The towns of St Helier and St Aubin, which, as already mentioned, ſtand both in the ſame bay called *St Aubin's Bay*, opening to the ſouth, are about three miles aſunder. St Helier took its name from *Elerius* or *Helier*, a holy man, who lived in this iſland many centuries ago, and was ſlain by the Pagan Normans at their coming hither. He is mentioned among the martyrs in the martyrology of Coutance. His little cell with the ſtone bed is ſtill ſhown among the rocks; and in memory of him a noble abbey of Canons regular was founded in the little iſland in this bay, and annexed to Cherburgh abbey in Normandy in the reign of Henry I. and ſuppreſſed as an alien priory. The town of St Helier ſtands at the foot of a long and high rocky hill at the eaſt end. It is a well built and populous place; greatly improved and enlarged within the laſt century; and contains about 400 houſes, moſtly ſhops, and near 2000 inhabitants. The market-place in the centre is ſpacious, ſurrounded with handſome houſes, among which is the Cohue Royale or court of juſtice. At the top of the market-place is a ſtatue of George II. of bronze gilt. The market is held on a Saturday, and much frequented.

St Aubin at the weſt end of the bay is principally inhabited by merchants and maſters of ſhips, whom the neighbourhood of the port has invited hither. It is not more than half the ſize of the other town, though greatly increaſed within theſe 100 years; and has a good ſtone pier carried far into the ſea, where ſhips of conſiderable burden lie ſafe under the guns of the adjoining fort.

The iſle of St Helier, more to the eaſt in the ſame bay, is in circuit near a mile, ſurrounded by the ſea at or about every half flood. On the ſite of the abbey before mentioned is now Elizabeth Caſtle, one of the largeſt and ſtrongeſt fortreſſes belonging to Britain. Queen Elizabeth began it, and gave it her name. Charles I. enlarged, and Charles II. who was twice here, completed it. It was the laſt fortreſs that held out for the king. It is the reſidence of the governor and garriſon, and occupies the whole iſle, from whence at low water is a paſſage called the *bridge*, half a mile long, formed of ſand and ſtones. A citadel was begun in the laſt war on a hill, whence the caſtle might be bombarded, but ſince the peace left off.

Mount Orgeuil caſtle, called alſo *Gourray* from the neighbouring village of that name, lies to the ſouth of Roſel harbour in the bay of St Catharine. It was a place of ſtrength before Henry Vth's time, and bid defiance to the attempts of the French under the conſtable De Gueſclin 1374 at the end of the reign of Edward III. It was repaired by Queen Elizabeth, but is now neglected, yet preſerves an air of grandeur anſwering its name even in ruins. The aſcent to its top is by near 200 ſteps; and from thence by a teleſcope may be ſeen the two front towers of the cathedral of Coutance. The famous William Prynne was confined in it three years.

The iſland is divided into 12 pariſhes, which are ſo laid out, that each has a communication with the ſea; theſe are ſubdivided into 52 vintaines, ſo called from the number of 20 houſes, which each is ſuppoſed to have

Jerſey.

formerly contained, juſt as in England 10 houſes anciently made a tything. The whole number of inhabitants is computed at about 20,000, of which 3000 are able to bear arms, and are formed into regiments. Their general review is on the ſandy bay between the two towns, when they are attended with a train of above 20 braſs field pieces and two ſmall bodies of horſe in the wings.

The chief officer is the governor, who has the cuſtody of his majeſty's caſtles, with the command of the garriſons and militia. The civil government is adminiſtered by a bailiff, aſſiſted by 12 jurats. They have here alſo what they call an aſſembly of the ſtates. Theſe are convened by the governor or his deputy, the bailiff's court conſiſts of himſelf and the jurats, the dean and clergy, and the 12 high conſtables.

There were formerly many druidical temples and altars in Jerſey, ſome remains of which are ſtill to be ſeen. The cromlechs are here called *pouquelays*, and there are ſome tumuli and keeps. Roman coins have alſo been dug up in this iſland; and there are the remains of a Roman camp in the manor of Dilamant. Chriſtianity was firſt planted here in the middle of the 6th century, and the iſland made part of the ſee of Dol in Bretagne, and it is now governed by a dean. Beſides the abbey of St Helier, here were four priories, *Noirmont*, *St Clement*, *Bonnenuit*, and *le Leek*, and above twenty chapels, now moſtly ruined. During the laſt war, this iſland, together with that of Guernſey, became an object of deſire to France, whoſe vanity, no leſs than her intereſt, was concerned in depriving Britain of thoſe laſt remnants of her continental poſſeſſions. The firſt attempt to atchieve this conqueſt took place in the year 1779. A force of 5000 or 6000 men was embarked in flat-bottomed boats, and endeavoured to land in the bay of St Ouen, on the firſt of May. In this attempt they were ſupported by five frigates and other armed veſſels; but met with ſuch a vigorous reſiſtance from the militia of the iſland, aſſiſted by a body of regulars, that they were compelled to retire without having landed a ſingle perſon. Much diſcontent and mutual recrimination took place among the French naval and military officers on this failure; and though the expedition was repreſented by many as ill concerted, and deſtitute of every hope of ſucceſs, another attempt was reſolved on. Both the troops and ſeamen that had been employed in the former expedition were equally deſirous of retrieving their honour; but they were for ſome time prevented from making any attempt of this kind by bad weather; and, before another opportunity offered, the ſquadron which was deſigned to cover their deſcent was attacked by Sir James Wallace, who drove them aſhore on the coaſt of Normandy, ſilenced a battery under whoſe guns they had taken ſhelter, captured a frigate of 34 guns, with two rich prizes, burnt two other large frigates, and a conſiderable number of ſmaller veſſels.

Thus the ſcheme of invading the iſland of Jerſey was totally diſconcerted, and laid aſide for that time, but was reſumed in the year 1781. The conduct of this ſecond expedition was given to the baron de Rullecourt, who had been ſecond in command when the former attempt was made. He was a man of courage, but fierce and violent in his diſpoſition, and ſeems to have been very deficient in the prudence and conduct neceſſary for bringing any military enterpriſe to a ſucceſsful iſſue. The force entruſted to him on the preſent occaſion conſiſted of 2000 men; with whom he embarked in very tempeſtuous weather, hoping that he might thus be able to ſurpriſe the garriſon. Many of his tranſports, however, were thus diſperſed, and he himſelf, with the remainder, obliged to take ſhelter in ſome iſlands in the neighbourhood of Jerſey. As ſoon as the weather grew calmer, he ſeized the opportunity of a dark night to effect landing at a place called Grouville, where he made priſoners of a party of militia. Hence he proceeded with the utmoſt expedition to St Helier's, the capital of the iſland, about three miles diſtant. His arrival was ſo unexpected, that he ſeized on a party of men who guarded it, together with the commanding officer, and the magiſtrates of the iſland. Rullecourt then drew up a capitulation, the terms of which were, that the iſland ſhould be inſtantly ſurrendered to the French, and the garriſon be ſent to England; threatening the town with immediate deſtruction in caſe of noncompliance. It was in vain repreſented to him that no act of the deputy-governor and magiſtrates could be valid while they remained in his power; but, as Rullecourt ſtill inſiſted, they were obliged to comply, leſt his menaces ſhould have been carried into execution. This point being gained, he advanced to Elizabeth Caſtle in the neighbourhood of the town, ſummoning it to ſurrender in virtue of the capitulation for the town and iſland juſt concluded. To this a peremptory refuſal was given, and followed by ſuch a vigorous diſcharge of artillery, that he was obliged to retire into the town. In the mean time the Britiſh troops ſtationed in the iſland began to aſſemble from every quarter under the command of Major Pierſon; who, on being required by the French commander to ſubmit, replied, that if the French themſelves did not, within 20 minutes, lay down their arms, he would attack them. This being refuſed, an attack was inſtantly made with ſuch impetuoſity, that the French were totally routed in leſs than half an hour, and driven into the market-place, where they endeavoured to make a ſtand. Their commander, exaſperated at this unexpected turn of affairs, endeavoured to wreak his vengeance on the captive governor, whom he obliged to ſtand by his ſide during the whole time of the conflict. This, however, was quickly over; the French were broken on all ſides, the baron himſelf mortally wounded, and the next in command obliged to ſurrender himſelf and the whole party priſoners of war; while the captive governor eſcaped without a wound. This ſecond diſaſter put an end to all hopes of the French miniſtry of being able to reduce the iſland of Jerſey, and was indeed no ſmall mortification to them; 800 troops having been landed at that time, of which not one eſcaped. A monument was erected at the public expence in the church of St Helier, to the memory of Major Pierſon, to whom the deliverance of the town was owing; but who unhappily fell in the moment of victory, when only 24 years of age.

All the landing places and creeks round the iſland are now fortified with batteries, and 17 or 18 watch-houſes are erected on the headlands. Theſe are round towers with embraſures for ſmall cannon and loop-holes for ſmall muſquetry; the entrance by a door in the wall out of the reach of man, and to be aſcended by a ladder afterwards drawn up. This iſland, with thoſe of Guernſey, Sark, Alderney, and their appendages, were parcel of the duchy of Normandy, and were united to the crown of England by the firſt princes of the Norman line. The language of the pulpit, and the bar, is the French, which is alſo that generally ſpoken by the people at large. They are governed by their own laws, which are for the moſt part of the ducal cuſtoms of Normandy, being collected in an ancient book of cuſtoms intitled *Le grand couſtumier*. The king's writ, or proceſs from the courts of Weſtminſter, is here of no force; but his commiſſion is. They are not bound by any common acts of parliaments, unleſs particularly named. All cauſes are originally determined by their own officers, the bailiff and jurats of the iſlands. But an appeal lies from them to the king and council in the laſt reſort.—Jerſey is an earldom in the Villier's family.

New Jersey, or, as it is commonly called, *the Jerſeys* (being two provinces united into one government), one of the united ſtates of North America, lying from 39 to 41 degrees of north latitude, and from 74 to 75 degrees 30 minutes longitude weſt from London; See New-Jersey.

Jersey, among woolcombers, denotes the fineſt wool, taken from the reſt by dreſſing it with a Jerſey comb.

JERUSALEM, a very famous and ancient city, capital of Judea or Paleſtine, now a province of Turkey in Aſia. According to Manetho, an Egyptian hiſtorian, it was founded by the ſhepherds who invaded Egypt in an unknown period of antiquity*. According to Joſephus, it was the capital of Melchiſedek's kingdom, called *Salem* in the book of Geneſis: and the Arabians aſſert, that it was built in honour of Melchiſedek by 12 neighbouring kings; which when they had done, he called it *Jeruſalem*. We know nothing of it with certainty, however, till the time of king David, who took it from the Jebuſites, and made it the capital of his kingdom, which it ever after continued to be. It was firſt taken in the days of Jehoaſh, by Hazael the king of Syria, who ſlew all the nobility, but did not deſtroy their city. It was afterwards taken by Nebuchadnezzar king of Babylon, who deſtroyed it, and carried away the inhabitants. Seventy years after, permiſſion was granted by Cyrus king of Perſia to the Jews to rebuild their city, which was done; and it continued the capital of Judea (though frequently ſuffering much from the Grecian monarchs of Syria and Egypt), till the time of Veſpaſian emperor of Rome, by whoſe ſon Titus it was totally deſtroyed†. It was, however, rebuilt by Adrian; and ſeemed likely to have recovered its former grandeur, being ſurrounded with walls, and adorned with ſeveral noble buildings; the Chriſtians alſo being permitted to ſettle in it. But this was a ſhort-lived change; ſo that when the empreſs Helena, mother of Conſtantine the Great, came to viſit this city, ſhe found it in the moſt forlorn and ruinous ſituation. Having formed a deſign of reſtoring it to its ancient luſtre, ſhe cauſed, with a great deal of coſt and labour, all the rubbiſh that had been thrown upon thoſe places where our Saviour had ſuffered, been buried, &c. to be removed. In doing this, they found the croſs on which he died, as well as thoſe of the two malefactors who ſuffered with him; and, as the writers of thoſe times relate, diſcovered by a miracle that which had borne the Saviour of mankind. She then cauſed a magnificent church to be built, which incloſed as many of the ſcenes of our Saviour's ſufferings as could conveniently be done, and adorned the city with ſeveral other buildings. The emperor Julian is ſaid to have formed a deſign of rebuilding the temple of Jeruſalem, and of reſtoring the Jewiſh worſhip. This ſcheme was contrived on purpoſe to give the lie to our Saviour's prophecy concerning the temple and city of Jeruſalem; namely, that the firſt ſhould be totally deſtroyed, without one ſtone being left upon another; and that Jeruſalem ſhould be trodden down of the Gentiles, till the times of the Gentiles were fulfilled. In this attempt, however, according to the accounts of the Chriſtian writers of that age, the emperor was fruſtrated by an earthquake and fiery eruption from the earth, which totally deſtroyed the work, conſumed the materials which had been collected, and killed a great number of the workmen.

This event hath been the ſubject of much diſpute. Mr Warburton, who hath publiſhed a treatiſe expreſsly on the truth of this fact, hath collected the following teſtimonies in favour of it. The firſt is that of Ammianus Marcellinus, who tells us, "Julian (having been already thrice conſul), taking Salluſt, prefect of the ſeveral Gauls, for his colleague, entered a fourth time on this high magiſtracy; and although his ſenſibility of the many and great events which this year was likely to produce made him very anxious for the future, yet he both puſhed on the various and complicated preparatives for this expedition with the utmoſt application, and, having an eye in every quarter, and being deſirous to eternize his reign by the greatneſs of his atchievements, he projected to rebuild at an immenſe expence the proud and magnificent temple of Jeruſalem; which (after many combats, attended with much bloodſhed on both ſides, during the ſiege by Veſpaſian) was with great difficulty taken and deſtroyed by Titus. He committed the conduct of this affair to Alypius of Antioch, who had formerly been lieutenant in Britain. When therefore this Alypius had ſet himſelf to the vigorous execution of his charge, in which he had all the aſſiſtance that the governor of the province could afford him, horrible balls of fire breaking out near the foundations, with frequent and reiterated attacks, rendered the place from time to time inacceſſible to the ſcorched and blaſted workmen; and the victorious element continuing, in this manner, obſtinately and reſolutely bent, as it were, to drive them to a diſtance, Alypius thought beſt to give over the enterpriſe."

The next teſtimony is that of Gregory Nazianzen. Speaking of the emperor Julian, he ſays, "After having run through a courſe of every other tyrannical experiment againſt the faith, and upon trial deſpiſing all of them as trifling and contemptible, he at laſt brought down the whole body of the Jews upon us; whom, for their ancient turn to ſeditious novelties, and an inveterate hatred of the Chriſtian name, he choſe as the fitteſt inſtrument for his machinations. Theſe, under a ſhow of great good-will, which hid his ſecret purpoſe, he endeavoured to convince from their ſacred books and traditions, which he took upon him to interpret, that now was come the time foretold, when they ſhould return to their own land, rebuild their temple, and reſtore the law to its ancient force and ſplendor. When theſe things had been thoroughly inſinuated, and heartily entertained (for deceit finds eaſy admittance when it flatters our paſſions), the Jews ſet upon the work of rebuilding with great attention, and puſhed on the project with the utmoſt labour and application. But when, now driven from their work by a violent whirlwind and a ſudden earthquake, they fled together for refuge to a certain neighbouring church (ſome to deprecate the impending miſchief; others, as is natural in ſuch caſes, to catch at any help that preſents itſelf; and others again, inveloped in the crowd, were carried along with the body of thoſe who fled), there are who ſay, the church refuſed them entrance; and that when they came to the doors which were wide open but a moment before, they found them on a ſudden cloſed by a ſecret and inviſible hand; a hand accuſtomed to work theſe wonders by the terror and confuſion of the impious, and for the ſecurity and comfort of godly men. This, however, is now invariably affirmed and believed by all, that as they ſtrove to force their way in by violence, the fire which burſt from the foundations of the temple, met and ſtopped them. One part it burnt and deſtroyed, and another it deſperately maimed, leaving them a living monument of God's commination and wrath againſt ſinners. Thus the affair paſſed; and, let no man continue incredulous concerning this or the other miraculous works of God. But ſtill the thing moſt wonderful and illuſtrious was, a light which appeared in the heavens, of a croſs within a circle. That name and figure which impious men before eſteemed ſo diſhonourable upon earth, was now raiſed on high, and equally objected to the common view of all men; advanced by God himſelf as the trophy of his victory over unbelievers; of all trophies the moſt exalted and ſublime. Nay further, they who were preſent, and partakers of the miracle we are now about to ſpeak of, ſhow to this very day the ſign or figure of the croſs which was then marked or impreſſed upon their garments. For at that time, as theſe men (whether ſuch as were of us or ſtrangers) were ſhowing theſe marks, or attending to others who ſhowed them, each preſently obſerved the wonder, either on himſelf or his neighbour; having a radiant mark on his body or on his garment, in which there is ſomething that, in art and elegance, exceeded all painting or embroidery."

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* See *Egypt*, n° 2.

† See *Jews*

Notwithſtanding theſe teſtimonies, however, this fact hath been ſtrenuouſly conteſted by others; and indeed it muſt be owned that the teſtimonies above mentioned are by no means unexceptionable. In the laſt particularly, the propenſity to the marvellous is ſo exceedingly great, that every one muſt at firſt ſight be ſtruck with it. It is true indeed, the moſt miraculous part of it, as it ſeemed to be to Gregory, namely, the appearance of croſſes upon the garments and bodies of ſome of the people who were ſtruck, may be explained upon a natural principle; ſince we are aſſured that lightning will ſometimes produce effects of this kind‡: but even this is no deciſive proof of the authenticity of the relation; though it cannot by any means diſcredit it, as ſome think. On the whole, however, it is not a matter of any conſequence whether this event happened with the circumſtances above mentioned or not. If Julian did make any attempt to rebuild the temple, it is certain that ſomething obſtructed the attempt, becauſe the temple was never actually rebuilt. If he made no ſuch attempt, the prophecy of our Saviour ſtill holds good; and it ſurely cannot be thought to detract from the merit of a prophecy, that no body ever attempted to elude it, or prove it to be a falſehood.

Jeruſalem continued in the hands of the eaſtern emperors till the reign of the Caliph Omar, who reduced it under his ſubjection. The Saracens continued in poſſeſſion of it till the year 1099, when it was taken by the Cruſaders. They founded a new kingdom, of which Jeruſalem was the capital, which laſted 88 years under nine kings. At laſt this kingdom was utterly ruined by Saladin; and though the Chriſtians once more got poſſeſſion of the city, they were again obliged to relinquiſh it. In 1217, the Saracens were expelled by the Turks, who have ever ſince continued in poſſeſſion of it.

The city of Jeruſalem, in its moſt flouriſhing ſtate, was divided into four parts, each incloſed with its own walls; viz. 1. The old city of Jebus, which ſtood on mount Zion, where the prophets dwelt, and where David built a magnificent caſtle and palace, which became the reſidence both of himſelf and ſucceſſors; on which account it was emphatically called, *the City of David*. 2. The lower city, called alſo *the Daughter of Zion*, being built after it; on which ſtood the two magnificent palaces which Solomon built for himſelf and his queen, that of the Maccabean princes; and the ſtately amphitheatre built by Herod, capable of containing 80,000 ſpectators; the ſtrong citadel, built by Antiochus, to command and overtop the temple, but afterwards razed by Simon the Maccabee, who recovered the city from the Syrians; and laſtly, a ſecond citadel, built by Herod, upon a high and craggy rock, and called by him *Antonia*. 3. The new city, moſtly inhabited by tradeſmen, artificers, and merchants; and, 4. Mount Moriah, on which was built the ſo famed temple of Solomon, deſcribed in the ſixth and ſeventh chapters of the ſecond book of Kings; and, ſince then, that rebuilt by the Jews on their return from Babylon, and afterwards built almoſt anew and greatly adorned and enriched by Herod.

Some idea of the magnificence of this temple may be had from the following conſiderations. 1. That there were no leſs than 163,300 men employed in the work. 2. That notwithſtanding that prodigious number of hands, it took up ſeven whole years in building. 3. That the height of this building was 120 cubits, or 82 yards, rather more than leſs; and the courts round it about half as high. 4. That the front, on the eaſt ſide, was ſuſtained by ramparts of ſquare ſtone, of vaſt bulk, and built up from the valley below, which laſt was 300 cubits high, and being added to that of the edifice amounted to 420 cubits; to which, if we add, 5. The height of the principal tower above all the reſt, viz. 60, will bring it

‡ See *Lightning*.

Jeruſalem.

Jeruſalem.

it to 480 cubits, which, reckoning at two feet to a cubit, will amount to 960 feet; but, according to the length of that meaſure, as others reckon it, viz. at two feet and an half, it will amount to 1200 feet; a prodigious height this from the ground, and ſuch as might well make Joſephus ſay, that the very deſign of it was ſufficient to have turned the brain of any but Solomon. 6. Theſe ramparts, which were raiſed in this manner, to fill up the prodigious chaſm made by the deep valley below, and to make the area of a ſufficient breadth and length for the edifice, were 1000 cubits in length at the bottom, and 800 at the top, and the breadth of them 100 more. 7. The huge buttreſſes which ſupported the ramparts were of the ſame height, ſquare at the top, and 50 cubits broad, and jutted out 150 cubits at the bottom. 8. The ſtones, of which they were built, were, according to Joſephus, 40 cubits long, 12 thick, and 8 high, all of marble, and ſo exquiſitely joined, that they ſeemed one continued piece, or rather poliſhed rock. 9. According to the ſame Jewiſh hiſtorian, there were 1453 columns of Parian marble, and twice that number of pilaſters; and of ſuch thickneſs, that three men could hardly embrace them, and their height and capitals proportionable, and of the Corinthian order. But it is likely Joſephus hath given us theſe two laſt articles from the temple of Herod, there being nothing like them mentioned by the ſacred hiſtorians, but a great deal about the prodigious cedars of Lebanon uſed in that noble edifice, the excellent workmanſhip of them adapted to their ſeveral ends and deſigns, together with their gildings and other curious ornaments. The only thing more we ſhall venture to add is, what is affirmed in Scripture, that all the materials of this ſtupendous fabric were finiſhed and adapted to their ſeveral ends before they were brought to Jeruſalem, that is, the ſtones in their quarries, and the cedars in Lebanon; ſo that there was no noiſe of ax, hammer, or any tool, heard in the rearing of it.

At preſent Jeruſalem is called by the Turks *Cudſembaric*, and *Coudſheriff*; and is reduced to a poor thinly inhabited town, about three miles in circumference, ſituated on a rocky mountain, ſurrounded on all ſides except the north, with ſteep aſcents and deep valleys; and theſe again environed with other hills, at ſome diſtance from them. In the neighbourhood of the city there grow ſome corn, vines, olives, &c. The ſtately church erected by the empreſs Helena, on mount Calvary, is ſtill ſtanding. It is called the *church of the ſepulchre*; and is kept in good repair by the generous offerings of a conſtant concourſe of pilgrims, who annually reſort to it, as well as by the contributions of ſeveral Chriſtian princes. The walls of this church are of ſtone, and the roof of cedar; the eaſt end incloſes Mount Calvary, and the weſt the holy ſepulchre: the former is covered with a noble cupola, open at top, and ſupported by 16 maſſive columns. Over the high altar, at the eaſt end, is another ſtately dome. The nave of the church conſtitutes the choir; and in the inſide iſles are ſhown the places where the moſt remarkable circumſtances of our Saviour's paſſion were tranſacted, together with the tombs of Godfrey and Baldwin, the two firſt Chriſtian kings of Jeruſalem. In the chapel of the crucifixion is ſhown the very hole in the rock in which the croſs is ſaid to have been fixed. The altar in this chapel hath three croſſes on it; and is richly adorned, particularly with four lamps of immenſe value that hang before it, and are kept conſtantly burning. At the weſt end is that of the ſepulchre, which is hewn in that form out of the ſolid rock, and hath a ſmall dome ſupported by pillars of porphyry. The cloiſter round the ſepulchre is divided into ſundry chapels appropriated to the ſeveral ſorts of Chriſtians who reſide there; as Greeks, Armenians, Maronites, Jacobites, Copts, Abyſſines, Georgians, &c. and on the north-weſt ſide of it are the apartments of the Latins, who have the care of the church, and are forced to reſide conſtantly in it; the Turks keeping the keys of it, and not ſuffering any of them to go out, but obliging them to receive their proviſions in at a wicket. At Eaſter there are ſome grand ceremonies performed in the church, repreſenting our Lord's paſſion, crucifixion, death, and reſurrection, at which a vaſt concourſe of pilgrims commonly aſſiſt. For a particular account of them, we refer the reader to Doctors Shaw and Pococke.

On Mount Moriah, on the ſouth-eaſt part of the city, is an edifice called *Solomon's Temple*, ſtanding on or near the ſame ſpot as the ancient; but when or by whom erected is uncertain. In the midſt of it is a Turkiſh moſque, where the Jewiſh ſanctum ſanctorum is ſuppoſed to have ſtood. The building, which Dr Pococke thinks muſt have been formerly a Chriſtian church, is held in the utmoſt veneration by the Turks.

The city is now under the government of a ſangiac, who reſides in a houſe ſaid to have been that of Pontius Pilate, over-againſt the caſtle of Antonia built by Herod the Great. Many of the churches erected in memory of ſome remarkable goſpel-tranſaction, have been ſince converted into moſques; into ſome of which money will procure admittance, but not into others. Both the friars and other Chriſtians are kept ſo poor by the tyranny of the government, that the chief ſupport and trade of the place conſiſts in providing ſtrangers with food and other accommodations, and ſelling them beads, relics, and other trinkets, for which they are obliged to pay conſiderable ſums to the ſangiac, as well as to his officers; and thoſe are ſeldom ſo well contented with their uſual duties, but they frequently extort ſome freſh ones, eſpecially from the Franciſcans, whoſe convent is the common receptacle for all pilgrims, and for which they have conſiderable allowances from the pope, and other crowned heads, beſides the preſents which ſtrangers generally make them at their departure. The moſt remarkable antiquities in the neighbourhood of Jeruſalem are, 1. The pools of Betheſda and Gihon; the former 120 paces long, 40 broad, and at leaſt eight deep, but now without water; and the old arches, which it ſtill diſcovers at the weſt end, are quite dammed up: the other, which is about a quarter of a mile without Bethlehem-gate, is a very ſtately relic, 106 paces long, and 60 broad, lined with a wall and plaſter, and ſtill well ſtored with water. 2. The tomb of the Virgin Mary, in the valley of Jehoſhaphat, into which one deſcends by a magnificent flight of 47 ſteps. On the right hand as one goes down, is alſo the ſepulchre of St Ann the mother, and on the left that of Joſeph the huſband, of the virgin-mother: ſome add likewiſe that of Jehoiakim her father. In all theſe are erected altars for prieſts of all ſorts to ſay maſs, and the whole is cut into the ſolid rock. 3. The tomb of king Jehoſhaphat, cut likewiſe into the rock and divided into ſeveral apartments; in one of which is his tomb, which is adorned with a ſtately portico and entablature over it. 4. That commonly called *Abſalom's pillar* or *place*, as being generally ſuppoſed to be that which he is ſaid to have erected in his life-time to perpetuate his memory, as he had no male-iſſue. The place, however, both within and without, hath more the reſemblance of a ſepulchre than any thing elſe: though we do not read that he was buried there, neither do the people here affirm that he was. There is a great heap of ſtones about it, which is continually increaſing; the ſuperſtitious Jews and Turks always throwing ſome as they paſs, in token of their abhorrence of Abſalom's unnatural rebellion againſt ſo good and holy a parent. The ſtructure itſelf is about 20 cubits ſquare, and 60 high, riſing in a lofty ſquare, adorned below with four columns of the Ionic order, with their capitals, entablatures, &c. to each front. From the height of 20 to 40 cubits, it is ſomewhat leſs, and quite plain, excepting a ſmall fillet at the upper end; and from 40 to the top it changes into a round, which grows gradually into a point, the whole cut out of the ſolid rock. There is a room within, conſiderably higher than the level of the ground without, on the ſides of which are niches probably to receive coffins. 5. A little eaſtward of this is that called the *tomb of Zechariah*, the ſon of Barachiah, whom the Jews ſlew between the temple and the altar, as is commonly ſuppoſed. This fabric is all cut out of the natural rock, 18 feet high, and as many ſquare; and adorned with Ionic columns on each front, cut out likewiſe of the ſame rock, and ſupporting a cornice. The whole ends in a pointed top, like a diamond. But the moſt curious, grand, and elaborate pieces, in this kind, are the grotts without the walls of Jeruſalem, ſtyled the *royal ſepulchres*; but of what kings is not agreed on. They conſiſt of a great number of apartments, ſome of them ſpacious, all cut out of the ſolid marble rock; and may juſtly be pronounced a royal work, and one of the moſt noble, ſurpriſing and magnificent. For a particular account of them we muſt refer the reader, for want of room, to Pococke's Travels. In the neighbourhood of Jeruſalem is a ſpot of ground, about 30 yards long and 15 broad, now the burying-place of the Armenians, which is ſhown as the Aceldama, or Field of Blood, formerly the Potter's Field, and ſince ſtyled *Campo Sancto*, or the *Holy Field*, purchaſed with the price of Judas's treaſon, for the burial of ſtrangers. It is walled round, to prevent the Turks abuſing the bones of Chriſtians; and one half of it is taken up by a building in the nature of a charnel houſe. Beſides the above, a great many other antiquities in the city and its environs are ſhown to ſtrangers; there being ſcarce any place or tranſaction mentioned either in the Old or New Teſtament, but they ſhow the very ſpot of ground where the one ſtood and the other was done; not only here, but all over Judæa.

JESI, an ancient town of Italy, in the territory of the church, and in the marca or march of Ancona, with a biſhop's ſee. It is ſeated on a mountain, near a river of the ſame name, in E. Long. 12. 20. N. Lat. 43. 50.

JESSO, JEDSO, or *Yadſo*, a large iſland of Aſia to the north of Niphon, and ſaid to be governed by a prince tributary to the empire of Japan; but is very little known to the Europeans, ſo that nothing can be ſaid with certainty concerning it.

JESSES, ribbonds that hang down from garlands or crowns in falconry; alſo ſhort ſtraps of leather faſtened to the hawk's legs, and ſo to vervels.

JESTING, or *conciſe wit*, as diſtinguiſhed from continued wit or humour, lies either in the thought, or the language, or both. In the firſt caſe it does not depend upon any particular words or turn of the expreſſion. But the greateſt fund of jeſts lies in the language, *i. e.* in tropes or verbal figures; thoſe afforded by tropes conſiſt in the metaphorical ſenſe of the words, and thoſe of verbal figures principally turn upon a double ſenſe of the ſame word, or a ſimilitude of ſound in different words. The third kind of jokes, which lie both in the ſenſe and language, ariſe from figures of ſentences, where the figure itſelf conſiſts in the ſenſe, but the wit turns upon the choice of the words.

1 Foundation of the order.

2 Confirmed by the pope, and from what motives.

JESUITS, or *the Society of* JESUS; a famous religious order of the Romiſh church, founded by Ignatius Loyola. See IGNATIUS.—The plan which this fanatic formed of its conſtitution and laws was ſuggeſted, as he gave out, and as his followers ſtill teach, by the immediate inſpiration of heaven. But notwithſtanding this high pretenſion, his deſign met at firſt with violent oppoſition. The pope, to whom Loyola had applied for the ſanction of his authority to confirm the inſtitution, referred his petition to a committee of cardinals. They repreſented the eſtabliſhment to be unneceſſary as well as dangerous, and Paul refuſed to grant his approbation of it. At laſt, Loyola removed all his ſcruples by an offer which it was impoſſible for any pope to reſiſt. He propoſed, that beſides the three vows of poverty, of chaſtity, and of monaſtic obedience, which are common to all the orders of regulars, the members of his ſociety ſhould take a fourth vow of obedience to the pope, binding themſelves to go whitherſoever he ſhould command for the ſervice of religion, and without requiring any thing from the holy ſee for their ſupport. At a time when the papal authority had received ſuch a ſhock by the revolt of ſo many nations from the Romiſh church; at a time when every part of the popiſh ſyſtem was attacked with ſo much violence and ſucceſs, the acquiſition of a body of men, thus peculiarly devoted to the ſee of Rome, and whom it might ſet in oppoſition to all its enemies, was an object of the higheſt conſequence. Paul inſtantly perceiving this, confirmed the inſtitution of the Jeſuits by his bull, granted the moſt ample privileges to the members of the ſociety, and appointed Loyola to be the firſt general of the order. The event hath fully juſtified Paul's diſcernment, in expecting ſuch beneficial conſequences to the ſee of Rome from this inſtitution. In leſs than half a century, the ſociety obtained eſtabliſhments in every country that adhered to the Roman-catholic church; its power and wealth increaſed amazingly; the number of its members became great; their character as well as accompliſhments were ſtill greater; and the Jeſuits were celebrated by the friends and dreaded by the enemies of the Romiſh faith as the moſt able and enterpriſing order in the church.

The conſtitution and laws of the ſociety were perfected by Laynez and Aquaviva, the two generals who ſucceeded Loyola, men far ſuperior to their maſter in abilities and in the ſcience of government. They framed that ſyſtem of profound and artful policy which diſtinguiſhes the order. The large infuſion of fanaticiſm mingled with its regulation ſhould be imputed to Loyola its founder. Many circumſtances concurred in giving a peculiarity of character to the order of Jeſuits, and in forming the members of it not only to take greater part in the affairs of the world than any other body of monks, but to acquire ſuperior influence in the conduct of them.

3
The object of the order ſingular.

The primary object of almoſt all the monaſtic orders is to ſeparate men from the world, and from any concern in its affairs. In the ſolitude and ſilence of the cloiſter, the monk is called to work out his own ſalvation by extraordinary acts of mortification and piety. He is dead to the world, and ought not to mingle in its tranſactions. He can be of no benefit to mankind but by his example and by his prayers. On the contrary, the Jeſuits are taught to conſider themſelves as formed for action. They are choſen ſoldiers, bound to exert themſelves continually in the ſervice of God, and of the pope his vicar on earth. Whatever tends to inſtruct the ignorant, whatever can be of uſe to reclaim or to oppoſe the enemies of the holy ſee, is their proper object. That they may have full leiſure for this active ſervice, they are totally exempted from thoſe functions the performance of which is the chief buſineſs of other monks. They appear in no proceſſions; they practice no rigorous auſterities; they do not conſume one half of their time in the repetition of tedious offices: but they are required to attend to all the tranſactions of the world, on account of the influence which theſe may have upon religion; they are directed to ſtudy the diſpoſitions of perſons in high rank, and to cultivate their friendſhip; and by the very conſtitution as well as genius of the order, a ſpirit of action and intrigue is infuſed into all its members.

4
Peculiarities in its policy.

As the object of the ſociety of Jeſuits differed from that of the other monaſtic orders, the diverſity was no leſs in the form of its government. The other orders are to be conſidered as voluntary aſſociations, in which whatever affects the whole body is regulated by the common ſuffrage of all its members. The executive power is veſted in the perſons placed at the head of each convent or of the whole ſociety; the legiſlative authority reſides in the community. Affairs of moment, relating to particular convents, are determined in conventual chapters; ſuch as reſpect the whole order are conſidered in general congregations. But Loyola, full of the ideas of implicit obedience, which he had derived from his military profeſſion, appointed that the government of his order ſhould be purely monarchial. A general, choſen for life by deputies from the ſeveral provinces, poſſeſſed power that was ſupreme and independent, extending to every perſon and to every caſe. He, by his ſole authority, nominated provincials, rectors, and every other officer employed in the government of the ſociety, and could remove them at pleaſure. In him was veſted the ſovereign adminiſtration of the revenues and funds of the order. Every member belonging to it was at his diſpoſal; and by his uncontrollable mandate he could impoſe on them any taſk, or employ them in what ſervice ſoever he pleaſed.

5
Power of the general.

To his commands they were required to yield not only outward obedience, but to reſign up to him the inclinations of their own wills and the ſentiments of their own underſtandings. They were to liſten to his injunctions as if they had been uttered by Chriſt himſelf. Under his direction they were to be mere paſſive inſtruments, like clay in the hands of the potter, or like dead carcaſes incapable of reſiſtance. Such a ſingular form of policy could not fail to impreſs its character on all the members of the order, and to give a peculiar force to all its operations. There is not, in the annals of mankind, any example of ſuch a perfect deſpotiſm, exerciſed not over monks ſhut up in the cells of a convent, but over men diſperſed among all the nations of the earth.

As the conſtitutions of the order veſt in the general ſuch abſolute dominion over all its members, they carefully provide for his being perfectly informed with reſpect to the character and abilities of his ſubjects. Every novice who offers himſelf as a candidate for entering into the order, is obliged to manifeſt his conſcience to the ſuperior, or a perſon appointed by him; and is required to confeſs not only his ſins and defects, but to diſcover the inclinations, the paſſions, and the bent of his ſoul. This manifeſtation muſt be renewed every ſix months. The ſociety, not ſatisfied with penetrating in this manner into the innermoſt receſſes of the heart, directs each member to obſerve the words and actions of the novices: they are conſtituted ſpies upon their conduct, and are bound to diſcloſe every thing of importance concerning them to the ſuperior. In order that this ſcrutiny into their character may be as complete as poſſible, a long noviciate muſt expire, during which they paſs through the ſeveral gradations of ranks in the ſociety; and they muſt have attained the full age of thirty-three years before they can be admitted to take the final vows, by which they become profeſſed members. By theſe various methods, the ſuperiors, under whoſe immediate inſpection the novices are placed, acquire a thorough knowledge of their diſpoſitions and talents. In order that the general, who is the ſoul that animates and moves the whole ſociety, may have under his eye every thing neceſſary to inform or direct him, the provincials and heads of the ſeveral houſes are obliged to tranſmit to him regular and frequent reports concerning the members under their inſpection. In theſe they deſcend into minute details with reſpect to the character of each perſon, his abilities natural or acquired, his temper, his experience in affairs, and the particular department for which he is beſt fitted. Theſe reports, when digeſted and arranged, are entered into regiſters kept on purpoſe, that the general may, at one comprehenſive view, ſurvey the ſtate of the ſociety in every corner of the earth; obſerve the qualifications and talents of its members; and thus chooſe, with perfect information, the inſtruments which his abſolute power can employ in any ſervice for which he thinks meet to deſtine them.

6
Progreſs of the power and influence of the order.

As it was the profeſſed intention of the order of Jeſuits to labour with unwearied zeal in promoting the ſalvation of men, this engaged them of courſe in many active functions. From their firſt inſtitution, they conſidered the education of youth as their peculiar province; they aimed at being ſpiritual guides and confeſſors; they preached frequently in order to inſtruct the people; they ſet out as miſſionaries to convert unbelieving nations. The novelty of the inſtitution, as well as the ſingularity of its objects, procured the order many admirers and patrons. The governors of the ſociety had the addreſs to avail themſelves of every circumſtance in its favour; and in a ſhort time the number as well as influence of its members increaſed wonderfully. Before the expiration of the ſixteenth century, the Jeſuits had obtained the chief direction of the education of youth in every catholic country in Europe. They had become the confeſſors of almoſt all its monarchs; a function of no ſmall importance in any reign, but, under a weak prince, ſuperior even to that of miniſter. They were the ſpiritual guides of almoſt every perſon eminent for rank or power. They poſſeſſed the higheſt degree of confidence and intereſt with the papal court, as the moſt zealous and able champions for its authority. The advantages which an active and enterpriſing body of men might derive from all theſe circumſtances are obvious. They formed the minds of men in their youth. They retained an aſcendant over them in their advanced years. They poſſeſſed, at different periods, the direction of the moſt conſiderable courts in Europe. They mingled in all affairs. They took part in every intrigue and revolution. The general, by means of the extenſive intelligence which he received, could regulate the operations of the order with the moſt perfect diſcernment; and, by means of his abſolute power, could carry them on with the utmoſt vigour and effect.

7 Of its wealth.

Together with the power of the order, its wealth continued to increaſe. Various expedients were deviſed for eluding the obligation of the vow of poverty. The order acquired ample poſſeſſions in every catholic country; and by the number as well as magnificence of its public buildings, together with the value of its property, moveable or real, it vied with the moſt opulent of the monaſtic fraternities. Beſides the ſources of wealth common to all the regular clergy, the Jeſuits poſſeſſed one which was peculiar to themſelves. Under pretext of promoting the ſucceſs of their miſſions, and of facilitating the ſupport of their miſſionaries, they obtained a ſpecial licence from the court of Rome to trade with the nations which they laboured to convert. In conſequence of this, they engaged in an extenſive and lucrative commerce both in the Eaſt and Weſt Indies. They opened warehouſes in different parts of Europe, in which they vended their commodities. Not ſatisfied with trade alone, they imitated the example of other commercial ſocieties, and aimed at obtaining ſettlements. They acquired poſſeſſion accordingly of a large and fertile province in the ſouthern continent of America, and reigned as ſovereigns over ſome hundred thouſand ſubjects.

8 Pernicious effects of theſe on civil ſociety.

Unhappily for mankind, the vaſt influence which the order of Jeſuits acquired by all theſe different means, has been often exerted with the moſt pernicious effect. Such was the tendency of that diſcipline obſerved by the ſociety in forming its members, and ſuch the fundamental maxims in its conſtitution, that every Jeſuit was taught to regard the intereſt of the order as the capital object to which every conſideration was to be ſacrificed. This ſpirit of attachment to their order, the moſt ardent perhaps that ever influenced any body of men, is the characteriſtic principle of the Jeſuits, and ſerves as a key to the genius of their policy as well as the peculiarities in their ſentiments and conduct.

As it was for the honour and advantage of the ſociety that its members ſhould poſſeſs an aſcendant over perſons in high rank or of great power; the deſire of acquiring and preſerving ſuch a direction of their conduct with greater facility, has led the Jeſuits to propagate a ſyſtem of relaxed and pliant morality, which accommodates itſelf to the paſſions of men, which juſtifies their vices, which tolerates their imperfections, which authoriſes almoſt every action that the moſt audacious or crafty politician would wiſh to perpetrate.

As the proſperity of the order was intimately connected with the preſervation of the papal authority, the Jeſuits, influenced by the ſame principle of attachment to the intereſts of their ſociety, have been the moſt zealous patrons of thoſe doctrines which tend to exalt eccleſiaſtical power on the ruins of civil government. They have attributed to the court of Rome a juriſdiction as extenſive and abſolute as was claimed by the moſt preſumptuous pontiffs in the dark ages. They have contended for the entire independence of eccleſiaſtics on the civil magiſtrates. They have publiſhed ſuch tenets concerning the duty of oppoſing princes who were enemies of the Catholic faith, as countenanced the moſt atrocious crimes, and tended to diſſolve all the ties which connect ſubjects with their rulers.

As the order derived both reputation and authority from the zeal with which it ſtood forth in defence of the Romiſh church againſt the attacks of the reformers, its members, proud of this diſtinction, have conſidered it as their peculiar function to combat the opinions and to check the progreſs of the Proteſtants. They have made uſe of every art, and have employed every weapon againſt them. They have ſet themſelves in oppoſition to every gentle or tolerating meaſure in their favour. They have inceſſantly ſtirred up againſt them all the rage of eccleſiaſtical and civil perſecution.

Monks of other denominations have indeed ventured to teach the ſame pernicious doctrines, and have held opinions equally inconſiſtent with the order and happineſs of civil ſociety. But they, from reaſons which are obvious, have either delivered ſuch opinions with greater reſerve, or have propagated them with leſs ſucceſs. Whoever recollects the events which have happened in Europe during two centuries, will find that the Jeſuits may juſtly be conſidered as reſponſible for moſt of the pernicious effects ariſing from that corrupt and dangerous caſuiſtry, from thoſe extravagant tenets concerning eccleſiaſtical power, and from that intolerant ſpirit, which have been the diſgrace of the church of Rome throughout that period, and which have brought ſo many calamities upon civil ſociety.

9 Some advantages reſulting from the inſtitution of this order.

But, amidſt many bad conſequences flowing from the inſtitution of this order, mankind, it muſt be acknowledged, have derived from it ſome conſiderable advantages. As the Jeſuits made the education of youth one of their capital objects, and as their firſt attempts to eſtabliſh colleges for the reception of ſtudents were violently oppoſed by the univerſities in different countries, it became neceſſary for them, as the moſt effectual method of acquiring the public favour, to ſurpaſs their rivals in ſcience and induſtry. This prompted them to cultivate the ſtudy of ancient literature with extraordinary ardour. This put them upon various methods for facilitating the inſtruction of youth; and, by the improvements which they made in it, they have contributed ſo much towards the progreſs of polite learning, that on this account they have merited well of ſociety. Nor has the order of Jeſuits been ſucceſsful only in teaching the elements of literature; it has produced likewiſe eminent maſters in many branches of ſcience, and can alone boaſt of a greater number of ingenious authors than all the other religious fraternities taken together.

10 Settlement in Paraguay.

But it is in the new world that the Jeſuits have exhibited the moſt wonderful diſplay of their abilities, and have contributed more effectually to the benefit of the human ſpecies. The conquerors of that unfortunate quarter of the globe had nothing in view but to plunder, to enſlave, and to exterminate its inhabitants. The Jeſuits alone have made humanity the object of their ſettling there. About the beginning of the laſt century, they obtained admiſſion into the fertile province of Paraguay, which ſtretches acroſs the ſouthern continent of America, from the bottom of the mountains of Potoſi to the confines of the Spaniſh and Portugueſe ſettlements on the banks of the river de la Plata. They found the inhabitants in a ſtate little different from that which takes place among men when they firſt begin to unite together; ſtrangers to the arts, ſubſiſting precariouſly by hunting or fiſhing, and hardly acquainted with the firſt principles of ſubordination and government. The Jeſuits ſet themſelves to inſtruct and to civilize theſe ſavages. They taught them to cultivate the ground, to rear tame animals, and to build houſes. They brought them to live together in villages. They trained them to arts and manufactures. They made them taſte the ſweets of ſociety, and accuſtomed them to the bleſſings of ſecurity and order. Theſe people became the ſubjects of their benefactors, who have governed them with a tender attention, reſembling that with which a father directs his children. Reſpected and beloved almoſt to adoration, a few Jeſuits preſided over ſome hundred thouſand Indians. They maintained a perfect equality among all the members of the community. Each of them was obliged to labour, not for himſelf alone, but for the public. The produce of their fields, together with the fruits of their induſtry of every ſpecies, were depoſited in common ſtore-houſes, from which each individual received every thing neceſſary for the ſupply of his wants. By this inſtitution, almoſt all the paſſions which diſturb the peace of ſociety, and render the members of it unhappy, were extinguiſhed. A few magiſtrates, choſen by the Indians themſelves, watched over the public tranquillity, and ſecured obedience to the laws. The ſanguinary puniſhments frequent under other governments were unknown. An admonition from a Jeſuit, a ſlight mark of infamy, or, on ſome ſingular occaſion, a few laſhes with a whip, were ſufficient to maintain good order among theſe innocent and happy people.

But even in this meritorious effort of the Jeſuits for the good of mankind, the genius and ſpirit of their order have mingled and are diſcernible. They plainly aimed at eſtabliſhing in Paraguay an independent empire, ſubject to the ſociety alone, and which, by the ſuperior excellence of its conſtitution and police, could ſcarcely have failed to extend its dominion over all the ſouthern continent of America. With this view, in order to prevent the Spaniards or Portugueſe in the adjacent ſettlements from acquiring any dangerous influence over the people within the limits of the province ſubject to the ſociety, the Jeſuits endeavoured to inſpire the Indians with hatred and contempt of theſe nations. They cut off all intercourſe between their ſubjects and the Spaniſh or Portugueſe ſettlements. They prohibited any private trader of either nation from entering their territories. When they were obliged to admit any perſon in a public character from the neighbouring governments, they did not permit him to have any converſation with their ſubjects; and no Indian was allowed even to enter the houſe where theſe ſtrangers reſided unleſs in the preſence of a Jeſuit. In order to render any communication between them as difficult as poſſible, they induſtriouſly avoided giving the Indians any knowledge of the Spaniſh or of any other European language; but encouraged the different tribes which they had civilized to acquire a certain dialect of the Indian tongue, and laboured to make that the univerſal language throughout their dominions. As all theſe precautions, without military force, would have been inſufficient to have rendered their empire ſecure and permanent, they inſtructed their ſubjects in the European arts of war. They formed them into bodies of cavalry and infantry, completely armed and regularly diſciplined. They provided a great train of artillery, as well as magazines ſtored with all the implements of war. Thus they eſtabliſhed an army ſo numerous and well-appointed, as to be formidable in a country where a few ſickly and ill-diſciplined battalions compoſed all the military force kept on foot by the Spaniards or Portugueſe.

11 Downfal of the order in Europe.

Such were the laws, the policy, and the genius of this formidable order; of which, however, a perfect knowledge has only been attainable of late. Europe had obſerved, for two centuries, the ambition and power of the order. But while it felt many fatal effects of theſe, it could not fully diſcern the cauſes to which they were to be imputed. It was unacquainted with many of the ſingular regulations in the political conſtitution or government of the Jeſuits, which formed the enterpriſing ſpirit of intrigue that diſtinguiſhed its members, and elevated the body itſelf to ſuch a height of power. It was a fundamental maxim with the Jeſuits, from their firſt inſtitution, not to publiſh the rules of their order. Theſe they kept concealed as an impenetrable myſtery. They never communicated them to ſtrangers, nor even to the greater part of their own members. They refuſed to produce them when required by courts of juſtice; and, by a ſtrange ſoleciſm in policy, the civil power in different countries authoriſed or connived at the eſtabliſhment of an order of men, whoſe conſtitution and laws were concealed with a ſolicitude which alone was a good reaſon for having excluded them. During the proſecutions lately carried on againſt them in Portugal and France, the Jeſuits have been ſo inconſiderate as to produce the myſterious volumes of their inſtitute. By the aid of theſe authentic records, the principles of their government may be delineated, and the ſources of their power inveſtigated with a degree of certainty and preciſion which, previous to that event, it was impoſſible to attain.

The pernicious effects, however, of the ſpirit and conſtitution of this order, rendered it early obnoxious to ſome of the principal powers in Europe, and gradually brought on its downfal. The emperor Charles V. ſaw it expedient to check its progreſs in his dominions; it was expelled England, by proclamation 2 James I. in 1604; Venice, in 1606; Portugal, in 1759; France, in 1764; Spain and Sicily, in 1767; and totally ſuppreſſed and aboliſhed by the late Pope Clement XIV. in 1773.

JESUITS BARK. See the article CINCHONA.

The account there given being, however, ſomewhat defective and indiſtinct in regard both to the enumeration of the ſpecies and the botanical diſtinctions, it has been thought proper to ſupply thoſe defects in this place by the following more particular deſcriptions and additional notices concerning an article of ſo great importance in the materia medica.

“ 1. CINCHONA *OFFICINALIS* (Quinquina *Condam. Acta Gallic.* 1738), *PERUVIAN-BARK Tree* The characters are as follows.

Plate CCLII.

“ *Cal.* Perianthium monophyllum, ſuperum, quinquefidum, minimum, perſiſtens. *Cor.* monopetala, infundibuliformis; tubus cylindricus, longus; limbus patulus, quinquefidus, acutus. *Stam.* Filamenta quinque, minima; antheræ oblongæ, intra faucem corollæ. *Piſt.* Germen ſubrotundum, inferum; ſtylus longitudine corollæ, ſtigma craſſiuſculum, oblongum, ſimplex. *Per.* Capſula ſubrotunda; calyce coronata, bilocularis, a baſi verſus apicem bifariam dehiſcens. *Sem.* plurima, oblonga, compreſſa, marginata. *Obſerv.* Flos interdum demit quintam partem numeri in ſingulis partibus.”

In Vol. XL. of the Phil. Tranſ. p. 81. N° 446. there is an account of the Jeſuits-bark tree of Peru by Mr William Arrot.—M. de la Condamine afterwards gave a more particular and ſcientific account of this tree: ſince which, ſpecimens of the fructification have been ſent to Europe; and Dr Pulteney has given an excellent figure in his inaugural diſſertation *De Cortice Peruviano* in 1764, from which our figure is copied.

The properties and preparations of the Peruvian bark have been already ſufficiently detailed under the article CINCHONA. We ſhall here add the following notice of a new preparation of this bark recommended by M. Lunel. He directs to “ boil ſix grains of ſalt of tartar with an ounce of bark in a pint of water; and, after filtering the decoction, another pint of water is to be boiled with the ſame quantity of ſalt and the remaining bark. In this way no bitterneſs remains; at the ſame time that the ſtrength of the bark appears to be completely exhauſted, as alcohol only extracted two grains of reſin from it.”

2. CINCHONA *CARIBÆA ſeu JAMAICENSIS.* Of this bark Dr Wright has given an accurate deſcription with an elegant engraving in the Phil. Tranſ. vol. lxvii. p. 504, from which we ſhall extract the botanic characters ſo as to diſtinguiſh it from other ſpecies.

Plate CCLIII.

“ *Fol.* ovata, integerrima, acuta, enervia, oppoſita. *Flor.* ſingulares, axillares. *Cal.* Perianthium monophyllum, quinquefidum, minimum, perſiſtens, campanulatum, obſoletiſſimi, quinquedentatum. *Cor.* monopetala, infundibuliformis; tubus cylindraceus, longiſſimus; limbus quinquepartitus, tubo æqualis; laciniis ovatis, oblongis, reflexis, quandoque pendulis. *Stam.* Filamenta quinque, filiformia, erecta e medio tubi, longitudine corollæ; antheræ longiſſimæ, obtuſæ, erectæ ſupra baſin exteriorem, affixæ in fauce corollæ. *Capſ.* bipartibilis, in duas partes diſſepimento parallelo, latere inferiore dehiſcens. *Sem.* plurima, compreſſa, marginata, oblonga.”

Dr Wright at firſt found this tree of a ſmall ſize; ſince which he diſcovered it 50 feet high, and of a proportional thickneſs.

The bark from the larger trunk is very fibrous and woody; that from the limbs and roots, when dry, breaks ſhort off, and powders eaſier than the Peruvian bark. The Jeſuits bark of Jamaica is one of the moſt agreeable bitters; and infuſed in wine or ſpirits with a little lemon peel, makes a rich and elegant tincture.

In the north ſide of Jamaica, where this bark is produced in the greateſt perfection, it is held in high eſteem, and anſwers every purpoſe of the Jeſuits bark. It ſits eaſy on the ſtomach, and never occaſions vomiting nor nauſea, but checks them in remitting fevers, or where the ſtomach is weak or diſordered.

3. CINCHONA *TRIFLORA*: “ *Foliis* oppoſitis, ovatis, acutis, integerrimis, petiolatis; *Floribus* tribus, axillaribus.”

The leaves are like the Cinchona Caribæa, but larger. The flowers three in number from the axillæ of the leaves, and of a fine red colour. The laciniæ are reflected. The ſeed-veſſels are larger than any of the other ſpecies we have yet ſeen.

Mr Roberts diſcovered this bark tree about the year 1781, but found it no where elſe than in that diſtrict of Jamaica called *Manchioneel.* It grows by the ſide of a ſmall rapid river near the Bath, and is about 35 feet high, but not thick in proportion.

Towards the bottom of the trunk the bark is rough and furrowed; but higher up it is ſmooth, and has much the appearance of the Peruvian bark. It is thinner, more fibrous, and redder, than either the Peruvian or the Jamaica bark already mentioned. When powdered, it is of a cinnamon colour, inclining more to red. The taſte is muſty, bitter, and aſtringent. It yields its qualities either infuſed in wine or ſpirits, but with ſome difficulty to cold infuſion by water.

Trials have been made with this bark in the cure of fevers, and in ſeveral with ſucceſs. But few people could bear more than 20 grains, and even that quantity ſometimes occaſioned ſo diſtreſſing a ſickneſs and nauſea that its exhibition has been in general left off.

4. CINCHONA *FLORIBUNDA*, (Phil. Tranſ. vol. lxxiv. tab. 19. page 452.), *St LUCIA-BARK Tree.* “ Cinchona *floribus* panniculatis, glabris; laciniis linearibus, tubo longioribus; ſtaminis exſertis; *foliis* ellipticis, glabris.”

The ſpecimen of this bark we have examined was externally ſmooth; it was thin, and very fibrous. Its taſte was a moſt nauſeous bitter, that laſted long in the mouth; its aſtringent quality was more than the Peruvian bark.

This bark is violently emetic when freſh; but on long keeping, it loſes this quality in part only, as no more than 20 grains can be ventured on, and its repetition at ſeveral hours diſtance.

Intermitting and remitting fevers have been cured by this bark, after reſiſting the uſe of the Peruvian bark. But it is probable that in thoſe caſes the cure was effected more from its emetic powers than by its tonic virtues. At preſent, however, it has gone into diſuſe, except perhaps in the iſlands where it grows, or where the Peruvian bark has either failed, or cannot eaſily be got to hand.

5. CINCHONA *BRACHYCARPA*: "*Foliis* ellipticis, rigidis, obtuſis, glabris; *Floribus* panniculatis, glabris; *Capſulis* ovatis, coſtatis.

Mr John Lindſay ſurgeon, Weſtmoreland, Jamaica, an expert and diligent botaniſt, diſcovered this ſpecies about the year 1785. It grew on the ſide of a ſteep hill or eminence running from eaſt to weſt, and the tree was only about eight or ten feet high.

The leaves in a recent ſtate were oval, ſhining, and rigid; the ſprig dries with great difficulty, and turns to a ruſty brown. The ſpike has many white flowers, ſimilar in figure to thoſe of the St Lucia bark tree. The ſeed-veſſels are larger than thoſe of the Peruvian. The ſeeds are ſmall and ſcaly. The trunks of this ſmall tree are much furrowed; the cuticle very thick; the bark farther up, ſmooth and brown; that of the inſide is of the colour of the Peruvian bark, but more fibrous. It has no aroma; and is leſs bitter, but more aſtringent, than the cinchona officinalis.

Mr Lindſay has made trial of this bark in the cure of intermitting and remitting fevers with ſucceſs. He finds that the ſtomach will bear 25 or 30 grains very well. He has uſed it alſo in tincture and decoction, in various caſes of dyſpepſia, with advantage. On the whole, were this bark to be had in ſufficient quantity, it promiſes to be an uſeful ſuccedaneum to the Peruvian bark.

6. CINCHONA *ANGUSTIFOLIA*: "*Floribus* panniculatis glabris; *Capſulis* oblongis pentagonis; *Foliis* linearibus lanceolatis." (Vide *Act. Stockholm*, vol. viii. 1787, p. 117. Tab. 3.)

7. CINCHONA *MONTANA*. This ſpecies, which is a native of Gaudaloupe and Martinico, was firſt deſcribed by M. Mallet, in the *Journal de Phyſique* for March 1781, under the name of *Quinquina Piton*; and is ſaid to have been employed by the author with the happieſt effects, in intermittent fevers, even after the Peruvian bark had failed.—It has ſince been ſcientifically deſcribed, and a figure of it given by M. Badier in the *Journal de Phyſique*, Feb. 1789, under the name of "*Cinchona Montana*, foliis ovatis utrinque glabris, ſtipulis baſi connato-vaginantibus, corymbo terminali, corollis glabris." It is deſcribed as a very beautiful tree, growing more than 40 feet high, and having a large regular head of branches with a thick foliage. The bark, when the epidermis is removed, is of a grey-brown colour, and its taſte very bitter. It would ſeem to contain no reſin, all its extract being ſoluble in water. It is however repreſented as a very quick and powerful febrifuge, as we have already noticed; at the ſame time that it poſſeſſes an emetic and cathartic property. To theſe poſſibly its effect on fever may be in part owing; though whether its evacuating qualities will admit of its ever becoming a good ſubſtitute for the officinalis, or whether it poſſeſſes any tonic power, remains yet to be determined.

8. CINCHONA *SPINOSA*; thus deſcribed in the *Journal de Phyſique* for October 1790. "Foliis minimis ſubrotundis, pedunculis unifloris, corollis glabris quadrifidis tetrandris, ſeminibus ſubmarginatis." It is a native of St Domingo. The flowers are like thoſe of the Caribæa, but ſmaller by a half. It is but a ſhrubby plant, not exceeding eight or ten feet in height. The leaves are ſmall and very glabrous, and the branches terminated by a ſpine. The peculiar properties of this bark, or its comparative efficacy as a medicine, have not yet been aſcertained.

9, 10. In the *Manuel des Vegetaux* by M. de St Germain, we find two ſpecies mentioned under the names of *Cinchona Antillana* and *Cinchona Herbacea*; but as no deſcriptions are added, we can ſay nothing concerning them.

11. A bark under the name of ANGUSTURA BARK has lately been introduced into practice as a ſubſtitute for the Peruvian bark. See London Medical Journal, vol. x. page 154.

This bark is of much the ſame colour and thickneſs as the canella aromatica, and powders very freely. It has a good deal of the aromatic taſte joined to bitterneſs and aſtringency; and has been ſuppoſed a true ſpecies of cinchona, different from the blancha or white ſort mentioned by Mr William Arrot in Phil. Tranſ. vol. xl. n° 446. Mr Bruce, however, is ſaid to have pronounced it to be the bark of the *Brucea antidyſenterica*; to which indeed the reſemblance is very conſiderable in its effects.

The Anguſtura bark was ſuppoſed at firſt to be the production of a tree growing on the coaſt of Africa; but is now found to come from the Spaniſh Main. According to *Experiments and Obſervations on the Anguſtura bark*, by Auguſtus Everard Brande, juſt publiſhed, it is ſaid to excel the Peruvian bark in ſome of its properties, and in other diſeaſes to have different qualities. It is a powerful bitter, joined with an aroma not more pungent than the caſcarilla, having a portion of pure oil which approaches in its nature to camphor. It differs from the Peruvian bark, by poſſeſſing a narcotic principle; and ſeems more powerful than it both as a tonic and an antiſeptic. Various experiments on the antiſeptic power of different ſubſtances are related, in which the columbo ſeems the leaſt efficacious, and the Anguſtura bark to claim the higheſt rank. The following is given as the beſt mode of preparing the extract.

"The quantity of extract obtained by the following method is ſomewhat leſs than by boiling, but it appears altogether the beſt. Four ounces of powdered Anguſtura bark were put into a flannel bag of a conical ſhape: a ſufficiency of boiling water was then poured upon it, and this repeated till the filtering liquor had but little taſte or colour. On evaporation by a gentle heat, there remained 13 drams and one ſcruple of an extract, poſſeſſing the full flavour of the bark, and which contained two drams of reſinous matter."

Half a pound of bruiſed Anguſtura bark was put into a ſtill with a gallon of water, and two quarts drawn off. This diſtilled water has a very ſingular flavour, perhaps ſomething like ſtrong parſley water. A white eſſential oil ſwam on the ſurface, but in too ſmall a quantity for ſeparation or aſcertaining its weight. This poſſeſſes the full ſmell of the bark, and is acrid to the taſte, leaving a glow in the mouth like camphire. From ſix pounds of this bark, it is ſaid, only two ſcruples of eſſential oil have been obtained by diſtillation.—The tincture ſeems alſo an uſeful preparation, but the reſin in its pure ſtate appears acrid and ſtimulating.

In Mr Brande's practice this bark ſeems to have excelled the Peruvian in curing intermittents: Dr Pearſon, however, found that it was ſcarcely ſuperior in any inſtance, and ſometimes not equal; but in low fevers, and putrid fevers, it ſeemed ſuperior. In the headach, attended with fever, but ariſing from the ſtomach, Mr

Brande found it uſeful; and in dyſentery and dyſpepſia it has been of great ſervice.

JESUS *the Son of Sirach*, a native of Jeruſalem, compoſed, about 200 B. C. the book of Eccleſiaſticus, called by the Greeks Πανάρετος, "repleniſhed with virtue;" who alſo quote it under the title of *the Wiſdom of Solomon the ſon of Sirach*. His grandſon, who was alſo of the ſame name, and a native of Jeruſalem, tranſlated it from the Hebrew into Greek about 121 B. C. We have this Greek verſion, but the Hebrew text is loſt.

Jesus Christ, the ſon of God, and Saviour of mankind, deſcended from heaven, and took upon him the human nature in Judæa, towards the concluſion of the reign of Herod the Great, king of that country. The place of his birth was Bethlehem, a flouriſhing city of Judah; but the year in which he was born is not preciſely aſcertained. The moſt general opinion is, that it happened about the year of Rome 748 or 749, and about 18 months before the death of Herod. Four inſpired writers have tranſmitted to us an account of the life of Jeſus Chriſt. They mention particularly his birth, lineage, family, and parents; but ſay very little concerning his infancy and earlier youth. Herod being informed that the Meſſiah, or king of the Jews, ſo much ſpoken of by the prophets, was now born, being afraid that his kingdom ſhould now be taken away, contrived how to deſtroy his ſuppoſed rival: but Chriſt, being carried, while very young, into Egypt, eſcaped the cruelty of the tyrant; who, being determined to make ſure work, made a general maſſacre of the infants about Bethlehem, from the age of two years and under.

After the death of Herod, our Saviour was brought back to Judæa; but we are totally ignorant of what his employment was during the interval between his return thither and the time of his entering upon the miniſtry. We know only, that when he was but 12 years of age, he diſputed in the temple with the moſt learned of the Jewiſh doctors; whom he ſurpriſed with his knowledge, and the anſwers he gave to their queſtions. After this, as the ſcripture tells us, he continued with his parents, and was ſubject to them, till he entered upon his miniſtry. It is ſaid, indeed, though upon no ſure foundation, that during this period he followed the trade of his father, who was a carpenter. In the 30th year of his age, he began his public miniſtry; to which the attention of the people was drawn by the preaching of John, a prophet miraculouſly inſpired of God to proclaim the exiſtence of the Saviour, as now deſcended upon earth, and viſible to the eyes of all; and by this prophet Chriſt himſelf was baptiſed in the waters of Jordan, that he might not, in any point, neglect to anſwer the demands of the Jewiſh law.

It is not neceſſary here to enter into a particular detail of the life and actions of Jeſus Chriſt. Every one knows, that his life was one continued ſcene of the moſt perfect ſanctity, and the pureſt and moſt active virtue; not only without ſpot, but alſo beyond the reach of ſuſpicion. And it is alſo well known, that by miracles of the moſt ſtupendous kind, and not more ſtupendous than ſalutary and beneficent, he diſplayed to the univerſe the truth of that religion which he brought with him from above, and demonſtrated the reality of his divine commiſſion in the moſt illuſtrious manner. For the propagation of his religion through the country of Judæa, our Saviour choſe 12 apoſtles; whom, however, he ſent out only once, and after their return kept them conſtantly about his perſon. But, beſides theſe, he choſe other 70, whom he diſperſed throughout the country.

There have been many conjectures concerning the reaſon why the number of apoſtles was fixed at 12, and that of the other teachers at 70. The firſt, however, was, according to our Saviour's own words (Matt. xix. 28.), an alluſion to the 12 tribes of Iſrael, thereby intimating that he was the king of theſe 12 tribes; and as the number of his other meſſengers anſwers evidently to that of the ſenators who compoſed the Sanhedrim, there is a high degree of probability in the conjecture of thoſe who think that Chriſt by this number deſigned to admoniſh the Jews, that the authority of their Sanhedrim was now at an end, and that all power with reſpect to religious matters was veſted in him alone. His miniſtry, however, was confined to the Jews; nor, while he remained upon earth, did he permit his apoſtles or diſciples to extend their labours beyond this favoured nation. At the ſame time, if we conſider the illuſtrious acts of mercy and benevolence that were performed by Chriſt, it will be natural to conclude, that his fame muſt ſoon have ſpread abroad in other countries. Indeed this ſeems probable from a paſſage in ſcripture, where we are told that ſome Greeks applied to the apoſtle Philip in order to ſee Jeſus. We learn alſo from authors of no ſmall note, that Abgarus† king of Edeſſa, being ſeized with a ſevere and dangerous illneſs, wrote to our Lord, imploring his aſſiſtance; and that Jeſus not only ſent him a gracious anſwer, but alſo accompanied it with his picture, as a mark of his eſteem for that pious prince. Theſe letters are ſtill extant; but by the judicious part of mankind are univerſally looked upon as ſpurious; and indeed the late Mr Jones, in his treatiſe entitled *A new and full method of ſettling the canonical authority of the New Teſtament*, hath offered reaſons which ſeem almoſt unanſwerable againſt the authenticity of the whole tranſaction.

The preaching of our Saviour, and the numberleſs miracles he performed, made ſuch an impreſſion on the body of the Jewiſh nation, that the chief prieſts and leading men, jealous of his authority, and provoked at his reproaching them with their wicked lives, formed a conſpiracy againſt him. For a conſiderable time their deſigns proved abortive; but at laſt Jeſus, knowing that he had fulfilled every purpoſe for which he came into the world, ſuffered himſelf to be taken through the treachery of one of his diſciples, named *Judas Iſcariot*, and was brought before the Sanhedrim. In this aſſembly he was accuſed of blaſphemy; and being afterwards brought before Pilate the Roman governor, where he was accuſed of ſedition, Pilate was no ſooner ſat down to judge in this cauſe, than he received a meſſage from his wife, deſiring him to have nothing to do with the affair, having that very day had a frightful dream on account of our Saviour, whom ſhe called *that juſt man*. The governor, intimidated by this meſſage, and ſtill more by the majeſty of our Saviour himſelf, and the evident falſehood of the accuſations brought againſt him, was determined if poſſible to ſave him. But the clamours of an enraged populace, who at laſt threatened to accuſe Pilate himſelf as a traitor to the Roman emperor, got the better of his love of juſtice, which indeed on other occaſions was not very fervent.

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† See *Abgarus*.

Our Saviour was now condemned by his judge, though contrary to the plaineſt dictates of reaſon and juſtice; was executed on a croſs between two thieves, and very ſoon expired. Having continued three days in a ſtate of death, he roſe from the dead, and made himſelf viſible to his diſciples as formerly. He converſed with them 40 days after his reſurrection, and employed himſelf during that time in inſtructing them more fully concerning the nature of his kingdom; and having manifeſted the certainty of his reſurrection to as many witneſſes as he thought proper, he was, in the preſence of many of his diſciples, taken up into heaven, there to remain till the end of the world. See CHRISTIANITY.

JET, a black inflammable ſubſtance of the bituminous kind, harder than aſphaltum, and ſuſceptible of a good poliſh. It becomes electrical by rubbing, attracting light bodies like yellow amber. It ſwims on water, ſo that its ſpecific gravity muſt be leſs than 1000; notwithſtanding which it has been frequently confounded with the *lapis obſidianus*, the ſpecific gravity of which according to Kirwan, is no leſs than 1744. It alſo reſembles cannel coal extremely in its hardneſs, receiving a poliſh, not ſoiling the fingers, &c. ſo that it has alſo been confounded with this. The diſtinction, however, is eaſily made betwixt the two; for cannel-coal wants the electrical properties of jet, and is likewiſe ſo heavy as to ſink in water; its ſpecific gravity being no leſs than 1273; whereas that of jet, as has already been ſaid, is leſs than 1000.

M. Magellan is of opinion that jet is a true amber, differing from the yellow kind only in the mere circumſtance of colour, and being lighter on account of the greater quantity of bituminous matter which enters into its compoſition. When burning it emits a bituminous ſmell. It is never found in ſtrata or continued maſſes like foſſil ſtones; but always in ſeparate and unconnected heaps like the true amber. Great quantities of it have been dug up in the Pyrenæan mountains; alſo near *Bata ka*, a ſmall town of Portugal; and in Galicia in Spain. It is found alſo in Ireland, Sweden, Pruſſia, Germany, and Italy. It is uſed in making ſmall boxes, buttons, bracelets, mourning jewels, &c. Sometimes alſo it is employed in conjunction with proper oils in making varniſhes. When mixed with lime in powder, it is ſaid to make an extraordinary hard and durable cement.

Jet-d'Eau, a French term, frequently alſo uſed with us, for a fountain that caſts up water to a conſiderable height in the air. See HYDROSTATICS, n° 27.; and ICELAND, n° 3. 4.

JETTY-HEAD, a name uſually given in the royal dockyards to that part of a wharf which projects beyond the reſt; but more particularly the front of a wharf, whoſe ſide forms one of the cheeks of a dry or wet dock.

JEWEL, any precious ſtone, or ornament beſet with them. See DIAMOND, RUBY, &c.

JEWELS made a part of the ornaments with which the Jews, Greeks and Romans, eſpecially their ladies of diſtinction, adorned themſelves. So prodigious was the extravagance of the Roman ladies, in particular, that Pliny the elder ſays he ſaw Lollio Paulina with an equipage of this kind amounting, according to Dr Arbuthnot's calculation, to 322,916l, 13s. 4d. of ſterl. money. It is worthy of obſervation, that precious ſtones amongſt the Romans and all the ancients were much ſcarcer, and conſequently in higher eſteem, than they are amongſt us, ſince a commerce has been opened with the Indies.—The ancients did not know how to cut and poliſh them to much perfection; but coloured ſtones were not ſcarce, and they cut them very well either hollow or in relief.—When luxury had gained ground amongſt them the Romans hung pendants and pearls in their ears; and for this purpoſe the ears of both ſexes were frequently bored. See EARS.

JEWEL (John), a learned Engliſh writer and biſhop, was born in 1522, and educated at Oxford. In 1540 he proceeded A. B. became a noted tutor, and was ſoon after choſen rhetoric lecturer in his college. In February 1544, he commenced A. M. He had early imbibed Proteſtant principles, and inculcated the ſame to his pupils; but this was carried on privately till the acceſſion of King Edward VI. in 1546, when he made a public declaration of his faith, and entered into a cloſe friendſhip with Peter Martyr, who was made profeſſor of divinity at Oxford. In 1550, he took the degree of B. D. and frequently preached before the univerſity with great applauſe. At the ſame time he preached and catechiſed every other Sunday at Sunningwell in Berkſhire, of which church he was rector. Upon the acceſſion of Queen Mary to the crown in 1553, he was one of the firſt who felt the rage of the ſtorm then raiſed againſt the reformation; for before any law was made, or order given by the queen, he was expelled Corpus Chriſti college by the ſellows, by their own private authority; but he continued in Oxford till he was called upon to ſubſcribe to ſome of the Popiſh doctrines, under the ſevereſt penalties, which he ſubmitted to. However, this did not procure his ſafety; for he was obliged to fly, and, after encountering many difficulties, arrived at Franckfort, in the 2d year of Queen Mary's reign, where he made a public recantation of his ſubſcription to the Popiſh doctrines. Thence he went to Straſburg, and afterwards to Zurich, where he attended Peter Martyr, in whoſe houſe he reſided. He returned to England in 1558, after Queen Mary's death; and in 1559, was conſecrated biſhop of Saliſbury. This promotion was given him as a reward for his great merit and learning; and another atteſtation of theſe was given him by the univerſity of Oxford, who, in 1565, conferred on him in his abſence the degree of D. D. In this character he attended the queen to Oxford the following year, and preſided at the divinity diſputations held before her majeſty on that occaſion. He had before greatly diſtinguiſhed himſelf by a ſermon preached at St Paul's-croſs, preſently after he was made a biſhop, wherein he gave a public challenge to all the Roman catholics in the world, to produce but one clear and evident teſtimony out of any father or famous writer, who flouriſhed within 600 years after Chriſt, for any one of the articles which the Romaniſts maintain againſt the church of England; and, two years afterwards, he publiſhed his famous apology for this church. In the mean time, he gave a particular attention to his dioceſe; where he began in his firſt viſitation, and perfected in his laſt, ſuch a reformation, not only in his cathedral and parochial churches, but in all the churches of his juriſdiction, as procured him and the whole order of biſhops due reverence and eſteem. For he was a careful overlooker and ſtrict obſerver, not only of all the flocks, but alſo of the paſtors, in his dioceſe: and he watched ſo narrowly upon the proceedings of his chancellor and archdeacons, and of his ſtewards and receivers, that they had no opportunities of being guilty of oppreſſion, injuſtice, or extortion, nor of being a burden to the people, or a ſcandal to himſelf. To prevent theſe and the like abuſes, for which the eccleſiaſtical courts are often too juſtly cenſured, he ſat often in his conſiſtory-court, and ſaw that all things were carried rightly there: he alſo ſat often as aſſiſtant on the bench of civil juſtice, being himſelf a juſtice of the peace. Amidſt theſe employments, however, the care of his health was too much neglected; to which, indeed, his general courſe of life was totally unfavourable. He roſe at four o'clock in the morning; and, after prayers with his family at five, and in the cathedral about ſix, he was ſo fixed to his ſtudies all the morning, that he could not without great violence be drawn from them. After dinner, his doors and ears were open to all ſuitors; and it was obſerved of him, as of Titus, that he never ſent any ſad from him. Suitors being thus diſmiſſed, he heard, with great impartiality and patience, ſuch cauſes debated before him, as either devolved to him as a judge, or were referred to him as an arbitrator; and if he could ſpare any time from theſe, he reckoned it as clear gain to his ſtudy. About nine at night he called all his ſervants to an account how they had ſpent the day, and he went to prayers with them. From the chapel he withdrew again to his ſtudy till near midnight, and from thence to his bed; in which when he was laid, the gentleman of his bed-chamber read to him till he fell aſleep. This watchful and laborious life, without any recreation at all, except what his neceſſary refreſhment at meals and a very few hours of reſt afforded him, waſted his life too faſt. He died at Monkton-Farley, in 1571, in the 50th year of his age. He wrote, 1. A view of a ſeditious bull ſent into England by Pope Pius V. in 1569. 2. A treatiſe on the holy Scriptures. 3. An expoſition of St Paul's two epiſtles to the Theſſalonians. 4. A treatiſe on the ſacrament. 5. An apology for the national church. 6. Several ſermons, controverſial treatiſes, and other works.

"This excellent prelate (ſays the Rev. Mr Granger) was one of the greateſt champions of the reformed religion, as he was to the church of England what Bellarmine was to that of Rome. His admirable Apology was tranſlated from the Latin by Anne, the ſecond of the four learned daughters of Sir Anthony Coke, and mother of Sir Francis Bacon. It was publiſhed, as it came from her pen, in 1564, with the approbation of the queen and the prelates. The ſame Apology was printed in Greek at Conſtantinople, under the direction of St Cyril the patriarch. His Defence of his Apology, againſt Harding and other Popiſh divines, was in ſuch eſteem, that Queen Elizabeth, King James I. King Charles I. and four ſucceſſive archbiſhops, ordered it to be kept chained in all pariſh-churches for public uſe.

Jewel-Blocks, in the ſea-language, a name given to two ſmall blocks which are ſuſpended at the extremity of the main and fore-top-ſail yards, by means of an eye-bolt driven from without into the middle of the yard-arm, parallel to its axis. The uſe of theſe blocks is, to retain the upper-part of the top-maſt ſtudding-ſails beyond the ſkirts of the top-ſails, ſo that each of thoſe ſails may have its full force of action, which would be diminiſhed by the encroachment of the other over its ſurface. The *haliards*, by which thoſe ſtudding-ſails are hoiſted, are accordingly paſſed through the jewel-blocks; whence, communicating with a block on the top-maſt head, they lead downwards to the top or decks, where they may be conveniently hoiſted. See SAIL.

JEWS, a name derived from the patriarch Judah, and given to the deſcendants of Abraham by his eldeſt ſon Iſaac, who for a long time poſſeſſed the land of Paleſtine in Aſia, and are now diſperſed through all nations in the world.

The hiſtory of this people, as it is the moſt ſingular, ſo is it alſo the moſt ancient in the world; and the greateſt part being before the beginning of profane hiſtory, depends entirely on the authenticity of the Old Teſtament, where it is only to be found.—To repeat here what is ſaid in the ſacred writings would both be ſuperfluous and tedious, as thoſe writings are in every perſons hands, and may be conſulted at pleaſure. It ſeems moſt proper therefore to commence the hiſtory of the Jews from their return to Jeruſalem from Babylon, and the rebuilding of their city and temple under Ezra and Nehemiah, when the ſcripture leaves off any farther accounts, and profane hiſtorians begin to take notice of them. We ſhall, however, premiſe a chronological liſt of their judges and kings down to the captivity.

The Iſraelites had no king of their nation till Saul. Before him, they were governed, at firſt by elders, as in Egypt; then by princes of God's appointment, as Moſes and Joſhua; then by Judges, ſuch as Othniel, Ehud, Shamgar, Gideon, Jephthah, Samſon, Eli, Samuel; and laſt of all by kings, as Saul, David, Solomon, Rehoboam, &c.

A liſt of the Judges of Iſrael in a chronological order. The numbers prefixed denote the years of the world.

2570. THE death of Joſhua.

2585. The government of the elders for about 15 years.

2592. An anarchy of about ſeven years. The hiſtory of Micah, the conqueſt of the city of Laiſh, by part of the tribe of Dan, and the war undertaken by the 11 tribes againſt Benjamin, are all referred to this time.

2591. The firſt ſervitude under Cuſhan-riſhathaim king of Meſopotamia, began in 2591, and laſted eight years to 2599.

2599. Othniel delivered Iſrael in the 40th year after peace eſtabliſhed in the land by Joſhua.

2662. A peace of about 62 years, from the deliverance procured by Othniel, in 2599, to 2662, when the ſecond ſervitude under Eglon king of the Moabites happened. It laſted 18 years.

2679. Ehud delivers Iſrael.

After him Shamgar governed, and the land was in peace till the 80th year after the firſt deliverance procured by Othniel.

Jews.

2699. The third ſervitude under the Canaanites, which laſted 20 years, from 2699 to 2719.
2719. Deborah and Barak deliver the Iſraelites: from the deliverance procured by Ehud to the end of Deborah and Barak's government, were 40 years.
2768. Abimelech the natural ſon of Gideon is acknowleged king by the Shechemites.
2771. He died at the ſiege of Thebez in Paleſtine.
2772. Tola after Abimelech governs for 23 years, from 2772 to 2795.
2795. Jair ſucceeds Tola, and governs 22 years, from 2795 to 2816.
2799. The fifth ſervitude under the Philiſtines, which laſted 18 years, from 2799 to 2817.
2817. The death of Jair.
2817. Jephthah is choſen head of the Iſraelites beyond Jordan, he defeated the Ammonites, who oppreſſed them. Jephthah governed ſix years, from 2817 to 2823.
2823. The death of Jephthah.
2830. Ibzan governs ſeven years, from 2823 to 2830.
2840. Elon ſucceeds Ibzan. He governs from 2830 to 2840.
Abdon judges Iſrael eight years, from 2840 to 2848.
2848. The ſixth ſervitude, under the Philiſtines, which laſted 40 years from 2848 to 2888.
2848. Eli the high prieſt, of the race of Ithamar, governed 40 years, the whole time of the ſervitude under the Philiſtines.
2849. The birth of Samſon.
2887. The death of Samſon, who was judge of Iſrael during the judicature of Eli the high-prieſt.
2888. The death of Eli, and beginning of Samuel's government, who ſucceeded him.
2909. The election and anointing of Saul, firſt king of the Hebrews.

A chronological liſt of the kings of the Hebrews.

Saul, the firſt king of the Iſraelites, reigned 40 years, from the year of the world 2909 to 2949.

Iſhboſheth the ſon of Saul ſucceeded him, and reigned ſix or ſeven years over part of Iſrael, from 2949 to to 2956.

David was anointed king by Samuel in the year of the world 2934, but did not enjoy the regal power till the death of Saul in 2949, and was not acknowledged king of all Iſrael till after the death of Iſhboſheth in 2956. He died in 2990 at the age of 70.

Solomon his ſon ſucceeded him; he received the royal unction in the year 2989. He reigned alone after the death of David in 2990. He died in 3029, after a reign of 40 years.

After his death, the kingdom was divided; and the ten tribes having choſen Jeroboam for their king, Rehoboam, the ſon of Solomon, reigned only over the tribes of Judah and Benjamin.

The Kings of Judah.

Rehoboam, the ſon and ſucceſſor of Solomon, reigned 17 years; from the year 3029 to 3046.

Abijam, three years, from 3046 to 3049.

Aſa, 41 years, from 3049 to 3090.

Jehoſhaphat, 25 years, from 3090 to 3115.

Jehoram, four years, from 3115 to 3119.

Ahaziah, one year, from 3119 to 3120.

Athaliah, his mother, reigned ſix years, from 3120 to 3126.

Joaſh was ſet upon the throne by Jehoiada the high-prieſt, in 3126. He reigned 40 years, to the year 3165.

Amaziah, 29 years, from 3165 to 3194.

Uzziah, otherwiſe called *Azariah*, reigned 27 years, to the year 3221. Then attempting to offer incenſe in the temple, he was ſtruck with a leproſy, and obliged to quit the government. He lived after this 26 years, and died in 3246.

Jotham his ſon took upon him the government in the year of the world 3221. He reigned alone in 3246, and died in 3262.

Ahaz ſucceeded Jotham in the year of the world 3262. He reigned 16 years, to 3278.

Hezekiah, 28 years, from 3278 to 3306.

Manaſſeh, 55 years, from the year of the world, 3306 to 3361.

Amon, 2 years, from 3361 to 3363.

Joſiah, 31 years, from 3363 to 3394.

Jehoahaz, three months.

Eliakim, or Jehoiakim, 11 years, from the year 3394 to 3405.

Jehoiachin, or Jechoniah, reigned three months and ten days, in the year 3405.

Mattaniah, or Zedekiah, reigned 11 years, from 3405 to 3416. In the laſt year of his reign Jeruſalem was taken, the temple burnt, and Judah carried into captivity, beyond the Euphrates.

Kings of Iſrael.

Jeroboam reigned 22 years, from 3029 to 3051.

Nadab, one year. He died in 3051.

Baaſha, 22 years, from 3052 to 3074.

Elah, two years. He died in 3075.

Zimri, ſeven days.

Omri, 11 years, from 3075 to 3086. He had a competitor Tibni who ſucceeded, and died in what year we know not.

Ahab, 21 years, from 3086 to 3107.

Ahaziah, two years, from 3106 to 3108.

Jehoram, the ſon of Ahab, ſucceeded him in 3108. He reigned 12 years, and died in 3120.

Jehu, uſurped the kingdom in 3120, reigned 28 years, and died in 3148.

Jehoahaz reigned 17 years, from 3148 to 3165.

Joaſh reigned 14 years, from 3165 to 3179.

Jeroboam II. reigned 41 years, from 3179 to 3220.

Zachariah, 12 years, from 3220 to 3232.

Shallum, reigned a month. He was killed in 3233.

Menahem, 10 years, from 3233 to 3243.

Pekahiah, two years, from 3243 to 3245.

Pekah, 20 years, from 3245 to 3265.

Hoſhea, 18 years, from 3265 to 3283. Here the kingdom of Iſrael had an end after a duration of 253 years.

1 Cyrus publiſhes a decree for rebuilding Jeruſalem.

Cyrus the Great, king of Perſia, having conquered Babylon and almoſt all the weſtern parts of Aſia, perceiving the deſolate and ruinous condition in which the province of Paleſtine lay, formed a deſign of reſtoring the Jews to their native country, and permitting them to rebuild Jeruſalem and re-eſtabliſh their worſhip. For this purpoſe he iſſued out a decree in the firſt year of his reign, about 536 B. C. by which they were allowed not only to return and rebuild their city, but to carry along with them all the ſacred veſſels which Nebuchadnezzar had carried off, and engaged to defray the expence of building the temple himſelf. This offer was gladly embraced by the more zealous Jews of the tribes of Judah, Benjamin, and Levi; but many more, being no doubt leſs ſanguine about their religion choſe to ſtay where they were.

2 The temple &c. finiſhed.

In 534 B. C. the foundations of the temple were laid, and matters ſeemed to go on proſperouſly, when the undertaking was ſuddenly obſtructed by the Samaritans. Theſe came at firſt expreſſing an earneſt deſire to aſſiſt in the work, as they worſhipped the ſame God with the Jews; but the latter refuſed their aſſiſtance, as they knew they were not true Iſraelites, but the deſcendants of thoſe heathens who had been tranſplanted into the country of the ten tribes after their captivity by Shalmanezer. This refuſal proved the ſource of all that bitter enmity which afterwards took place between the Jews and Samaritans; and the immediate conſequence was, that the latter made all the oppoſition in their power to the going on of the work. At laſt, however, all obſtacles were ſurmounted, and the temple finiſhed as related in the books of Ezra and Nehemiah. The laſt of theſe chiefs died about 409 B. C. after having reſtored the Jewiſh worſhip to its original purity, and reformed a number of abuſes which took place immediately on its commencement.

3 Adminiſtration of affairs conferred on the high-prieſts.

But though the Jews were now reſtored to the free exerciſe of religion, they were neither a free nor a powerful people as they had formerly been. They were few in number, and their country only a province of Syria, ſubject to the kings of Perſia. The Syrian governors conferred the adminiſtration of affairs upon the high-prieſts; and their accepting this office, and thus deviating from the law of Moſes, muſt be conſidered as one of the chief cauſes of the miſfortunes which immediately befel the people, becauſe it made room for a ſet of men who aſpired at this high office merely through ambition or avarice, without either zeal for religion or love for their country. It beſides made the high-prieſthood capable of being diſpoſed of at the pleaſure of the governors, whereas the Moſaic inſtitution had fixed it unalienably in the family of Aaron.—Of the bad effects of this practice a fatal inſtance happened in 373 B. C. Bagoſes, governor of Syria, having contracted an intimate friendſhip with Jeſhua the brother of Johanan the high-prieſt, promiſed to raiſe him to the pontifical office a few years after his brother had been inveſted with it. Jeſhua came immediately to Jeruſalem, and acquainted his brother with it. Their interview happened in the inner court of the temple; and a ſcuffle enſuing, Jeſhua was killed by his brother, and the temple thus polluted in the moſt ſcandalous manner. The conſequence to the Jews was, that a heavy fine was laid on the temple, which was not taken off till ſeven years after.

4 Interview of the high-prieſt with Alexander the Great.

The firſt public calamity which befel the Jewiſh nation after their reſtoration from Babylon, happened in the year 351 B. C.; for having ſome how or other diſobliged Darius Ochus king of Perſia, he beſieged and took Jericho, and carried off all the inhabitants captives. From this time they continued faithful to the Perſians, inſomuch that they had almoſt drawn upon themſelves the diſpleaſure of Alexander the Great. That monarch having reſolved upon the ſiege of Tyre, and being informed that the city was wholly ſupplied with proviſions from Judea, Samaria, and Galilee, ſent to Jaddua, then high-prieſt, to demand of him that ſupply which he had been accuſtomed to pay to the Perſians. The Jewiſh pontiff excuſed himſelf on account of his oath of fidelity to Darius; which ſo provoked Alexander, that he had no ſooner completed the reduction of Tyre than he marched againſt Jeruſalem. The inhabitants then, being with good reaſon thrown into the utmoſt conſternation, had recourſe to prayers; and Jaddua is ſaid, by a divine revelation, to have been commanded to go and meet Alexander. He obeyed accordingly, and ſet out on his journey, dreſſed in his pontifical robes, at the head of all his prieſts in their proper habits, and attended by the reſt of the people dreſſed in white garments. Alexander is ſaid to have been ſeized with ſuch awful reſpect on ſeeing this venerable proceſſion, that he embraced the high-prieſt, and paid a kind of religious adoration to the name of God engraven on the front of his mitre. His followers being ſurpriſed at this unexpected behaviour, the Macedonian monarch informed them, that he paid that reſpect not to the prieſt, but to his God, as an acknowledgment for a viſion which he had been favoured with at Dia; where he had been promiſed the conqueſt of Perſia, and encouraged in his expedition by a perſon of much the ſame aſpect and dreſſed in the ſame habit with the pontiff before him. He afterwards accompanied Jaddua into Jeruſalem, where he offered ſacrifices in the temple. The high prieſt ſhowed him alſo the prophecies of Daniel, wherein the deſtruction of the Perſian empire by himſelf is plainly ſet forth; in conſequence of which the king went away highly ſatisfied, and at his departure aſked the high-prieſt if there was nothing in which he could gratify himſelf or his people. Jaddua then told him, that, according to the Moſaic law, they never ſowed nor ploughed on the ſeventh year; therefore would eſteem it an high favour if the king would be pleaſed to remit their tribute in that year. To this requeſt the king readily yielded; and having confirmed them in the enjoyment of all their privileges, particularly that of living under their own laws, he departed.

5 Miſerable ſtate of the Jews after Alexander's death.

Whether this ſtory deſerves credit or not (for the whole tranſaction is not without reaſon called in queſtion by ſome), it is certain that the Jews were much favoured by Alexander; but with him their good fortune ſeemed alſo to expire. The country of Judea being ſituated between Syria and Egypt, became ſubject to all the revolutions and wars which the ambitious ſucceſſors of Alexander waged againſt each other. At firſt it was given, together with Syria and Phenicia, to Laomedon the Mitylenian, one of Alexander's generals; but he being ſoon after ſtripped of the other two by Ptolemy, Judea was next ſummoned to yield to the conqueror. The Jews ſcrupled to break their oath of fidelity to Laomedon; and were of conſequence invaded by Ptolemy at the head of a powerful army. The open country was eaſily reduced; but the city being ſtrongly fortified both by art and nature, threatened a ſtrong reſiſtance. A ſuperſtitious fear for breaking the ſabbath, however, prevented the beſieged from making any defence on that day; of which Ptolemy being informed, he cauſed an aſſault to be made on the ſabbath, and eaſily carried the place. At firſt he treated them with great ſeverity, and carried 100,000 men of them into captivity; but reflecting ſoon after on their known fidelity to their conquerors, he reſtored them to all the privileges they had enjoyed under the Macedonians. Of the captives he put ſome into garriſons, and others he ſettled in the countries of Libya and Cyrene. From thoſe who ſettled in the latter of theſe countries deſcended the Cyrenean Jews mentioned by the writers of the New Teſtament.

Five years after Ptolemy had ſubdued Judea, he was forced to yield it to Antigonus, reſerving to himſelf only the cities of Ace, Samaria, Joppa, and Gaza; and carrying off an immenſe booty, together with a great number of captives, whom he ſettled at Alexandria, and endowed with conſiderable privileges and immunities.—Antigonus behaved in ſuch a tyrannical manner, that great numbers of his Jewiſh ſubjects fled into Egypt, and others put themſelves under the protection of Seleucus, who alſo granted them conſiderable privileges. Hence this nation came gradually to be ſpread over Syria and Aſia Minor; while Judea ſeemed to be in danger of being depopulated till it was recovered by Ptolemy in 292. The affairs of the Jews then took a more proſperous turn, and continued in a thriving way till the reign of Ptolemy Philopater, when they were grievouſly oppreſſed by the incurſions of the Samaritans, at the ſame time that Antiochus Theos king of Syria invaded Galilee. Ptolemy, however, marched againſt Antiochus, and defeated him; after which, having gone to Jeruſalem to offer ſacrifices, he ventured to profane the temple itſelf by going into it. He penetrated through the two outer courts; but as he was about to enter the ſanctuary, he was ſtruck with ſuch dread and terror that he fell down half-dead. A dreadful perſecution was then raiſed againſt the Jews, who had attempted to hinder him in his impious attempt; but this perſecution was ſtopped by a ſtill more extraordinary accident related under the article Egypt, n° 30. and the Jews again received into favour.

6 Subdued by Antiochus the Great.

About the year 204 B. C. the country of Judea was ſubdued by Antiochus the Great; and on this occaſion the loyalty of the Jews to the Egyptians failed them, the whole nation readily ſubmitting to the king of Syria. This attachment ſo pleaſed the Syrian monarch, that he ſent a letter to his general, wherein he acquainted him that he deſigned to reſtore Jeruſalem to its ancient ſplendor, and to recal all the Jews that had been driven out of it: that out of his ſingular reſpect to the temple of God, he granted them 20,000 pieces of ſilver, towards the charges of the victims, frankincenſe, wine, and oil; 1400 meaſures of fine wheat, and 375 meaſures of ſalt, towards their uſual oblations: that the temple ſhould be thoroughly repaired at his coſt; that they ſhould enjoy the free exerciſe of their religion; and reſtore the public ſervice of the temple, and the prieſts, Levites, ſingers, &c. to their uſual functions: that no ſtranger, or Jew that was unpurified, ſhould enter farther into the temple than was allowed by their law; and that no fleſh of unclean beaſts ſhould be brought into Jeruſalem; not even their ſkins: and all theſe under the penalty of paying 3000 pieces of ſilver into the treaſury of the temple. He further granted an exemption of taxes for three years to all the diſperſed Jews that ſhould come within a limited time to ſettle in the metropolis; and that all who had been ſold for ſlaves within his dominions ſhould be immediately ſet free.

7 Dreadful commotions.

This ſudden proſperity proved of no long duration. About the year 176, a quarrel happened between Onias at that time high prieſt, and one Simon, governor of the temple, which was attended with the moſt fatal conſequences. The cauſes of this quarrel are unknown. The event, however, was, that Simon finding he could not get the better of Onias; informed Apollonius governor of Cœloſyria and Paleſtine, that there was at that time in the temple an immenſe treaſure, which at his pleaſure might be ſeized upon for the uſe of the king of Syria. Of this the governor inſtantly ſent intelligence to the king, who diſpatched one Heliodorus to take poſſeſſion of the ſuppoſed treaſure. This perſon, through a miraculous interpoſition, as the Jews pretend, failed in his attempt of entering the temple; upon which Simon accuſed the high-prieſt to the people, as the perſon who had invited Heliodorus to Jeruſalem. This produced a kind of civil war, in which many fell on both ſides. At laſt Onias having complained to the king, Simon was baniſhed; but ſoon after, Antiochus Epiphanes having aſcended the throne of Syria, Jaſon, the high-prieſt's brother, taking advantage of the neceſſities of Antiochus, purchaſed from him the high-prieſthood at the price of 350 talents, and obtained an order that his brother ſhould be ſent to Antioch, there to be confined for life.

Jaſon's next ſtep was to purchaſe liberty, at the price of 150 talents more, to build a gymnaſium at Jeruſalem ſimilar to thoſe which were uſed in the Grecian cities; and to make as many Jews as he pleaſed free citizens of Antioch. By means of theſe powers he became very ſoon able to form a ſtrong party in Judea; for his countrymen were exceedingly fond of the Grecian cuſtoms, and the freedom of the city of Antioch was a very valuable privilege. From this time therefore a general apoſtacy took place; the ſervice of the temple was neglected, and Jaſon abandoned himſelf without remorſe to all the impieties and abſurdities of paganiſm.

8 A general apoſtacy takes place.

He did not, however, long enjoy his ill-acquired dignity. Having ſent his brother Menelaus with the uſual tribute to Antiochus, the former took the opportunity of ſupplanting Jaſon in the ſame manner that he had ſupplanted Onias. Having offered for the high-prieſthood 300 talents more than his brother had given, he eaſily obtained it, and returned with his new commiſſion to Jeruſalem. He ſoon got himſelf a ſtrong party; but Jaſon proving too powerful, forced Menelaus and his adherents to retire to Antioch. Here, the better to gain their point, they acquainted Antiochus that they were determined to renounce their old religion, and wholly conform themſelves to that of the Greeks: which ſo pleaſed the tyrant, that he immediately gave them a force ſufficient to drive Jaſon out of Jeruſalem; who thereupon took refuge among the Ammonites.

Menelaus being thus freed from his rival, took care to fulfil his promiſe to the king with regard to the apoſtacy, but forgot to pay the money he had promiſed. At laſt he was ſummoned to Antioch; and finding nothing but the payment of the promiſed ſum would do, ſent orders to his brother Lyſimachus to convey to him as many of the ſacred utenſils belonging to the temple as could be ſpared. As theſe were all of gold, the apoſtate ſoon raiſed a ſufficient ſum from them, not only to ſatisfy the king, but alſo to bribe the courtiers in his favour. But his brother Onias, who had been all this time confined at Antioch, getting intelligence of the ſacrilege, made ſuch bitter complaints, that an inſurrection was ready to take place among the Jews at Antioch. Menelaus, in order to avoid the impending danger, bribed Andronicus, governor of the city, to murder Onias. This produced the moſt vehement complaints, as ſoon as Antiochus returned to the capital (he having been abſent for ſome time in order to quell an inſurrection in Cilicia); which at laſt ended in the death of Andronicus, who was executed by the king's order. By dint of money, however, Menelaus ſtill found means to keep up his credit; but was obliged to draw ſuch large ſums from Jeruſalem, that the inhabitants at laſt maſſacred his brother Lyſimachus, whom he had left governor of the city in his abſence. Antiochus ſoon after took a journey to Tyre; upon which the Jews ſent deputies to him, both to juſtify the death of Lyſimachus, and to accuſe Menelaus of being the author of all the troubles which had happened. The apoſtate, however, was never at a loſs while he could procure money. By means of this powerful argument he pleaded his cauſe ſo effectually, that the deputies were not only caſt, but put to death; and this unjuſt ſentence gave the traitor ſuch a complete victory over all his enemies, that from thenceforth he commenced a downright tyrant. Jeruſalem was deſtitute of protectors; and the ſanhedrim, if there were any zealous men left among them, were ſo much terrified, that they durſt not oppoſe him, though they evidently ſaw that his deſign was finally to eradicate the religion and liberties of his country.

In the mean time, Antiochus was taken up with the conqueſt of Egypt, and a report was ſome how or other ſpread that he had been killed at the ſiege of Alexandria. At this news the Jews imprudently ſhowed ſome ſigns of joy; and Jaſon thinking this a proper opportunity to regain his loſt dignity, appeared before Jeruſalem at the head of about 1000 reſolute men. The gates were quickly opened to him by ſome of his friends in the city; upon which Menelaus retired into the citadel, and Jaſon, minding nothing but his reſentment, committed the moſt horrid butcheries. At laſt he was obliged to leave both the city and country, on the news that Antiochus was coming with a powerful army againſt him; for that prince, highly provoked at this rebellion, and eſpecially at the rejoicings the Jews had made on the report of his death, had actually reſolved to puniſh the city in the ſevereſt manner. Accordingly, about 170 B. C. having made himſelf maſter of the city, he behaved with ſuch cruelty, that within three days they reckoned no fewer than 40,000 killed, and as many ſold for ſlaves. In the midſt of this dreadful calamity, the apoſtate Menelaus found means not only to preſerve himſelf from the general ſlaughter, but even to regain the good graces of the king, who, having by his means plundered the temple of every thing valuable, returned to Antioch in a kind of triumph. Before he departed, however, he put Judea under the government of one Philip, a barbarous Phrygian; Samaria under that of Andronicus, a perſon of a ſimilar diſpoſition; and left Menelaus, the moſt hateful of all the three, in poſſeſſion of the high-prieſthood.

9
Jeruſalem taken by Antiochus Epiphanes.

10
His monſtrous cruelty.

Though the Jews ſuffered exceedingly under theſe tyrannical governors, they were ſtill reſerved for greater calamities. About 168 B. C. Antiochus having been moſt ſeverely mortified by the Romans, took it into his head to wreak his vengeance on the unhappy Jews. For this purpoſe he diſpatched Apollonius at the head of 22,000 men, with orders to plunder all the cities of Judea, to murder all the men, and ſell the women and children for ſlaves. Apollonius accordingly came with his army, and to outward appearance with a peaceable intention; neither was he ſuſpected by the Jews, as he was ſuperintendant of the tribute in Paleſtine. He kept himſelf inactive till the next ſabbath, when they were all in a profound quiet; and then, on a ſudden, commanded his men to arms. Some of them he ſent to the temple and ſynagogues, with orders to cut in pieces all whom they found there; whilſt the reſt going through the ſtreets of the city maſſacred all that came in their way; the ſuperſtitious Jews not attemptting to make the leaſt reſiſtance for fear of breaking the ſabbath. He next ordered the city to be plundered and ſet on fire, pulled down all their ſtately buildings, cauſed the walls to be demoliſhed, and carried away captive about 10,000 of thoſe who had eſcaped the ſlaughter. From that time the ſervice of the temple was totally abandoned; that place having been quite polluted, both with the blood of multitudes who had been killed, and in various other ways. The Syrian troops built a large fortreſs on an eminence in the city of David; fortified it with a ſtrong wall and ſtately towers, and put a garriſon in it to command the temple over-againſt which it was built, ſo that the ſoldiers could eaſily ſee and ſally out upon all thoſe who attempted to come into the temple; ſo many of whom were continually plundered and murdered by them, that the reſt, not daring to ſtay any longer in Jeruſalem, fled for refuge to the neighbouring nations.

11
The temple profaned and the Jewiſh religion aboliſhed.

Antiochus, not yet ſatisfied with the blood of the Jews, reſolved either totally to aboliſh their religion, or deſtroy their whole race. He therefore iſſued out a decree that all nations within his dominions ſhould forſake their old religion and gods, and worſhip thoſe of the king under the moſt ſevere penalties. To make his orders more effectual, he ſent overſeers into every province to ſee them ſtrictly put in execution; and as he knew the Jews were the only people who would diſobey them, ſpecial directions were given to have them treated with the utmoſt ſeverity. Atheneas, an old and cruel miniſter, well verſed in all the pagan rites, was ſent into Judea. He began by dedicating the temple to Jupiter Olympius, and ſetting up his ſtatue on the altar of burnt-offerings. Another leſſer altar was raiſed before it, on which they offered ſacrifices to that falſe deity. All who refuſed to come and worſhip this idol were either maſſacred or put to ſome cruel tortures till they either complied or expired under the hands of the executioners. At the ſame time, altars, groves, and ſtatues, were raiſed every where through the country, and the inhabitants compelled to worſhip them under the ſame ſevere penalties; while it was inſtant death to obſerve the ſabbath, circumciſion, or any other inſtitution of Moſes.

12 Reſtored by Mattathias.

At laſt, when vaſt numbers had been put to cruel deaths, and many more had ſaved their lives by their apoſtacy, an eminent prieſt, named *Mattathias*, began to ſignalize himſelf by his bravery and zeal for religion. He had for ſome time been obliged to retire to Modin his native place, in order to avoid the perſecution which raged at Jeruſalem. During his receſs there, Apelles, one of the king's officers, came to oblige the inhabitants to comply with the abovementioned orders. By him Mattathias and his ſons were addreſſed in the moſt earneſt manner, and had the moſt ample promiſes made them of the king's favour and protection if they would renounce their religion. But Mattathias anſwered, that though the whole Jewiſh nation, and the whole world, were to conform to the king's edict, yet both he and his ſons would continue faithful to their God to the laſt minute of their lives. At the ſame time perceiving one of his countrymen juſt going to offer ſacrifices to an idol, he fell upon him inſtantly and killed him, agreeable to the law of Moſes in ſuch caſes. Upon this his ſons, fired with the ſame zeal, killed the officer and his men; overthrew the altar and idol; and running about the city, cried out, that thoſe who were zealous for the law of God ſhould follow them; by which means they quickly ſaw themſelves at the head of a numerous troop, with whom they ſoon after withdrew into ſome of the deſerts of Judea. They were followed by many others, ſo that in a ſhort time they found themſelves in a condition to reſiſt their enemies; and having conſidered the danger to which they were expoſed by their ſcrupulous obſervance of the ſabbath, they reſolved to defend themſelves, in caſe of an attack, upon that day as well as upon any other.

In the year 167 B. C. Mattathias finding that his followers daily increaſed in number, began to try his ſtrength by attacking the Syrians and apoſtate Jews. As many of theſe as he took he put to death, but forced a much greater number to fly for refuge into foreign countries; and having ſoon ſtruck his enemies with terror, he marched from city to city, overturned the idolatrous altars, opened the Jewiſh ſynagogues, made a diligent ſearch after all the ſacred books, and cauſed freſh copies of them to be written; he alſo cauſed the reading of the Scriptures to be reſumed, and all the males born ſince the perſecution to be circumciſed. In all this he was attended with ſuch ſucceſs, that he had extended his reformation through a conſiderable part of Judea within the ſpace of one year; and would probably have completed it, had he not been prevented by death.

13 Exploits of Judas Maccabeus.

Mattathias was ſucceeded by his ſon Judas, ſurnamed *Maccabeus*, the greateſt uninſpired hero of whom the Jews can boaſt. His troops amounted to no more than 6000 men; yet with theſe he quickly made himſelf maſter of ſome of the ſtrongeſt fortreſſes of Judea, and became terrible to the Syrians, Samaritans, and apoſtate Jews. In one year he defeated the Syrians in five pitched battles, and drove them quite out of the country; after which he purified the temple, and reſtored the true worſhip, which had been interrupted for three years and a half. Only one obſtacle now remained, viz. the Syrian garriſon abovementioned, which had been placed over againſt the temple, and which Judas could not at preſent reduce. In order to prevent them from interrupting the worſhip, however, he fortified the mountain on which the temple ſtood, with an high wall and ſtrong towers round about, leaving a garriſon to defend it; making ſome additional fortifications at the ſame time to Bethzura, a fortreſs at about 20 miles diſtance.

14 Dreadful death of Antiochus Epiphanes.

In the mean time Antiochus being on his return from an unſucceſsful expedition into Perſia, received the diſagreeable news that the Jews had all to a man revolted, defeated his generals, driven their armies out of Judea, and reſtored their ancient worſhip. This threw him into ſuch a fury, that he commanded his charioteer to drive with the utmoſt ſpeed, threatening utterly to extirpate the Jewiſh race, without leaving a ſingle perſon alive. Theſe words were ſcarce uttered, when he was ſeized with a violent pain in his bowels, which no remedy could cure or abate. But notwithſtanding this violent ſhock, ſuffering himſelf to be hurried away by the tranſports of his fury, he gave orders for proceeding with the ſame precipitation in his journey. But while he was thus haſtening forward, he fell from his chariot, and was ſo bruiſed by the fall, that his attendants were forced to put him into a litter. Not being able to bear even the motion of the litter, he was forced to halt at a town called *Tabæ* on the confines of Perſia and Babylonia. Here he kept his bed, ſuffering inexpreſſible torments, occaſioned chiefly by the vermin which bred in his body, and the ſtench, which made him inſupportable even to himſelf. But the torments of his mind, cauſed by his reflecting on the former actions of his life, ſurpaſſed by many degrees thoſe of his body. Polybius, who in his account of this prince's death agrees with the Jewiſh hiſtorians, tells us, that the uneaſineſs of his mind grew at laſt to a conſtant delirium or ſtate of madneſs, by reaſon of ſeveral ſpectres and apparitions of evil genii or ſpirits, which he imagined were continually reproaching him with the many wicked actions of which he had been guilty. At laſt, having languiſhed for ſome time in this miſerable condition, he expired, and by his death freed the Jews from the moſt inveterate enemy they had ever known.

Notwithſtanding the death of Antiochus, however, the war was ſtill carried on againſt the Jews; but through the valour and good conduct of Judas, the Syrians were conſtantly defeated, and in 163 B. C. a peace was concluded upon terms very advantageous to the Jewiſh nation. This tranquillity, however, was of no long continuance; the Syrian generals renewed their hoſtilities, and were attended with the ſame ill ſucceſs as before. Judas defeated them in five engagements; but in the ſixth was abandoned by all his men except 800, who, together with their chief, were ſlain in the year 161 B. C.

15 Exploits of Jonathan, Simon, and Hyrcan.

The news of the death of Judas threw his countrymen into the utmoſt conſternation, and ſeemed to give new life to all their enemies. He was ſucceeded, however, by his brother Jonathan; who conducted matters with no leſs prudence and ſucceſs than Judas had done, till he was treacherouſly ſeized and put to death by Tryphon, a Syrian uſurper, who ſhortly after murdered his own ſovereign. The traitor immediately prepared to invade Judea; but found all his projects fruſtrated by Simon, Jonathan's brother. This pontiff repaired all the fortreſſes of Judea, and furniſhed them with freſh garriſons, took Joppa and Gaza, and drove out the Syrian garriſon from the fortreſs of Jeruſalem; but was at laſt treacherouſly murdered by a ſon-in-law named *Ptolemy*, about 135 B. C.

Simon was ſucceeded by his ſon Hyrcan; who not only ſhook off the yoke of Syria, but conquered the Samaritans, demoliſhed their capital city, and became maſter of all Paleſtine, to which he added the provinces of Samaria and Galilee; all which he enjoyed till within a year of his death, without the leaſt diſturbance from without, or any internal diſcord. His reign was no leſs remarkable on the account of his great wiſdom and piety at home than his conqueſts abroad. He was the firſt ſince the captivity who had aſſumed the royal title; and he raiſed the Jewiſh nation to a greater degree of ſplendor than it had ever enjoyed ſince that time. The author of the fourth book of the Maccabees alſo informs us, that in him three dignities were centered which never met in any other perſon, namely, the royal dignity, the high-prieſthood, and the gift of prophecy. But the inſtances given of this laſt are very equivocal and ſuſpicious. The laſt year of his reign, however, was embittered by a quarrel with the Phariſees; and which proceeded to ſuch a length as was thought to have ſhortened his days. Hyrcan had always been a great friend to that ſect, and they had hitherto enjoyed the moſt honourable employments in the ſtate; but at length one of them, named *Eleazar*, took it into his head to queſtion Hyrcan's legitimacy, alleging, that his mother had formerly been a ſlave, and conſequently that he was incapable of enjoying the high-prieſthood. This report was credited, or pretended to be ſo, by the whole ſect; which irritated the high-prieſt to ſuch a degree, that he joined the Sadducees, and could never afterwards be reconciled to the Phariſees, who therefore raiſed all the troubles and ſeditions they could during the ſhort time he lived.

16
Alexander Jannæus, a great conqueror.

Hyrcan died in 107 B. C. and was ſucceeded by his eldeſt ſon Ariſtobulus, who conquered Iturea, but proved a moſt cruel and barbarous tyrant, polluting his hands with the blood even of his mother and one of his brothers, keeping the reſt cloſely confined during his reign, which, however, was but ſhort. He was ſucceeded in 105 by Alexander Jannæus, the greateſt conqueror, next to king David, that ever ſat on the Jewiſh throne. He was hated, however, by the Phariſees, and once in danger of being killed in a tumult excited by them; but having cauſed his guards to fall upon the mutinous mob, they killed 6000 of them, and diſperſed the reſt. After this, finding it impoſſible to remain in quiet in his own kingdom, he left Jeruſalem, with a deſign to apply himſelf wholly to the extending of his conqueſts; but while he was buſied in ſubduing his foreign enemies, the Phariſees raiſed a rebellion at home. This was quaſhed in the year 86 B. C. and the rebels were treated in the moſt inhuman manner. The faction, however, was by this means ſo thoroughly quelled, that they never dared to lift up their heads as long as he lived; and Alexander having made ſeveral conqueſts in Syria, died about 79 B. C.

The king left two ſons, Hyrcanus and Ariſtobulus; but bequeathed the government to his wife Alexandra as long as ſhe lived: but as he ſaw her greatly afraid, and not without reaſon, of the reſentment of the Phariſees, he deſired his queen, juſt before his death, to ſend for the principal leaders of that party, and pretend to be entirely devoted to them; in which caſe, he aſſured her, that they would ſupport her and her ſons after her in the peaceable poſſeſſion of the government. With this advice the queen complied; but found herſelf much embarraſſed by the turbulent Phariſees, who, after ſeveral exorbitant demands, would at laſt be contented with nothing leſs than the total extermination of their adverſaries the Sadducees. As the queen was unable to reſiſt the ſtrength of the phariſaic faction, a moſt cruel perſecution immediately took place againſt the Sadducees, which continued for four years; until at laſt, upon their earneſt petition, they were diſperſed among the ſeveral garriſons of the kingdom, in order to ſecure them from the violence of their enemies. A few years after this, being ſeized with a dangerous ſickneſs, her youngeſt ſon Ariſtobulus collected a ſtrong party in order to ſecure the crown to himſelf; but the queen, being diſpleaſed with his conduct, appointed her other ſon Hyrcanus, whom ſhe had before made high-prieſt, to ſucceed her alſo in the royal dignity. Soon after this ſhe expired, and left her two ſons competitors for the crown. The Phariſees raiſed an army againſt Ariſtobulus, which almoſt inſtantly deſerted to him, ſo that Hyrcanus found himſelf obliged to accept of peace upon any terms: which, however, was not granted, till the latter had abandoned all title both to the royal and pontifical dignity, and contented himſelf with the enjoyment of his peculiar patrimony as a private perſon.

17
Conteſts between his ſons Hyrcanus and Ariſtobulus.

But this depoſition did not extinguiſh the party of Hyrcanus. A new cabal was raiſed by Antipater an Idumæan proſelyte, and father of Herod the Great; who carried off Hyrcanus into Arabia, under pretence that his life was in danger if he remained in Judea. Here he applied to Aretas king of that country, who undertook to reſtore the depoſed monarch; and for that purpoſe invaded Judea, defeated Ariſtobulus, and kept him cloſely beſieged in Jeruſalem. The latter had recourſe to the Romans; and having bribed Scaurus, one of their generals, he defeated Aretas with the loſs of 7000 of his men, and drove him quite out of the country. The two brothers next ſent preſents to Pompey, at that time commander in chief of all the Roman forces in the eaſt, and whom they made the arbitrator of their differences. But he, fearing that Ariſtobulus, againſt whom he intended to declare, might obſtruct his intended expedition againſt the Nabatheans, diſmiſſed them with a promiſe, that as ſoon as he had ſubdued Aretas, he would come into Judea and decide their controverſy.

18
The Romans called in by Ariſtobulus.

This delay gave ſuch offence to Ariſtobulus, that he ſuddenly departed for Judea without even taking leave of the Roman general, who on his part was no leſs offended at this want of reſpect. The conſequence was, that Pompey entered Judea with thoſe troops with which he had deſigned to act againſt the Nabathæans, and ſummoned Ariſtobulus to appear before him. The Jewiſh prince would gladly have been excuſed; but was forced by his own people to comply with Pompey's ſummons, to avoid a war with that general. He came accordingly more than once or twice to him, and was diſmiſſed with great promiſes and marks of friendſhip. But at laſt Pompey inſiſted, that he ſhould deliver into his hands all the fortified places he poſſeſſed; which let Ariſtobulus plainly ſee that he was in the intereſt of his brother, and upon this he fled to Jeruſalem with a deſign to oppoſe the Romans to the utmoſt of his power. He was quickly followed by Pompey; and to prevent hoſtilities was at laſt forced to go and throw himſelf at the feet of the haughty Roman, and to promiſe him a conſiderable ſum of money as the reward of his forbearance. This ſubmiſſion was accepted; but Gabinus, being ſent with ſome troops to receive the ſtipulated ſum, was repulſed by the garriſon of Jeruſalem, who ſhut the gates againſt him, and refuſed to fulfil the agreement. This diſappointment ſo exaſperated Pompey, that he immediately marched with his whole army againſt the city.

19 Jeruſalem taken by Pompey.

The Roman general firſt ſent propoſals of peace; but finding the Jews reſolved to ſtand out to the laſt, he began the ſiege in form. As the place was ſtrongly fortified both by nature and art, he might have found it very difficult to accompliſh his deſign, had not the Jews been ſuddenly ſeized with a qualm of conſcience reſpecting the obſervance of the ſabbath-day. From the time of the Maccabees they had made no ſcruple of taking up arms againſt an offending enemy on the ſabbath; but now they diſcovered, that though it was lawful on that day to ſtand on their defence in caſe they were actually attacked, yet it was unlawful to do any thing towards the preventing of thoſe preparatives which the enemy made towards ſuch future aſſaults. As therefore they never moved an hand to hinder the erection of mounds and batteries, or the making of breaches in their walls on the ſabbath, the beſiegers at laſt made ſuch a conſiderable breach on that day, that the garriſon could no longer reſiſt them. The city was therefore taken in the year 63 B. C. 12,000 of the inhabitants were ſlaughtered, and many more died by their own hands; while the prieſts, who were offering up the uſual prayers and ſacrifices in the temple, choſe rather to be butchered along with their brethren, than ſuffer divine ſervice to be one moment interrupted. At laſt, after the Romans had ſatiated their cruelty with the death of a vaſt number of the inhabitants, Hyrcanus was reſtored to the pontifical dignity with the title of *prince;* but forbid to aſſume the title of *king*, to wear a diadem, or to extend his territories beyond the limits of Judea. To prevent future revolts, the walls were pulled down; and Scaurus was left governor with a ſufficient force. But before he departed, the Roman general gave the Jews a ſtill greater offence than almoſt any thing he had hitherto done; and that was by entering into the moſt ſacred receſſes of the temple, where he took a view of the golden table, candleſtick, cenſers, lamps, and all the other ſacred veſſels; but, out of reſpect to the Deity, forbore, to touch any of them, and when he came out commanded the prieſts immediately to purify the temple according to cuſtom.

Pompey having thus ſubdued the Jewiſh nation, ſet out for Rome, carrying along with him Ariſtobulus and his two ſons Alexander and Antigonus, as captives to adorn his future triumph. Ariſtobulus himſelf and his ſon Antigonus were led in triumph; but Alexander found means to eſcape into Judea, where he raiſed an army of 10,000 foot and 1500 horſe, and began to fortify ſeveral ſtrong holds, from whence he made incurſions into the neighbouring country. As for Hyrcanus, he had no ſooner found himſelf freed from his rival brother, than he relapſed into his former indolence, leaving the care of all his affairs to Antipater, who, like a true politician, failed not to turn the weakneſs of the prince to his own advantage and the aggrandizing of his family. He foreſaw, however, that he could not eaſily compaſs his ends, unleſs he ingratiated himſelf with the Romans; and therefore ſpared neither pains nor coſt to gain their favour. Scaurus ſoon after received from him a ſupply of corn and other proviſions, without which his army, which he had led againſt the metropolis of Arabia, would have been in danger of periſhing; and after this, he prevailed on the king to pay 300 talents to the Romans, to prevent them from ravaging his country. Hyrcanus was now in no condition to face his enemy Alexander; and therefore had again recourſe to the Romans, Antipater at the ſame time ſending as many troops as he could ſpare to join them. Alexander ventured a battle; but was defeated with conſiderable loſs, and beſieged in a ſtrong fortreſs named *Alexandrion.* Here he would have been forced to ſurrender; but his mother, partly by her addreſs, and partly by the ſervices ſhe found means to do the Roman general, prevailed upon him to grant her ſon a pardon for what was paſt. The fortreſſes were then demoliſhed, that they might not give occaſion to freſh revolts; Hyrcanus was again reſtored to the pontifical dignity; and the province was divided into five ſeveral diſtricts, in each of which a ſeparate court of judicature was erected. The firſt of theſe was at Jeruſalem, the ſecond at Gadara, the third at Amath, the fourth at Jericho, and the fifth at Sephoris in Galilee. Thus was the government changed from a monarchy to an ariſtocracy, and the Jews now fell under a ſet of domineering lords.

20 Jewiſh government changed into an ariſtocracy.

Soon after this, Ariſtobulus found means to eſcape from his confinement at Rome, and raiſed new troubles in Judea, but was again defeated and taken priſoner: his ſon alſo renewed his attempts; but was in like manner defeated, with the loſs of near 10,000 of his followers; after which Gabinius, having ſettled the affairs of Judea to Antipater's mind, reſigned the government of his province to Craſſus. The only tranſaction during his government was his plundering the temple of all its money and ſacred utenſils, amounting in the whole to 10,000 Attic talents, *i. e.* above two millions ſterling. After this ſacrilege, Craſſus ſet out on his expedition againſt Parthia, where he periſhed; and his death was by the Jews interpreted as a divine judgment for his impiety.

21 Jews favoured by Cæſar.

The war between Cæſar and Pompey afforded the Jews ſome reſpite, and likewiſe an opportunity of ingratiating themſelves with the former, which the politic Antipater readily embraced. His ſervices were rewarded by the emperor. He confirmed Hyrcanus in his prieſthood, added to it the principality of Judea to be entailed on his poſterity for ever, and reſtored the Jewiſh nation to their ancient rights and privileges; ordering at the ſame time a pillar to be erected, whereon all theſe grants, and his own decree, ſhould be engraved,

graved, which was accordingly done; and ſoon after, when Cæſar himſelf came into Judea, he granted liberty alſo to fortify the city; and rebuild the wall which had been demoliſhed by Pompey,

22 Herod raiſed to the Jewiſh throne.

During the lifetime of Cæſar, the Jews were ſo highly favoured, that they could ſcarcely be ſaid to feel the Roman yoke. After his death, however, the nation fell into great diſorders; which were not finally quelled till Herod, who was created king of Judea by Marc Anthony in 40 B. C. was fully eſtabliſhed on the throne by the taking of Jeruſalem by his allies the Romans in 37 B. C. The immediate conſequence of this was another cruel pillage and maſſacre: then followed the death of Antigonus the ſon of Ariſtobulus, who had for three years maintained his ground againſt Herod, put to death his brother Phaſael, and cut off Hyrcanus's ears, in order the more effectually to incapacitate him for the high-prieſthood.

23 His tyranny and cruelty.

The Jews gained but little by this change of maſters. The new king proved one of the greateſt tyrants mentioned in hiſtory. He began his reign with a cruel perſecution of thoſe who had ſided with his rival Antigonus; great numbers of whom he put to death, ſeizing and confiſcating their effects for his own uſe. Nay, ſuch was his jealouſy in this laſt reſpect, that he cauſed guards to be placed at the city-gates, in order to watch the bodies of thoſe of the Antigonian faction who were carried out to be buried, leſt ſome of their riches ſhould be carried along with them. His jealouſy next prompted him to decoy Hyrcanus, the baniſhed pontiff, from Parthia, where he had taken refuge, that he might put him to death, tho' contrary to his moſt ſolemn promiſes. His cruelty then fell upon his own family. He had married Mariamne, the daughter of Hyrcanus; whoſe brother, Ariſtobulus, a young prince of great hopes, was made high-prieſt at the interceſſion of his mother Alexandra. But the tyrant, conſcious that Ariſtobulus had a better right to the kingdom than himſelf, cauſed him ſoon after to be drowned in a bath. The next victim was his beloved queen Mariamne herſelf. Herod had been ſummoned to appear firſt before Marc Anthony, and then before Auguſtus, in order to clear himſelf from ſome crimes laid to his charge. As he was, however, doubtful of the event, he left orders, that in caſe he was condemned, Mariamne ſhould be put to death. This, together with the death of her father and brother, gave her ſuch an averſion for him, that ſhe ſhowed it on all occaſions. By this conduct the tyrant's reſentment was at laſt ſo much inflamed, that having got her falſely accuſed of infidelity, ſhe was condemned to die, and executed accordingly. She ſuffered with great reſolution; but with her ended all the happineſs of her huſband. His love for Mariamne increaſed ſo much after her death, that for ſome time he appeared like one quite diſtracted. His remorſe, however, did not get the better of his cruelty. The death of Mariamne was ſoon followed by that of her mother Alexandra, and this by the execution of ſeveral other perſons who had joined with her in an attempt to ſecure the kingdom to the ſons of the deceaſed queen.

Herod, having now freed himſelf from the greateſt part of his ſuppoſed enemies, began to ſhow a greater contempt for the Jewiſh ceremonies than formerly; and introduced a number of heatheniſh games, which made him odious to his ſubjects. Ten bold fellows, at laſt took it into their heads to enter the theatre where the tyrant was celebrating ſome games, with daggers concealed under their clothes, in order to ſtab him or ſome of his retinue. In caſe they ſhould miſcarry in the attempt, they had the deſperate ſatisfaction to think, that, if they periſhed, the tyrant would be rendered ſtill more odious by the puniſhment inflicted on them. They were not miſtaken: for Herod being informed of their deſign by one of his ſpies, and cauſing the aſſaſſins to be put to a moſt excrutiating death, the people were ſo much exaſperated againſt the informer, that they cut and tore him to pieces, and caſt his fleſh to the dogs. Herod tried in vain to diſcover the authors of this affront; but at laſt having cauſed ſome women to be put to the rack, he extorted from them the names of the principal perſons concerned, whom he cauſed immediately to be put to death with their families. This produced ſuch diſturbances, that, apprehending nothing leſs than a general revolt, he ſet about fortifying Jeruſalem with ſeveral additional works, rebuilding Samaria, and putting garriſons into ſeveral fortreſſes in Judea. Notwithſtanding this, however, Herod had ſhortly after an opportunity of regaining the affections of his ſubjects in ſome meaſure, by his generoſity to them during a famine; but as he ſoon relapſed into his former cruelty, their love was again turned into hatred, which continued till his death.

24 Rebuilds the temple.

Herod now, about 23 B. C. began to adorn his cities with many ſtately buildings. The moſt remarkable and magnificent of them all, however, was the temple at Jeruſalem, which he is ſaid to have raiſed to a higher pitch of grandeur than even Solomon himſelf had done. Ten thouſand artificers were immediately ſet to work, under the direction of 1000 prieſts, the beſt ſkilled in carving, maſonry, &c. all of whom were kept in conſtant pay. A thouſand carts were employed in fetching materials; and ſuch a number of other hands were employed, that every thing was got ready within the ſpace of two years. After this they ſet about pulling down the old building, and rearing up the new one with the ſame expedition: ſo that the *holy place*, or temple, properly ſo called, was finiſhed in a year and an half; during which we are told that it never rained in the day-time, but only in the night. The remainder was finiſhed in ſomewhat more than eight years. The *temple*, properly ſo called, or holy place, was but 60 cubits high, and as many in breadth; but in the front he added two wings or ſhoulders which projected 20 cubits more on each ſide, and which in all made a front of 120 cubits in length, and as many in height; with a gate 70 cubits high and 20 in breadth, but open and without any doors. The ſtones were white marble, 25 cubits in length, 12 in height, and 9 in breadth all wrought and poliſhed with exquiſite beauty; the whole reſembling a ſtately palace, whoſe middle being conſiderably raiſed above the extremities of each face, made it afford a beautiful viſta at a great diſtance, to thoſe who came to the metropolis. Inſtead of doors, the gates cloſed with very coſtly veils, enriched with a variety of flowering of gold, ſilver, purple, and every thing that was rich and curious; and on each ſide of the gates were planted two ſtately columns, from whoſe cornices hung golden feſtoons and vines, with their cluſters of grapes, leaves, &c. curiouſly wrought. The ſuperſtructure, however, which was properly reared on the old foundation without ſufficient additions, proved too heavy, and ſunk down about 20 cubits; ſo that its height was reduced to 100. This foundation was of an aſtoniſhing ſtrength and height, of which an account is given under the article JERUSALEM. The platform was a regular ſquare of a ſtadium or furlong on each ſide. Each front of the ſquare had a ſpacious gate or entrance, enriched with ſuitable ornaments; but that on the weſt had four gates, one of which led to the palace, another to the city, and the two others to the ſuburbs and fields. This encloſure was ſurrounded on the outſide with a ſtrong and high wall of large ſtones, well cemented; and on the inſide had on each front a ſtately piazza or gallery, ſupported by columns of ſuch a bigneſs, that three men could but juſt embrace them, their circumference being about 27 feet. There were in all 162 of them, which ſupported a cedar cieling of excellent workmanſhip, and formed three galleries, the middlemoſt of which was the largeſt and higheſt, it being 45 feet in breadth and 100 in height, whereas thoſe on each ſide were but 30 feet wide and 50 in height.

The piazzas and court were paved with marble of various colours; and, at a ſmall diſtance from the galleries, was a ſecond incloſure, ſurrounded with a flight of beautiful marble rails, with ſtately columns at proper diſtances, on which were engraven certain admonitions in Greek and Latin, to forbid ſtrangers, and thoſe Jews that were not purified, to proceed farther upon pain of death. This incloſure had but one gate on the eaſt ſide; none on the weſt; but on the north and ſouth it had three, placed at equal diſtances from each other.

A third incloſure ſurrounded the *temple*, properly ſo called, and the altar of burnt-offerings; and made what they called *the court of the Hebrews* or *Iſraelites*. It was ſquare like the reſt: but the wall on the outſide was ſurrounded by a flight of 14 ſteps, which hid a conſiderable part of it; and on the top was a terrace, of about 15 cubits in breadth, which went quite round the whole cincture. The eaſt ſide had but one gate; the weſt none; and the north and ſouth four, at equal diſtances. Each gate was aſcended by five ſteps more before one could reach the level of the inward court; ſo that the wall which incloſed it appeared within to be but 25 cubits high, though conſiderably higher on the outſide. On the inſide of each of thoſe gates were raiſed a couple of ſpacious ſquare chambers, in form of a pavilion, 30 cubits wide and 40 in height, each ſupported by columns of 12 cubits in circumference.

This incloſure had likewiſe a double flight of galleries on the inſide, ſupported by a double row of columns; but the weſtern ſide was only one continued wall, without gates or galleries. The women had likewiſe their particular courts ſeparate from that of the men, and one of the gates on the north and ſouth leading to it.

The altar of burnt-offerings was likewiſe high and ſpacious, being 40 cubits in breadth, and 15 in height. The aſcent to it was, according to the Moſaic law, ſmooth, and without ſteps; and the altar of unhewn ſtones. It was ſurrounded, at a convenient diſtance, with a low wall or rail, which divided the court of the prieſts from that of the lay Iſraelites; ſo that theſe laſt were allowed to come thus far to bring their offerings and ſacrifices; though none but the prieſts were allowed to come within that incloſure.

Herod cauſed a new dedication of this temple to be performed with the utmoſt magnificence; and preſented to it many rich trophies of his former victories, after the cuſtom of the Jewiſh monarchs.

This, and many other magnificent works, however, did not divert the king's attention from his uſual jealouſies and cruelty. His ſiſter Salome, and one of his ſons named *Antipater*, taking advantage of this diſpoſition, prompted him to murder his two ſons by Mariamne, named *Alexander* and *Ariſtobulus*, who had been educated at the court of Auguſtus in Italy, and were juſtly admired by all who ſaw them. His cruelty ſoon after broke out in an impotent attempt to deſtroy the Saviour of the world, but which was attended with no other conſequence than the deſtruction of 2000 innocent children of his own ſubjects. His miſery was almoſt brought to its ſummit by the diſcovery of Antipater's deſigns againſt himſelf; who was accordingly tried and condemned for treaſon. Something ſtill more dreadful, however, yet awaited him; he was ſeized with a moſt loathſome and incurable diſeaſe, in which he was tormented with intolerable pains, ſo that his life became a burden. 25 His death. At laſt he died, to the great joy of the Jews, five days after he had put Antipater to death, and after having divided his kingdom among his ſons in the following manner.—Archelaus had Judea; Antipas, or Herod, was tetrarch of Galilee and Perea; and Philip had the regions of Trachonitis, Gaulon, Batanea, and Panias, which he erected likewiſe into a tetrarchy. To his ſiſter Salome he gave 50,000 pieces of money, together with the cities of Jamnia, Azotus, and Phaſaelis; beſides ſome conſiderable legacies to his other relations.

The cruelty of this monſter accompanied him to his grave; nay, he in a manner carried it beyond the grave. Being well appriſed that the Jews would rejoice at being freed from ſuch a tyrant, he bethought himſelf of the following infernal ſtratagem to damp their mirth. A few days before his death, he ſummoned all the heads of the Jews to repair to Jericho under pain of death; and, on their arrival, ordered them all to be ſhut up in the circus, giving at the ſame time ſtrict orders to his ſiſter Salome and her huſband to have all the priſoners butchered as ſoon as his breath was gone out. "By this means (ſaid he), I ſhall not only damp the people's joy, but ſecure a real mourning at my death." Theſe cruel orders, however, were not put in execution. Immediately after the king's death, Salome went to the Hippodrome, where the heads of the Jews were detained, cauſed the gates to be flung open, and declared to them, that now the king had no farther occaſion for their attendance, and that they might depart to their reſpective homes; after which, and not till then, the news of the king's death was publiſhed. Tumults, ſeditions, and inſurrections, quickly followed. 26 New diviſion of the kingdom by Auguſtus. Archelaus was oppoſed by his brethren, and obliged to appear at Rome before Auguſtus, to whom many complaints were brought againſt him. After hearing both parties, the emperor made the following diviſion of the kingdom: Archelaus had one half, under the title of *ethnarch*, or governor of a nation; together with a promiſe that he ſhould have the title of *king*, as ſoon as he ſhowed himſelf worthy of it. This ethnarchy contained Judea Propria, Idumea, and Samaria: but this laſt was exempted from one-fourth of the taxes paid by the reſt, on account of the peaceable behaviour of the inhabitants during the late tumults. The remainder was divided between Philip and Herod; the former of whom had Trachonitus, Batanea, and Auranitis, together with a ſmall part of Galilee; the latter had the reſt of Galilee and the countries beyond the Jordan. Salome had half a million of ſilver, together with the cities of Jamnia, Azotus, Phaſaelis, and Aſcalon.

27
Archelaus baniſhed, and a Roman governor appointed over Judæa.

For ſome years Archelaus enjoyed his government in peace: but at laſt, both Jews and Samaritans, tired out with his tyrannical behaviour, joined in a petition to Auguſtus againſt him. The emperor immediately ſummoned him to Rome, where, having heard his accuſation and defence, he baniſhed him to the city of Vienne in Dauphiny, and confiſcated all his effects. Judea being by this ſentence reduced to a Roman province, was ordered to be taxed: and Cyrenius the governor of Syria, a man of conſular dignity, was ſent thither to ſee it put in execution: which having done, and ſold the palaces of Archelaus, and ſeized upon all his treaſure, he returned to Antioch, leaving the Jews in no ſmall ferment on account of this new tax.

Thus were the ſeeds of diſſenſion ſown between the Jews and Romans, which ended in the moſt lamentable cataſtrophe of the former. The Jews, always impatient of a foreign yoke, knew from their prophecies, that the time was now come when the Meſſiah ſhould appear. Of conſequence, as they expected him to be a great and powerful warrior, their rebellious and ſeditious ſpirit was heightened to the greateſt degree; and they imagined they had nothing to do but take up arms, and victory would immediately declare on their ſide. From this time, therefore, the country was never quiet; and the infatuated people, while they rejected the true Meſſiah, gave themſelves up to the direction of every impoſtor who choſe to lead them to their own deſtruction. The governors appointed by the Romans were alſo frequently changed, but ſeldom for the better. About the 16th year of Chriſt, Pontius Pilate was appointed governor; the whole of whoſe adminiſtration, according to Joſephus, was one continued ſcene of venality, rapine, tyranny, and every wicked action; of racking and putting innocent men to death, untried and uncondemned; and of every kind of ſavage cruelty. Such a governor was but ill calculated to appeaſe the ferments occaſioned by the late tax. Indeed Pilate was ſo far from attempting this, that he greatly inflamed them by taking every occaſion of introducing his ſtandards with images and pictures, conſecrated ſhields, &c. into their city; and at laſt attempting to drain the treaſury of the temple, under pretence of bringing an aqueduct into Jeruſalem. The moſt remarkable tranſaction of his government, however, was his condemnation of JESUS CHRIST: ſeven years after which he was removed from Judea; and in a ſhort time Agrippa, the grandſon of Herod the Great, was promoted by Caius to the regal dignity. He did not, however, long enjoy this honour; for, on his coming into Judæa, having raiſed a perſecution againſt the Chriſtians, and blaſphemouſly ſuffering himſelf to be ſtyled a *God* by ſome deputies from Tyre and Sidon, he was miraculouſly ſtruck with a diſeaſe, which ſoon put an end to his life. The ſacred hiſtorian tells us, that he was eaten of worms; and Joſephus, that he was ſeized with moſt violent pains in his heart and bowels; ſo that he could not but reflect on the baſeneſs of thoſe flatterers, who had but lately complimented him with a kind of divine immortality, that was now about to expire in all the torments and agonies of a miſerable mortal.

28
Agrippa made king.

29
The kingdom again reduced to a Roman province.

On the death of Agrippa, Judæa was once more reduced to a province of the Roman empire, and had new governors appointed over it. Theſe were Ventidius, Felix, Feſtus Albinus, and Geſſius Florus. Under their government the Jewiſh affairs went on from bad to worſe; the country ſwarmed with robbers and aſſaſſins; the latter committing every where the moſt unheard-of cruelties under the pretence of religion; and about 64 A. C. were joined by 18,000 workmen who had been employed in further repairing and beautifying the temple. About this time alſo, Geſſius Florus, the laſt and worſt governor the Jews ever had, was ſent into the country. Joſephus ſeems at a loſs for words to deſcribe him by, or a monſter to compare him to. His rapines, cruelties, conniving for large ſums with the banditti, and, in a word, his whole behaviour, were ſo open and barefaced, that he was looked upon by the Jews more like a bloody executioner ſent to butcher, than a magiſtrate to govern them. In this diſtracted ſtate of the country, many of the inhabitants forſook it to ſeek for an aſylum ſomewhere elſe; while thoſe who remained applied themſelves to Ceſtius Gallus, governor of Syria, who was at Jeruſalem at the paſſover; beſeeching him to pity their unhappy ſtate, and free them from the tyranny of a man who had totally ruined their country. Florus, who was preſent when theſe complaints were brought againſt him, made a mere jeſt of them; and Ceſtius, inſtead of making a ſtrict inquiry into his conduct, diſmiſſed the Jews with a general promiſe that the governor ſhould behave better for the future; and ſet himſelf about computing the number of Jews at that time in Jeruſalem, by the number of lambs offered at that feſtival, that he might ſend an account of the whole to Nero. By his computation, there were at that time in Jeruſalem 2,556,000; though Joſephus thinks they rather amounted to 3,000,000.

30
Cauſe of the laſt war with the Romans.

In the year 67 began the fatal war with the Romans, which was ended only by the deſtruction of Jeruſalem. The immediate cauſe was the deciſion of a conteſt with the Syrians concerning the city of Cæſaria. The Jews maintained that this city belonged to them, becauſe it had been built by Herod; and the Syrians pretended that it had always been reckoned a Greek city, ſince even that monarch had reared temples and ſtatues in it. The conteſt at laſt came to ſuch an height, that both parties took up arms againſt each other. Felix put an end to it for a time, by ſending ſome of the chiefs of each nation to Rome, to plead their

31 The Jews terribly maſſacred

their cauſe before the emperor, where it hung in ſuſpenſe till this time, when Nero decided it againſt the Jews. No ſooner was this deciſion made public, than the Jews in all parts of the country flew to arms; and though they were every where the ſufferers, yet, from this fatal period, their rage never abated. Nothing was now to be heard of but robberies, murders, and every kind of cruelty. Cities and villages were filled with dead bodies of all ages, even ſucking babes. The Jews, on their part, ſpared neither Syrians nor Romans, where they got the better of them; and this proved the deſtruction of great numbers of their peaceful brethren: 20,000 were maſſacred at Cæſarea, 50,000 at Alexandria, 2000 at Ptolemais, and 3500 at Jeruſalem.

32 They defeat Ceſtius Gallus.

A great number of aſſaſſins, in the mean time, having joined the factious Jews in Jeruſalem, they beat the Romans out of Antonia, a fortreſs adjoining to the temple, and another called *Maſſada*; and likewiſe out of the towers called *Phaſael* and *Mariamne*, killing all who oppoſed them. The Romans were at laſt reduced to ſuch ſtraits, that they capitulated on the ſingle condition that their lives ſhould be ſpared; notwithſtanding which, they were all maſſacred by the furious zealots; and this treachery was ſoon revenged on the faithful Jews of Scythopolis. Theſe had offered to aſſiſt in reducing their factious brethren; but their ſincerity being ſuſpected by the townſmen, they obliged them to reire into a neighbouring wood, where, on the third night, they were maſſacred to the number of 13,000, and all their wealth carried off. The rebels, in the mean time, croſſed the Jordan, and took the fortreſſes of Machæron and Cyprus; which laſt they raiſed to the ground, after having put all the Romans to the ſword.—This brought Ceſtius Gallus, the Syrian governor, into Judæa with all his forces; but the Jews, partly by treachery and partly by force, got the better of him, and drove him out of the country with the loſs of 5000 men.

33 Veſpaſian ſent againſt them.

All this time ſuch dreadful diſſenſions reigned among the Jews, that great numbers of the better ſort foreſeeing the ſad effects of the reſentment of the Romans, left the city as men do a ſinking veſſel; and the Chriſtians, mindful of their Saviour's prediction, retired to Pella, a city on the other ſide of Jordan, whether the war did not reach. Miſerable was the fate of ſuch as either could not, or would not, leave that devoted city. Veſpaſian was now ordered to leave Greece, where he was at that time, and to march with all ſpeed into Judea. He did ſo accordingly at the head of a powerful army, ordering his ſon Titus in the mean time to bring two more legions from Alexandria; but before he could reach that country, the Jews had twice attempted to take the city of Aſcalon, and were each time repulſed with the loſs of 10,000 of their number. In the beginning of the year 68, Veſpaſian entered Galilee at the head of an army of 60,000 men all completely armed and excellently diſciplined. He firſt took and burnt Gadara: then he laid ſiege to Jotapa, and took it after a ſtout reſiſtance; at which he was ſo provoked, that he cauſed every one of the Jews to be maſſacred or carried into captivity, not one being left to carry the dreadful news to their brethren. Forty thouſand periſhed on this occaſion; only 1200 were made priſoners, among whom was Joſephus the Jewiſh hiſtorian. Japha next ſhared the ſame fate, after an obſtinate ſiege; all the men being maſſacred and the women and children carried into captivity. A week after this the Samaritans, who had aſſembled on Mount Gerizzim, were almoſt all put to the ſword, or periſhed. Joppa fell the next victim to the Roman vengeance. It had been formerly laid waſte by Ceſtius; but was now repeopled and fortified by the ſeditious Jews who infeſted the country. It was taken by ſtorm, and ſhared the ſame fate with the reſt. Four thouſand Jews attempted to eſcape by taking to their ſhips; but were driven back by a ſudden tempeſt, and all of them were drowned or put to the ſword. Tarichea and Tiberias were next taken, but part of their inhabitants were ſpared on account of their peaceable diſpoſitions. Then followed the ſieges of Gamala, Giſchala, and Itabyr. The firſt was taken by ſtorm, with a dreadful ſlaughter of the Jews; the laſt by ſtratagem. The inhabitants of Giſchala were inclinable to ſurrender: but a ſeditious Jew of that town, named *John*, the ſon of Levi, head of the faction, and a vile fellow, oppoſed it; and, having the mob at his back, overawed the whole city. On the ſabbath he begged of Titus to forbear hoſtilities till to-morrow, and then he would accept his offer; but inſtead of that, he fled to Jeruſalem with as many as would follow him. The Romans, as ſoon as they were informed of his flight, purſued, and killed 6000 of his followers on the road, and brought back near 3000 women and children priſoners. The inhabitants then ſurrendered to Titus, and only the factious were puniſhed; and this completed the reduction of Galilee.

34 Different factions among the Jews.

The Jewiſh nation by this time was divided into two very oppoſite parties: the one foreſeeing that this war, if continued, muſt end in the total ruin of their country, were for putting an end to it by ſubmitting to the Romans; the other, which was the remains of the faction of Judas Gaulonites, breathed nothing but war and confuſion, and oppoſed all peaceable meaſures with invincible obſtinacy. This laſt, which was by far the moſt numerous and powerful, conſiſted of men of the vileſt and moſt profligate characters that can be paralleled in hiſtory. They were proud, ambitious, cruel, rapacious, and committed the moſt horrid and unnatural crimes under the maſk of religion. They affirmed every where, that it was offering the greateſt diſhonour to God to ſubmit to any earthly potentate; much leſs to Romans and to heathens. This, they ſaid, was the only motive that induced them to take up arms, and to bind themſelves under the ſtricteſt obligations not to lay them down till they had either totally extirpated all foreign authority, or periſhed in the attempt.—This dreadful diſſenſion was not confined to Jeruſalem, but had infected all the cities, towns, and villages, of Paleſtine. Even houſes and families were ſo divided againſt each other, that, as our Saviour had expreſsly foretold, a man's greateſt enemies were often thoſe of his own family and houſehold. In ſhort, if we may believe Joſephus, the zealots acted more like incarnate devils than like men who had any ſenſe of humanity left them.—This obliged the contrary party likewiſe to riſe up in arms in their own defence againſt thoſe miſcreants; from whom, however, they ſuffered much

35
Cruelty of the zealots.

more than they did even from the exaſperated Romans.—The zealots began their outrages by murdering all that oppoſed them in the countries round about. Then they entered Jeruſalem: but met with a ſtout oppoſition from the other party headed by Ananus, who had lately been high-prieſt. A fierce engagement enſued between them; and the zealots were driven into the inner cincture of the temple, where they were cloſely beſieged. John of Giſchala abovementioned, who had pretended to ſide with the peaceable party, was then ſent with terms of accommodation; but, inſtead of adviſing the beſieged to accept of them, he perſuaded them ſtill to hold out, and call the Idumeans to their aſſiſtance. They did ſo, and procured 20,000 of them to come to their relief; but theſe new allies were refuſed admittance into the city. On that night, however, there happened ſuch a violent ſtorm, accompanied with thunder, lightning, and an earthquake, that the zealots from within the inner court ſawed the bolts and hinges of the temple-gates without being heard, forced the guards of the beſiegers, ſallied into the city, and led in the Idumeans. The city was inſtantly filled with butcheries of the moſt horrid kind. Barely to put any of the oppoſite party to death was thought too mild a puniſhment; they muſt have the pleaſure of murdering them by inches: ſo that they made it now their diverſion to put them to the moſt exquiſite tortures that could be invented; nor could they be prevailed upon to diſpatch them till the violence of their torments had rendered them quite incapable of feeling them. In this manner periſhed 12,000 perſons of noble extraction, and in the flower of their age; till at laſt the Idumeans complained ſo much againſt the putting ſuch numbers to death, that the zealots thought proper to erect a kind of tribunal, which, however, was intended not for judgment but condemnation; for the judges having once acquitted a perſon who was manifeſtly innocent, the zealots not only murdered him in the temple, but depoſed the new-created judges as perſons unfit for their office.

36
They turn their arms againſt each other.

The zealots, after having exterminated all thoſe of any character or diſtinction, began next to wreak their vengeance on the common people. This obliged many of the Jews to forſake Jeruſalem, and take refuge with the Romans, though the attempt was very hazardous; for the zealots had all the avenues well guarded, and failed not to put to death ſuch as fell into their hands. Veſpaſian in the mean time ſtaid at Cæſarea an idle ſpectator of their outrages; well knowing that the zealots were fighting for him, and that the ſtrength of the Jewiſh nation was gradually waſting away. Every thing ſucceeded to his wiſh. The zealots, after having maſſacred or driven away the oppoſite party, turned their arms againſt each other. A party was formed againſt John, under one Simon who had his head-quarters at the fortreſs of Maſſada. This new miſcreant plundered, burned, and maſſacred, wherever he came, carrying the ſpoil into the fortreſs abovementioned. To increaſe his party, he cauſed a proclamation to be publiſhed, by which he promiſed liberty to the ſlaves, and proportionable encouragement to the freemen who joined him. This ſtratagem had the deſired effect, and he ſoon ſaw himſelf at the head of a conſiderable army. Not thinking himſelf, however, as yet maſter of force ſufficient to beſiege Jeruſalem, he invaded Idumea with 20,000 men. The Idumeans oppoſed him with 25,000; and a ſharp engagement enſued, in which neither party was victorious. But Simon, ſoon after, having corrupted the Idumean general, got their army delivered up to him. By this means he eaſily became maſter of the country; where he committed ſuch cruelties, that the miſerable inhabitants abandoned it to ſeek for ſhelter in Jeruſalem,

In the city, matters went in the ſame way. John tyrannized in ſuch a manner, that the Idumeans revolted, killed a great number of his men, plundered his palace, and forced him to retire into the temple. In the mean time the people, having taken a notion that he would ſally out in the night and ſet fire to the city, called a council, in which it was reſolved to admit Simon with his troops, in order to oppoſe John and his zealots. Simon's firſt attempt againſt his rival, however, was ineffectual, and he was obliged to content himſelf with beſieging the zealots in the temple. In the mean time the miſeries of the city were increaſed by the ſtarting up of third party headed by one Eleazar who ſeized on the court of the prieſts, and kept John confined within that of the Iſraelites. Eleazar kept the avenues ſo well guarded, that none were admitted to come into that part of the temple but thoſe who came thither to offer ſacrifices; and it was by theſe offerings chiefly that he maintained himſelf and his men. John by this means found himſelf hemmed in between two powerful enemies, Simon below, and Eleazar above. He defended himſelf, however, againſt them both with great reſolution; and when the city was inveſted by the Romans, having pretended to come to an agreement with his rivals, he found means totally to cut off or force Eleazar's men to ſubmit to him, ſo that the factions were again reduced to two.

37
The Romans advance to Jeruſalem.

The Romans, in the year 72, began to advance towards the capital. In their way they deſtroyed many thouſands, waſting the country as they went along; and in the year 73 arrived before the walls of Jeruſalem, under Titus afterwards emperor. As he was a man of an exceedingly merciful diſpoſition, and greatly deſired to ſpare the city, he immediately ſent offers of peace; but theſe were rejected with contempt, and he himſelf put in great danger of his life, ſo that he reſolved to begin the ſiege in form. In the mean time, Simon and John renewed their hoſtilities with greater fury than ever. John now held the whole temple, ſome of the out-parts of it, and the valley of Cedron. Simon had the whole city to range in; in ſome parts of which John had made ſuch devaſtations, that they ſerved them for a field of battle, from which they ſallied unanimouſly againſt the common enemy whenever occaſion ſerved; after which they returned to their uſual hoſtilities, turning their arms againſt each other, as if they had ſworn to make their ruin more eaſy to the Romans. Theſe drew ſtill nearer to the walls, having with great labour and pains levelled all the ground between Scopas and them, by pulling down all the houſes and hedges, cutting down the trees, and even cleaving the rocks that ſtood in their way, from Scopas to the tomb of Herod, and Bethara or the pool of ſerpents; in which work ſo many hands were employed, that they finiſhed it in four days.

38 Offers of peace rejected.

Whilſt this was doing, Titus ſent the beſieged ſome offers of peace; and Joſephus was pitched upon to be the meſſenger of them: but they were rejected with indignation. He ſent a ſecond time Nicanor and Joſephus with freſh offers, and the former received a wound in his ſhoulder; upon which Titus reſolved to begin the aſſault in good earneſt, and ordered his men to raſe the ſuburbs, cut down all the trees, and uſe the materials to raiſe platforms againſt the wall.

39 The ſiege carried on with vigour.

Every thing was now carried on with invincible ardour; the Romans began to play their engines againſt the city with all their might. The Jews had likewiſe their machines upon the walls, which they plied with uncommon fury: they had taken them lately from Ceſtius; but were ſo ignorant in their uſe, that they did little execution with them, till they were better inſtructed by ſome Roman deſerters: till then, their chief ſucceſs was rather owing to their frequent ſallies; but the Roman legions, who had all their towers and machines before them, made terrible havock. The leaſt ſtones they threw were near 100 weight; and theſe they could throw the length of a quarter of a mile againſt the city, and with ſuch a force, that they could do miſchief on thoſe that ſtood at ſome diſtance behind them. Titus had reared three towers 50 cubits high; one of which happening to fall in the middle of the night, greatly alarmed the Roman camp, who immediately ran to arms at the noiſe of it; but Titus, upon knowing the cauſe, diſmiſſed them, and cauſed it to be ſet up again. Theſe towers, being plated with iron, the Jews tried in vain to ſet fire to them, but were at length forced to retire out of the reach of their ſhot; by which the battering rams were now at full liberty to play againſt the wall. A breach was ſoon made in it, at which the Romans entered; and the Jews, abandoning this laſt incloſure, retired behind the next. This happened about the 28th of April, a fortnight after the beginning of the ſiege.

John defended the temple and the caſtle of Antonia, and Simon the reſt of the city. Titus marched cloſe to the ſecond wall, and plied his battering-rams ſo furiouſly, that one of the towers, which looked towards the north, gave a prodigious ſhake. The men who were in it, made a ſignal to the Romans, as if they would ſurrender; and, at the ſame time, ſent Simon word to be ready to give them a warm reception. Titus, having diſcovered their ſtratagem, plied his work more furiouſly, whilſt the Jews that were in the tower ſet it on fire, and flung themſelves into the flames. The tower being fallen, gave them an entrance into the ſecond incloſure, five days after gaining the firſt; and Titus, who was bent on ſaving the city, would not ſuffer any part of the wall or ſtreets to be demoliſhed; which left the breach and lanes ſo narrow, that when his men were furiouſly repulſed by Simon, they had not room enough to make a quick retreat, ſo that there was a number of them killed in it. This overſight was quickly rectified; and the attack renewed with ſuch vigour, that the place was carried four days after their firſt repulſe.

40 Famine and peſtilence in the city.

The famine, raging in a terrible manner in the city, was ſoon followed by a peſtilence; and as theſe two dreadful judgments increaſed, ſo did the rage of the factious, who, by their inteſtine feuds, had deſtroyed ſuch quantities of proviſion, that they were forced to prey upon the people with the moſt unheard-of cruelty. They forced their houſes; and, if they found any victuals in them, they butchered them for not appriſing them of it; and, if they found nothing but bare walls, which was almoſt every where the caſe, they put them to the moſt ſevere tortures, under pretence that they had ſome proviſion concealed. "I ſhould (ſays Joſephus) undertake an impoſſible taſk, were I to enter into a detail of all the cruelties of thoſe impious wretches; it will be ſufficient to ſay, that I do not think, that ſince the creation any city ever ſuffered ſuch dreadful calamities, or abounded with men ſo fertile in all kinds of wickedneſs."

Titus, who knew their miſerable condition, and was ſtill willing to ſpare them, gave them four days to cool; during which he cauſed his army to be muſtered, and proviſions to be diſtributed to them in ſight of the Jews, who flocked upon the walls to ſee it.

41 Offers of peace rejected.

Joſephus was ſent to ſpeak to them afreſh, and to exhort them not to run themſelves into an inevitable ruin by obſtinately perſiſting in the defence of a place which could hold out but a very little while, and which the Romans looked upon already as their own. But this ſtubborn people, after many bitter invectives, began to dart their arrows at him; at which, not at all diſcouraged, he went on with greater vehemence: but all the effect it wrought on them was, that it prevailed on great numbers to ſteal away privately to the Romans, whilſt the reſt became only the more deſperate and reſolute to hold out to the laſt, in ſpite of Titus's merciful offers.

To haſten therefore their deſtined ruin, he cauſed the city to be ſurrounded with a ſtrong wall, to prevent either their receiving any ſuccours or proviſion from abroad, or their eſcaping his reſentment by flight. This wall, which was near 40 ſtadia or five miles in circuit, was yet carried on with ſuch ſpeed, and by ſo many hands, that it was finiſhed in three days; by which one may gueſs at the ardour of the beſiegers to make themſelves maſters of the city.

There was now nothing to be ſeen thro' the ſtreets of Jeruſalem but heaps of dead bodies rotting above ground, walking ſkeletons, and dying wretches. As many as were caught by the Romans in their ſallies, Titus cauſed to be crucified in ſight of the town, to ſtrike a terror among the reſt: but the zealots gave it out, that they were thoſe who fled to him for protection; which when Titus underſtood, he ſent a priſoner with his hands cut off to undeceive, and aſſure them, that he ſpared all that voluntarily came over to him; which encouraged great numbers to accept his offers, tho' the avenues were cloſely guarded by the factious, who put all to death who were caught going on that errand. A greater miſchief than that was, that even thoſe who eſcaped ſafe, to the Roman camp were miſerably butchered by the ſoldiers, from a notion which theſe had taken that they had ſwallowed great quantities of gold; inſomuch that two thouſand of them were ripped up in one night, to come at their ſuppoſed treaſure. When Titus was appriſed of this barbarity, he would have condemned all thoſe butchering wretches to death; but they proved ſo numerous, that he was forced to ſpare them, and contented himſelf with ſending a proclamation thro' his camp, that as many as ſhould be ſuſpected thenceforward of that horrid villany, ſhould be put to immediate death: yet did not this deter many of them from it, only they did it more privately than before; ſo greedy were they of that bewitching metal. All this while the defection increaſed ſtill more thro' the inhumanity of the faction within, who made the miſeries and dying groans of their ſtarving brethren the ſubject of their cruel mirth, and carried their barbarity even to the ſheathing of their ſwords in ſport in thoſe poor wretches, under pretence of trying their ſharpneſs.

When they found therefore that neither their guards nor ſeverities could prevent the people's flight, they had recourſe to another ſtratagem equally impious and cruel: which was, to hire a pack of vile pretenders to prophecy, to go about and encourage the deſpairing remains of the people to expect a ſpeedy and miraculous deliverance; and this impoſture proved a greater expedient with that infatuated nation than their other precautions.

42
Miſerable condition of the Jews.

Nothing could be more dreadful than the famiſhed condition to which they were now reduced. The poor, having nothing to truſt to but the Roman's mercy or a ſpeedy death, ran all hazards to get out of the city; and if in their flight, and wandering out for herbs or any other ſuſtenance, they fell into the hands of any of Titus's parties ſent about to guard the avenues, they were unmercifully ſcourged, and crucified if they made the leaſt reſiſtance. The rich within the walls were now forced, though in the moſt private manner, to give half, or all they were worth, for a meaſure of wheat, and the middling ſort for one of barley. This they were forced to convey into ſome private place in their houſes, and to feed upon it as it was, without daring to pound or grind it, much leſs to boil or bake it, leſt the noiſe or ſmell ſhould draw the rapacious zealots to come and tear it from them. Not that theſe were reduced to any real want of proviſions, but they had a double end in this barbarous plunder; to wit, the ſtarving what they cruelly ſtyled all uſeleſs perſons, and the keeping their own ſtores in reſerve. It was upon this ſad and pinching juncture, that an unhappy mother was reduced to the extremity of butchering and eating her own child.

43
A mother eats her own child.

When this news was ſpread through the city, the horror and conſternation were as univerſal as they were inexpreſſible. It was then that they began to think themſelves forſaken by the Divine Providence, and to expect the moſt terrible effects of his anger againſt the poor remains of their nation; inſomuch that they began to envy thoſe that had periſhed before them, and to wiſh their turn might come before the ſad expected cataſtrophe. Their fears were but too juſt; ſince Titus, at the very firſt hearing of this inhuman deed, ſwore the total extirpation of city and people. "Since (ſaid he) they have ſo often refuſed my proffers of pardon, and have preferred war to peace, rebellion to obedience, and famine, ſuch a dreadful one eſpecially, to plenty, I am determined to bury that accurſed metropolis under its ruins, that the ſun may never ſhoot his beams on a city where the mothers feed on the fleſh of their children, and the fathers, no leſs guilty than they, chooſe to drive them to ſuch extremities, rather than lay down their arms."

44
Titus ſwears the total ruin of the city.

The dreadful action happened about the end of July, by which time the Romans, having purſued their attacks with freſh vigour, made themſelves maſters of the fortreſs Antonia; which obliged the Jews to ſet fire to thoſe ſtately galleries which joined it to the temple, leſt they ſhould afford an eaſy paſſage to the beſiegers into this laſt. About the ſame time Titus, with much difficulty, got materials for raiſing new mounds and terraces, in order to haſten the ſiege, and ſave, if poſſible, the ſad remains of that once glorious ſtructure; but his pity proved ſtill worſe and worſe beſtowed on thoſe obſtinate wretches, who only became the more furious and deſperate by it. Titus at length cauſed fire to be ſet to the gates, after having had a very bloody encounter, in which his men were repulſed with loſs. The Jews were ſo terrified at it, that they ſuffered themſelves to be devoured by the flames, without attempting either to extinguiſh them or ſave themſelves. All this while Joſephus did not ceaſe exhorting the infatuated people to ſurrender, to repreſent to them the dreadful conſequences of an obſtinate reſiſtance, and to aſſure them that it was out of mere compaſſion to them that he thus hazarded his own life to ſave theirs: he received one day ſuch a wound in his head by a ſtone from the battlements, as laid him for dead on the ground. The Jews ſallied out immediately, to have ſeized on his body; but the Romans proved too quick and ſtrong for them, and carried him off.

45
John plunders the temple.

By this time the two factions within, but eſpecially that of John, having plundered rich and poor of all they had, fell alſo on the treaſury of the temple, whence John took a great quantity of golden utenſils, together with thoſe magnificent gifts which had been preſented to that ſacred place by the Jewiſh kings, by Auguſtus, Livia, and many other foreign princes, and melted them all to his own uſe. The repoſitories of the ſacred oil which was to maintain the lamps, and of the wine which was reſerved to accompany the uſual ſacrifices, were likewiſe ſeized upon, and turned into common uſe; and the laſt of this to ſuch exceſs, as to make himſelf and his party drunk with it. All this while, not only the zealots, but many of the people, were ſtill under ſuch an infatuation, that tho' the fortreſs Antonia was loſt, and nothing left but the temple, which the Romans were preparing to batter down, yet they could not perſuade themſelves, that God would ſuffer that holy place to be taken by heathens, and were ſtill expecting ſome ſudden and miraculous deliverance. Even that vile monſter John, who commanded there, either ſeemed confident of it, or elſe endeavoured to make them think him ſo. For, when Joſephus was ſent for the laſt time to upbraid his obſtinately expoſing that ſacred building, and the miſerable remains of God's people, to ſudden and ſure deſtruction, he only anſwered him with the bittereſt invectives; adding, that he was defending the Lord's vineyard, which he was ſure could not be taken by any human force. Joſephus in vain reminded him of the many ways by which he had polluted both city and temple; and in particular of the ſeas of blood which he cauſed to be ſhed in both thoſe ſacred places, and which, he aſſured him from the old prophecies, were a certain ſign and forerunner of their ſpeedy ſurrender and deſtruction. John remained as inflexible as if all the prophets had aſſured him of a deliverance; till at length Titus, foreſeeing the inevitable ruin of that ſtately edifice, which he was ſtill extremely deſirous to ſave, vouchſafed even himſelf to ſpeak to them, and to perſuade them to ſurrender. But the factious, looking upon this condeſcenſion as the effects of his fear rather than generoſity, only grew the more furious upon it, and forced him at laſt to come to thoſe extremities, which he had hitherto endeavoured to avoid. That his army, which was to attack the temple, might have the freer paſſage towards it through the caſtle Antonia, he cauſed a conſiderable part of the wall to be pulled down, and levelled; which proved ſo very ſtrong, that it took him up ſeven whole days, by which time they were far advanced in the month of July.

46
The daily ſacrifice interrupted.

It was on the 17th day of the month, as all Joſephus's copies have it, that the daily ſacrifice ceaſed for the firſt time ſince its reſtoration by the brave Judas Maccabeus, there being no proper perſon left in the temple to offer it up. Titus cauſed the factious to be ſeverely upbraided for it; exhorted John to ſet up whom he would to perform that office, rather than ſuffer the ſervice of God to be ſet aſide; and then challenged him and his party to come out of the temple, and fight on a more proper ground, and thereby ſave that ſacred edifice from the fury of the Roman troops. When nothing could prevail on them, they began to ſet fire again to the gallery which yielded a communication between the temple and the caſtle Antonia. The Jews had already burnt about 20 cubits of it in length; but this ſecond blaze, which was likewiſe encouraged by the beſieged, conſumed about 14 more; after which, they beat down what remained ſtanding. On the 27th of July, the Jews, having filled part of the weſtern portico with combuſtible matter, made a kind of flight; upon which, ſome of the forwardeſt of the Romans having ſcaled up to the top, the Jews ſet fire to it, which flamed with ſuch ſudden fury, that many of the former were conſumed in it, and the reſt, venturing to jump down from the battlements, were, all but one, cruſhed to death.

On the very next day, Titus having ſet fire to the north gallery, which incloſed the outer court of the temple, from fort Antonia to the valley of Cedron, got an eaſy admittance into it, and forced the beſieged into that of the prieſts. He tried in vain ſix days to batter down one of the galleries of that precinct with an helepolis: he was forced to mount his battering-rams on the terrace, which was raiſed by this time; and yet the ſtrength of this wall was ſuch, that it eluded the force of theſe alſo, though others of his troops were buſy in ſapping it. When they found that neither rams nor ſapping could gain ground, they bethought themſelves of ſcaling; but were vigorouſly repulſed in the attempt, with the loſs of ſome ſtandards, and a number of men. When Titus therefore found that his deſire of ſaving that building was like to coſt ſo many lives, he ſet fire to the gates, which, being plated with ſilver, burnt all that night, whilſt the metal dropt down in the melting. The flame ſoon communicated itſelf to the porticoes and galleries; which the beſieged beheld without offering to ſtop it, but contented themſelves with ſending whole volleys of impotent curſes againſt the Romans. This was done on the eighth of Auguſt; and, on the next day, Titus, having given orders to extinguiſh the fire, called a council, to determine whether the remainder of the temple ſhould be ſaved or demoliſhed. That general was ſtill for the former, and moſt of the reſt declared for the latter; alleging, that it was no longer a temple, but a ſcene of war and ſlaughter, and that the Jews would never be at reſt as long as any part of it was left ſtanding: but when they found Titus ſtiffly bent on preſerving ſo noble an edifice, againſt which he told them he could have no quarrel, they all came over to his mind. The next day, Auguſt the 10th, was therefore determined for a general aſſault: and the night before the Jews made two deſperate ſallies on the Romans; in the laſt of which, theſe, being timely ſuccoured by Titus, beat them back into their incloſure.

47
The gates of the temple ſet on fire.

But whether this laſt Jewiſh effort exaſperated the beſiegers, or, which is more likely, as Joſephus thinks, puſhed by the hand of Providence, one of the Roman ſoldiers, of his own accord, took up a blazing firebrand, and, getting on his comrade's ſhoulders, threw it into one of the apartments that ſurrounded the ſanctuary, through a window. This immediately ſet the whole north-ſide in a flame up to the third ſtory, on the ſame fatal day and month in which it had been formerly burnt by Nebuchadnezzar. Titus, who was gone to reſt himſelf a while in his pavilion, was awaked at the noiſe, and ran immediately to give orders to have the fire extinguiſhed. He called, prayed, threatened, and even caned his men, but in vain; the confuſion was ſo great, and the ſoldiers ſo obſtinately bent upon deſtroying all that was left, that he was neither heard nor minded. Thoſe that flocked thither from the camp, inſtead of obeying his orders, were buſy, either in killing the Jews, or in increaſing the flames. When Titus obſerved that all his endeavours were vain, he entered into the ſanctuary and the moſt holy place, in which he found ſtill ſuch ſumptuous utenſils and other riches as even exceeded all that had been told him of it. Out of the former he ſaved the golden candleſtick, the table of ſhew-bread, the altar of perfumes, all of pure gold, and the book or volume of the law, wrapped up in a rich gold tiſſue: but in the latter he found no utenſils, becauſe, in all probability, they had not made a freſh ark ſince that of Solomon had been loſt. Upon his coming out of that ſacred place, ſome other ſoldiers ſet fire to it, and obliged thoſe that had ſtaid behind to come out; they all fell foul on the plunder of it, tearing even the gold plating off the gates and timber-work, and carried off all the coſtly utenſils, robes, &c. they found, inſomuch that there was not one of them who did not enrich himſelf by it.

48
A dreadful maſſacre.

An horrid maſſacre followed ſoon after, in which a great many thouſands periſhed; ſome by the flames, others by the fall from the battlements, and a greater number by the enemy's ſword, which deſtroyed all it met with, without diſtinction of age, ſex, or quality. Among them were upwards of 6000 perſons who had been ſeduced thither by a falſe prophet, who promiſed them that they ſhould find a ſpeedy and miraculous relief there on that very day. Some of them remained five whole days on the top of the walls, and afterwards threw themſelves on the generals mercy; but were anſwered that they had outſtaid the time, and were led to execution. The Romans carried their fury to the burning of all the treaſure-houſes of the place, tho' they were full of the richeſt furniture, plate, veſtments, and other things of value, which had been laid up in thoſe places for ſecurity. In a word, they did not ceaſe burning and butchering, till they had deſtroyed all, except two of the temple-gates, and that part of the court which was deſtined for the women.

In the mean time the ſeditious made ſuch a vigorous puſh, that they eſcaped the fury of the Romans, at leaſt for the preſent, and retired into the city. But here they found all the avenues ſo well guarded, that there was no poſſibility leſt for them to get out; which obliged them to ſecure themſelves as well as they could on the ſouth-ſide of it, from whence Simon, and John of Giſchala, ſent to deſire a parley with Titus. They were anſwered, that though they had been the cauſe of all this bloodſhed and ruin, yet they ſhould have their lives ſpared, if they laid down their arms, and ſurrendered themſelves priſoners. To this they replied, that they had engaged themſelves, by the moſt ſolemn oaths, never to ſurrender; and therefore, only begged leave to retire into the mountains with their wives and children: which inſolence ſo exaſperated the Roman general, that he cauſed an herald to bid them ſtand to their defence; for that not one of them ſhould be ſpared, ſince they had rejected his laſt offers of pardon. Immediately after this, he abandoned the city to the fury of the ſoldiers, who fell forthwith on plundering, ſetting fire every where, and murdering all that fell into their hands; whilſt the factious, who were leſt, went and fortified themſelves in the royal palace, where they killed 8000 Jews who had taken refuge there.

In the mean time, great preparations were making for a vigorous attack on the upper city, eſpecially on the royal palace; and this took them up from the 20th of Auguſt to the 7th of September, during which time great numbers came and made their ſubmiſſion to Titus. The warlike engines then played ſo furiouſly on the factious, that they were taken with a ſudden panic; and, inſtead of fleeing into the towers of Hippicos, Phaſael, or Mariamne, which were yet untaken, and ſo ſtrong that nothing but famine could have reduced them, they ran like madmen towards Siloah, with a deſign to have attacked the wall of circumvallation, and to have eſcaped out of the city; but, being there repulſed, they were forced to go and hide themſelves in the public ſinks and common ſewers, ſome one way and ſome another. All whom the Romans could find were put to the ſword, and the city was ſet on fire. This was on the eighth of September, when the city was taken and entered by Titus. He would have put an end to the maſſacre; but his men killed all, except the moſt vigorous, whom they ſhut up in the porch of the women juſt mentioned. Fronto, who had the care of them, reſerved the youngeſt and moſt beautiful for Titus's triumph; and ſent all that were above ſeventeen years of age into Egypt, to be employed in ſome public works there; and a great number of others were ſent into ſeveral cities of Syria, and other provinces, to be expoſed on the public theatre, to exhibit fights, or be devoured by wild beaſts. The number of thoſe priſoners amounted to 97,000, beſides about 11,000 more, who were either ſtarved through neglect, or ſtarved themſelves through ſullenneſs and deſpair——The whole number of Jews who periſhed in this war is computed at upwards of 1, 400,000.

59 Simon and John taken.

50 Deſperate end of the garriſon of Maſſada.

Beſides theſe, however, a vaſt number periſhed in caves, woods, wilderneſſes, common-ſewers, &c. of whom no computation could be made. Whilſt the ſoldiers were ſtill buſy in burning the remains of the city, and viſiting all the hiding-places, where they killed numbers of poor creatures who had endeavoured to evade their cruelty, the two grand rebels Simon and John were found, and reſerved for the triumph of the conqueror. John, being pinched with hunger, ſoon came out; and having begged his life, obtained it; but was condemned to perpetual impriſonment. Simon, whoſe retreat had been better ſtored, held out till the end of October. The two chiefs, with 700 of the hanſomeſt Jewiſh captives, were made to attend the triumphal chariot; after which Simon was dragged through the ſtreets with a rope about his neck, ſeverely ſcourged, and then put to death; and John was ſent into perpetual impriſonment.—Three caſtles ſtill remained untaken, namely, Herodian, Machæron, and Maſſada. The two former capitulated; but Maſſada held out. The place was exceedingly ſtrong both by nature and art, well ſtored with all kinds of proviſions, and defended by a numerous garriſon of zealots, at the head of whom was one Eleazar, the grandſon of Judas Gaulonites, formerly mentioned. The Roman general having in vain tried his engines and battering-rams againſt it, bethought himſelf of ſurrounding it with a high and ſtrong wall, and then ordered the gates to be ſet on fire. The wind puſhed the flames ſo fiercely againſt the Jews, that Eleazar in deſpair perſuaded them firſt to kill their wives and children, and then to chooſe ten men by lot, who ſhould kill all the reſt; and laſtly one out of the ſurviving ten to diſpatch them and himſelf; only this laſt man was ordered to ſet fire to the place before he put an end to his own life. All this was accordingly done; and on the morrow when the Romans were preparing to ſcale the walls, they were greatly ſurpriſed neither to ſee nor hear any thing move. On this they made ſuch an hideous outcry, that two women, who had concealed themſelves in an aqueduct, came forth and acquainted them with the deſperate cataſtrophe of the beſieged.

51 State of the Jews ſince the deſtruction of their city.

Thus ended the Jewiſh nation and worſhip; nor have they ever ſince been able to regain the ſmalleſt footing in the country of Judea, nor indeed in any other country on earth, though there is ſcarce any part of the globe where they are not to be found. They continue their vain expectations of a Meſſiah to deliver them from the low eſtate into which they are fallen; and, notwithſtanding their repeated diſappointments, there are few who can ever be perſuaded to embrace Chriſtianity. Their ceremonies and religious worſhip ought to be taken from the law of Moſes; but they have added a multitude of abſurdities not worth the enquiring after. In many countries, and in different ages, they have been terribly maſſacred, and in general have been better treated by the Mahometans and Pagans than by Chriſtians. Since the revival

val of arts and learning, however, they have felt the benefit of that increaſe of humanity which hath taken place almoſt all over the globe. It is ſaid, that in Britain the life of a Jew was formerly at the diſpoſal of the chief lord where he lived, and likewiſe all his goods. So ſtrong alſo were popular prejudices and ſuſpicions againſt them, that in the year 1348, a fatal endemic diſtemper raging in a great part of Europe, it was ſaid that they had poiſoned the ſprings and wells; in conſequence of which a million and a half of them were cruelly maſſacred. In 1493, half a million of them were driven out of Spain, and 150,000 from Portugal. Edward I. did the ſame. In ſhort, they were every where perſecuted, oppreſſed, and moſt rigorouſly treated.

In this enlightened period a more generous ſyſtem is taking place. France has allowed them the rights of citizens, which induces numbers of the moſt wealthy Jews to fix their reſidence in that country. Poland is about granting them very great privileges and immunities; England, Holland, and Pruſſia tolerate and protect them; and the emperor has revoked ſome reſtrictions, for which an edict has lately paſſed: Spain, Portugal, and ſome of the Italian ſtates, are ſtill, however, totally averſe to their dwelling among them.

JEZIDES, among the Mahometans; a term of ſimilar import with heretics among Chriſtians.

The Jezides are a numerous ſect inhabiting Turkey and Perſia, ſo called from their head Jezid, an Arabian prince, who ſlew the ſons of Ali, Mahomet's father-in-law; for which reaſon he is reckoned a parricide, and his followers heretics. There are about 20,000 Jezides in Turkey and Perſia; who are of two ſorts, black and white. The white are clad like Turks; and diſtinguiſhed only by their ſhirts, which are not ſlit at the neck like thoſe of others, but have only a round hole to thruſt their heads through. This is in memory of a golden ring, or circle of light, which deſcended from heaven upon the neck of their cheq, the head of their religion, after his undergoing a faſt of forty days. The black Jezides, though married, are the monks or religious of the order; and theſe are called *Fakirs*.

The Turks exact exceſſive taxes from the Jezides, who hate the Turks as their mortal enemies; and when, in their wrath, they curſe any creature, they call it *muſſulman*: but they are great lovers of the Chriſtians, being more fond of Jeſus Chriſt than of Mahomet, and are never circumciſed but when they are forced to it. They are extremely ignorant, and believe both the bible and the koran without reading either of them: they make vows and pilgrimages, but have no places of religious worſhip.

All the adoration they pay to God conſiſts of ſome ſongs in honour of Jeſus Chriſt, the virgin, Moſes, and ſometimes Mahomet; and it is a principal point of their religion never to ſpeak ill of the devil, leſt he ſhould reſent the injury, if ever he ſhould come to be in favour with God again, which they think poſſible; whenever they ſpeak of him, they call him the *angel Peacock*. They bury their dead in the firſt place they come at, rejoicing as at a feſtival, and celebrating the entry of the deceaſed into heaven. They go in companies like the Arabians, and change their habitations every 15 days. When they get wine, they drink it to exceſs; and it is ſaid, that they ſometimes do this with a religious purpoſe, calling it the blood of Chriſt. They buy their wives; and the market-price is 200 crowns for all women, handſome or not, without diſtinction.

JEZRAEL, or JEZREEL, a town in the north of Samaria, towards mount Carmel, where ſtood a palace of the kings of Iſrael, 1 Kings xxi. 18. On the borders of Galilee (Joſhua xix.) ſaid to be one of the towns of Iſſachar.—The valley of Jezreel (Judges vi. 17.) was ſituated to the north of the town, running from weſt to eaſt for ten miles, between two mountains; the one to the north, commonly called *Hermon*, near mount Tabor; the other *Gilboa*: in breadth two miles.

IF, an iſland of France, in Provence, and the moſt eaſtern of the three before the harbour of Marſeilles. It is very well fortified, and its port one of the beſt in the Mediterranean.

IGIS, a town of the country of the Griſons, in Caddea, with a magnificent caſtle, in which is a cabinet of curioſities, and a handſome library; 23 miles ſouth-weſt of Choira, and 23 ſouth of Glaris. E. Lon. 9. 0. N. Lat. 49. 10.

IGLAW, a conſiderable and populous town of Germany, in Moravia, where they have a manufactory of good cloth, and excellent beer. It is ſeated on the river Igla, 40 miles weſt of Brin, and 80 ſouth-eaſt of Prague. E. Long. 15. 5. N. Lat. 49. 10.

IGNATIA, in botany, a genus of the monogynia order, belonging to the pentandria claſs of plants. The calyx is five-toothed; the corolla is long; the fruit an unilocular plum, with many ſeeds. There is but one ſpecies, the amara, a native of India. The fruit of this tree contains the ſeeds called *St Ignatius's beans*.

The beſt account of the plant that has yet appeared, is that ſent by father Cameli to Ray and Petiver, and publiſhed in the Philoſophical Tranſactions for the year 1699: he obſerves, that it grows in the Philippine iſlands, and winds itſelf about the talleſt trees to the top; that it has large, ribbed, bitter leaves, a flower like that of the pomegranate, and a fruit larger than a melon. Some reſemble the fruit to a pomegranate, probably from miſapplying Camelli's words. The fruit is covered with a thin, gloſſy, blackiſh, green, and as it were marbled ſhell, under which is lodged another of a ſtony hardneſs: within this is contained a ſoft, yellow, bitteriſh pulp, in which lie the ſeeds or beans, to the number commonly of 24, each covered with a ſilvery down.

The ſame gentleman gives an account of the virtues attributed to theſe ſeeds by the Indians; but experience has ſhown that they are dangerous. Konig relates, that a perſon, by drinking ſome of a ſpirituous tincture of them inſtead of aqua vitæ, was thrown into ſtrong convulſions; and Dr Grim, that a dram of the ſeed in ſubſtance occaſioned, for a time, a total deprivation of the ſenſes. Others mention violent vomitings and purgings from its uſe. Neumann hath obſerved intermitting fevers removed by drinking, on the approach of a paroxyſm, an infuſion of ſome grains of the bean made in carduus water: We are not, however, from hence to look upon this medicine as an univerſal febrifuge, or to uſe it indiſcriminately.

Theſe beans (for ſo cuſtom requires that we ſhould call them) are about the ſize of a moderately large nutmeg; in figure ſomewhat roundiſh, but extremely irregular, ſcarcely any two being entirely alike, full of unequal depreſſions and prominences; in colour, externally yellowiſh brown, but when the outer ſkin is taken off, of a blackiſh brown, and in part quite blackiſh; in conſiſtence hard and compact as horn, ſo as not to be reducible into a powdery form, but by cutting or raſping: for all their hardneſs, however, they are not proof againſt worms. When freſh, they have ſomewhat of a muſky ſmell, which by age is loſt: their taſte is very bitter, reſembled by ſome to that of centaury.

According to ſome, it is from this plant that the COLUMBO root is obtained.

IGNATIUS LOYOLA, (canonized), the founder of the well-known order of the JESUITS, was born at the caſtle of Loyola, in Biſcay, 1491; and became firſt page to Ferdinand V. king of Spain, and then an officer in his army. In this laſt capacity, he ſignalized himſelf by his valour; and was wounded in both legs at the ſiege of Pompeluna, in 1521. To this circumſtance the Jeſuits owe their origin; for, while he was under cure of his wound, a *Life of the Saints* was put into his hands, which determined him to forſake the military for the eccleſiaſtical profeſſion. His firſt devout exerciſe was to dedicate himſelf to the bleſſed virgin as her knight: he then went a pilgrimage to the Holy Land; and on his return to Europe, he continued his theological ſtudies in the univerſities of Spain, though he was then 33 years of age. After this he went to Paris; and in France laid the foundation of this new order, the inſtitutes of which he preſented to Pope Paul III. who made many objections to them, but at laſt confirmed the inſtitution in 1540. The founder died in 1555, and left his diſciples two famous books; 1. Spiritual exerciſes; 2. Conſtitutions or rules of the order. But it muſt be remembered, that though theſe avowed inſtitutes contain many privileges obnoxious to the welfare of ſociety, the moſt diabolical are contained in the private rules intitled *Monita ſecreta*, which were not diſcovered till towards the cloſe of the laſt century; and moſt writers attribute theſe, and even the Conſtitutions, to Laynex, the ſecond general of the order.

IGNATIUS (St), ſurnamed *Theophraſtus*, one of the apoſtolical fathers of the church, was born in Syria, and educated under the apoſtle and evangeliſt St John, and intimately acquainted with ſome other of the apoſtles, eſpecially St Peter and St Paul. Being fully inſtructed in the doctrines of Chriſtianity, he was, for his eminent parts and piety, ordained by St John, and confirmed about the year 67 biſhop of Antioch, by thoſe two apoſtles, who firſt planted Chriſtianity, in that city, where the diſciples alſo were firſt called *Chriſtians*. Antioch was then not only the metropolis of Syria, but a city the moſt famous and renowned of any in the eaſt, and the ancient ſeat of the Roman emperors, as well as of the viceroys and governors. In this important ſeat he continued to ſit ſomewhat above 40 years, both an honour and ſafe-guard of the Chriſtian religion, till the year 107, when Trajan the emperor, fluſhed with a victory which he had lately obtained over the Scythians and Daci, about the ninth year of his reign, came to Antioch to make preparations for a war againſt the Parthians and Armenians. He entered the city with the pomp and ſolemnities of a triumph; and, as his firſt care uſually was about the concernments of religion, he began preſently to inquire into that affair. Chriſtianity had by this time made ſuch a progreſs, that the Romans grew jealous and uneaſy at it. This prince, therefore, had already commenced a perſecution againſt the Chriſtians in other parts of the empire, which he now reſolved to carry on here. However, as he was naturally of a mild diſpoſition, though he ordered the laws to be put in force againſt them, if convicted, yet he forbad them to be ſought after.

In this ſtate of affairs, Ignatius, thinking it more prudent to go himſelf than ſtay to be ſent for, of his own accord preſented himſelf to the emperor; and, it is ſaid, there paſſed a long and particular diſcoruſe between them, wherein the emperor expreſſing a ſurpriſe how he dared to tranſgreſs the laws, the biſhop took the opportunity to aſſert his own innocency, and to explain and vindicate his faith with freedom. The iſſue of this was, that he was caſt into priſon, and this ſentence paſſed upon him, That, being incurably overrun with ſuperſtition, he ſhould be carried bound by ſoldiers to Rome, and there thrown as a prey to wild beaſts.

He was firſt conducted to Seleucia, a port of Syria, at about 16 miles diſtance, the place where Paul and Barnabas ſet ſail for Cyprus. Arriving at Smyrna in Ionia, he went to viſit Polycarp biſhop of that place, and was himſelf viſited by the clergy of the Aſian churches round the country. In return for that kindneſs, he wrote letters to ſeveral churches, as the Epheſians, Magneſians, and Trallians, beſides the Romans, for their inſtruction and eſtabliſhment in the faith; one of theſe was addreſſed to the Chriſtians at Rome, to acquaint them with his preſent ſtate, and paſſionate deſire not to be hindered in the courſe of martyrdom which he was now haſtening to accompliſh.

His guard, a little impatient of their ſtay, ſet ſail with him for Troas, a noted city of the leſſer Phrygia, not far from the ruins of old Troy; where, at his arrival, he was much refreſhed with the news he received of the perſecution ceaſing in the church of Antioch: hither alſo ſeveral churches ſent their meſſengers to pay their reſpects to him; and hence too he diſpatched two epiſtles, one to the church of Philadelphia, and the other to that of Smyrna; and, together with this laſt, as Euſebius relates, he wrote privately to Polycarp, recommending to him the care and inſpection of the church of Antioch.

From Troas they ſailed to Neapolis, a maritime town in Macedonia; thence to Philippi, a Roman colony, where they were entertained with all imaginable kindneſs and courteſy, and conducted forwards on their journey, paſſing on foot through Macedonia and Epirus, till they came to Epidanium, a city of Dalmatia; where again taking ſhipping, they ſailed through the Adriatic, and arrived at Rhegium, a port-town in Italy; directing their courſe thence through the Tyrrhenian ſea to Puteoli, whence Ignatius deſired to proceed by land, ambitious to trace the ſame way by which St Paul went to Rome: but this wiſh was not complied with: and, after a ſtay of 24 hours, a proſperous wind quickly carried them to the Roman port, the great harbour and ſtation for their navy, built near Oſtia, at the mouth of the Tyber, about 16 miles from Rome; whither the martyr longed to come, as much deſirous to be at the end of his race, as his keepers, weary of their voyage, were to be at the end of their journey.

The Chriſtians at Rome, daily expecting his arrival, were come out to meet and entertain him, and accordingly received him with a mixture of joy and ſorrow; but when ſome of them intimated, that poſſibly the populace might be taken off from deſiring his death, he expreſſed a pious indignation, intreating them to caſt no rubs in his way, nor do any thing that might hinder him, now he was haſtening to his crown. There are many ſuch expreſſions as this in his epiſtle to the Romans, which plainly ſhow that he was highly ambitious of the crown of martyrdom. Yet it does not appear that he raſhly ſought or provoked danger. Among other expreſſions of his ardour for ſuffering, he ſaid, that the wild beaſts had feared and refuſed to touch ſome that had been thrown to them, which he hoped would not happen to him. Being conducted to Rome, he was preſented to the præfect, and the emperor's letters probably delivered concerning him. The interval before his martyrdom was ſpent in prayers for the peace and proſperity of the church. That his puniſhment might be the more pompous and public, one of their ſolemn feſtivals, the time of their Saturnalia, and that part of it when they celebrated their Sigillaria, was pitched on for his execution; at which time it was their cuſtom to entertain the people with the bloody conflicts of gladiators, and the hunting and fighting with wild beaſts. Accordingly, on the 13th kal. January, *i. e.* December 20. he was brought out into the amphitheatre, and the lions being let looſe upon him, quickly diſpatched their meal, leaving nothing but a few of the hardeſt of his bones. Theſe remains were gathered up by two deacons who had been the companions of his journey, and being tranſported to Antioch, were interred in the cemetery, without the gate that leads to Daphne; whence, by the command of the emperor Theodoſius, they were removed with great pomp and ſolemnity to the Tycheon, a temple within the city, dedicated to the public genius of it, but now conſecrated to the memory of the martyr.

St Ignatius ſtands at the head of thoſe Antinicene fathers, who have occaſionally delivered their opinions in defence of the true divinity of Chriſt, whom he calls the *Son of God, and his eternal Word.* He is alſo reckoned the great champion of the doctrine of the epiſcopal order, as diſtinct and ſuperior to that of prieſt and deacon. And one, the moſt important, uſe of his writings reſpects the authenticity of the holy Scriptures, which he frequently alludes to, in the very expreſſions as they ſtand at this day.—Archbiſhop Uſher's edition of his works, printed in 1647, is thought the beſt: yet there is a freſher edition extant at Amſterdam, where, beſide the beſt notes, there are the diſſertations of Uſher and Pearſon.

St Ignatius's Bean. See Ignatia.

IGNIS-fatuus, a kind of light, ſuppoſed to be of an electric nature, appearing frequently in mines, marſhy places, and near ſtagnating waters. It was formerly thought, and is ſtill by the ſuperſtitious believed to have ſomething ominous in its nature, and to preſage death and other misfortunes. There have been inſtances of people being decoyed by theſe lights into marſhy places, where they have periſhed; whence the names of *Ignis-fatuus*, *Will-with-a-wiſp*, and *Jack-with-a-lanthorn*, as if this appearance was an evil ſpirit which took delight in doing miſchief of that kind. For a further account of the nature and properties of the ignis-fatuus, ſee the articles Light and Meteor.

IGNITION, properly ſignifies the ſetting fire to any ſubſtance; but the ſenſe is commonly reſtrained to that kind of burning which is not accompanied with flame, ſuch as that of charcoal, cinders, metals, ſtones, and other ſolid ſubſtances.

The effects of ignition are firſt to diſſipate what is called the *phlogiſton* of the ignited ſubſtance, after which it is reduced to aſhes. Vitrification next follows; and laſtly, the ſubſtance is totally diſſipated in vapour. All theſe effects, however, depend on the preſence of the air; for *in vacuo* the phlogiſton of any ſubſtance cannot be diſſipated. Neither can a body which is totally deſtitute of phlogiſton be ignited in ſuch a mamner as thoſe which are not deprived of it; for as long as the phlogiſton remains, the heat is kept up in the body by the action of the external air upon it; but when the phlogiſton is totally gone, the air always deſtroys, inſtead of augmenting the heat. Philoſophers have therefore been greatly embarraſſed in explaining the phenomena of ignition. See Phlogiston.

IGNOBILES, among the Romans, was the deſignation of ſuch perſons as had no right of uſing pictures and ſtatues. See *Jus Imaginis.*

IGNOMINIA, a ſpecies of puniſhment amongſt the Romans, whereby the offender ſuffered public ſhame, either by virtue of the prætor's edict, or by order of the cenſor. This inſtrument, beſides the ſcandal, deprived the party of the privilege of bearing any offices, and almoſt all other liberties of a Roman citizen.

IGNORAMUS, in law is a word properly uſed by the grand inqueſt empanelled in the inquiſition of cauſes criminal and public, and written upon the bill whereby any crime is offered to their conſideration, when as they miſlike their evidence as defective or too weak to make good the preſentment; the effect of which word ſo written is, that all farther inquiry upon that party for that fault is thereby ſtopped, and he delivered without farther anſwer. It hath a reſemblance with that cuſtom of the ancient Romans, where the judges, when they abſolved a perſon accuſed, did write *A.* upon a little table provided for that purpoſe, i. e. *abſolvimus;* if they judged him guilty, they wrote *C.* i. e. *condemnamus;* if they found the caſe difficult and doubtful, they wrote *N. L.* i. e. *non liquet.*

IGNORANCE, the privation or abſence of knowledge. The cauſes of ignorance, according to Locke, are chiefly theſe three. 1. Want of ideas. 2. Want of a diſcoverable connection between the ideas we have. 3. Want of tracing and examining our ideas. See Metaphysics.

Ignorance, in a more particular ſenſe, is uſed to denote illiteracy. Previous to the taking of Rome by the Gauls, ſuch groſs ignorance prevailed among the Romans, that few of the citizens could read or write, and the alphabet was almoſt unknown. During three ages there were no public ſchools, but the little learning their children had was taught them by their parents; and how little that was may be partly concluded from this circumſtance, that a nail was uſually driven into the wall of the temple of *Jupiter Capitolinus*, on the 15th of September, to aſſiſt the ignorance of the people in reckoning the years, becauſe they were unacquainted with letters or figures. The driving of the nail was afterwards converted into a religious ceremony, and performed by the *Dictator*, to avert public calamities.

IGNORANCE, or miſtake, in law, a defect of will, whereby a perſon is excuſed from the guilt of a crime, when, intending to do a lawful act, he does that which is unlawful. For here the deed and the will acting ſeparately, there is not that conjunction between them which is neceſſary to form a criminal act. But this muſt be an ignorance or miſtake of fact, and not an error in point of law. As if a man intending to kill a thief or houſe-breaker in his own houſe, by miſtake kills one of his own family, this is no criminal action: but if a man thinks he has a right to kill a perſon excommunicated or outlawed wherever he meets him, and does ſo; this is wilful murder. For a miſtake in point of law, which every perſon of diſcretion not only may, but is bound and preſumed to know, is, in criminal caſes, no ſort of defence. *Ignorantia juris quod quiſque tenetur ſcire, neminem excuſat*, is as well the maxim of our own law as it was of the Roman.

IGUANA, in zoology, a ſpecies of LACERTA.

Mud-Iguana. See MURAENA.

IHOR, JOHOR, or *Jor*, a town of Aſia, in Malacca, and capital of a province of the ſame name in the peninſula beyond the Ganges. It was taken by the Portugueſe in 1603, who deſtroyed it, and carried off the cannon; but it has ſince been rebuilt, and is now in poſſeſſion of the Dutch. E. Long. 93. 55. N. Lat. 1. 15.

JIB, the foremoſt ſail of a ſhip, being a large ſtay-ſail extended from the outer end of the bowſprit prolonged by the jib-boom, towards the fore-top-maſt-head. See SAIL.

The jib is a ſail of great command with any ſide-wind, but eſpecially when the ſhip is *cloſe hauled*, or has the wind upon her beam; and its effort in *caſting* the ſhip, or turning her head to leeward, is very powerful, and of great utility, particularly when the ſhip is working through a narrow channel.

Jib-Boom, a boom run out from the extremity of the bowſprit, parallel to its length, and ſerving to extend the bottom of the jib, and the ſtay of the fore-top-gallant maſt. This boom, which is nothing more than a continuation of the bowſprit forward, to which it may be conſidered as a top-maſt, is uſually attached to the bowſprit by means of two large boom-irons, or by one boom-iron, and a cap on the outer end of the bowſprit; or, finally, by the cap without and a ſtrong laſhing within, inſtead of a boom-iron, which is generally the method of ſecuring it in ſmall merchant-ſhips. It may therefore be drawn in upon the bowſprit as occaſion requires; which is uſually practiſed when the ſhip enters a harbour, where it might very ſoon be broken or carried away, by the veſſels which are moored therein, or paſſing by under ſail.

JIBBEL-AUREZ, the mons auraſius of the middle age, an aſſemblage of many very rocky mountains in Africa, in the kingdom of Algiers. Here Mr Bruce met with a ſet of people much fairer in their complexion than any of the nations to the ſouthward of Britain: their hair was red, and their eyes blue: they maintain their independence, and are of a ſavage diſpoſition, ſo that our traveller found it difficult to approach them with ſafety. They are called Neardia; and each of them has a Greek croſs in the middle between the eyes, marked with antimony. They are divided into tribes, but, unlike the other Arabs, have huts in the mountains built of mud and ſtraw; and are, by our author, ſuppoſed to be a remnant of the Vandals. He even thinks that they may be deſcended from the remainder of an army of Vandals mentioned by Procopius, which was defeated among thoſe mountains. They live in perpetual war with the Moors, and boaſt that their anceſtors were Chriſtians. They pay no taxes.

JIDDA, a town of Arabia, ſituated, according to Mr Bruce, in N. Lat. 28° 0′ 1″ E. Long. 39° 16′ 45″. It is ſituated in a very unwholeſome, barren, and deſert part of the country. Immediately without the gate to the eaſtward is a deſart plain filled with the huts of the Bedoweens or country Arabs, built of long bundles of ſpartum or bent-graſs put together like faſcines. Theſe people ſupply the town with milk and butter. "There is no ſtirring out of the town (ſays Mr Bruce) even for a walk, unleſs for about half a mile in the ſouth-ſide by the ſea, where there is a number of ſtinking pools of ſtagnant water, which contribute to make the town very unwholeſome."

From the diſagreeable and inconvenient ſituation of this port, it is probable, that it would have been long ago abandoned, had it not been for its vicinity to Mecca, and the vaſt annual influx of wealth occaſioned by the India trade; which, however, does not continue, but paſſes on to Mecca, whence it is diſperſed all over the eaſt. The town of Jidda itſelf receives but little advantage, for all the cuſtoms are immediately ſent to the needy and rapacious ſheriff of Mecca and his dependents. "The gold (ſays Mr Bruce) is returned in bags and boxes, and paſſes on as rapidly to the ſhips as the goods do to the market, and leaves as little profit behind. In the mean time proviſions riſe to a prodigious price, and this falls upon the townſmen, while all the profit of the traffic is in the hands of ſtrangers; moſt of whom, after the market is over (which does not laſt ſix weeks), retire to Yemen and other neighbouring countries, which abound in every ſort of proviſion.

From this ſcarcity, Mr Bruce ſuppoſes it is that polygamy is leſs common here than in any other part of Arabia. "Few of the inhabitants of Jidda (ſays our author) can avail themſelves of the privilege granted by Mahomet. He cannot marry more than one wife, becauſe he cannot maintain more; and from this cauſe ariſes the want of people and the number of unmarried women.

The trade at Jidda is carried on in a manner which appeared very ſtrange to our traveller. "Nine ſhips (ſays he) were there from India; ſome of them worth, I ſuppoſe, 200,000l. One merchant, a Turk, living at Mecca, 30 hours journey off, where no Chriſtian dares go whilſt the continent is open to the Turk for eſcape, offers to purchaſe the cargoes of four out of theſe nine ſhips himſelf; another of the ſame caſt comes and ſays he will buy none unleſs he has them all. The ſamples are ſhown, and the cargoes of the whole nine ſhips are carried into the wildeſt parts of Arabia by men with whom one would not wiſh to truſt himſelf alone in the field. This is not all; two India brokers come into the room to ſettle the price; one on the part of the India Captain, the other on that of the buyer the Turk. They are neither Mahometans nor Chriſtians, but have credit with both. They ſit down on the carpet, and take an India ſhawl which they carry on their ſhoulder like a napkin, and ſpread it over their hands. They talk in the mean time indifferent converſation, as if they were employed in no ſerious buſineſs whatever. After about 20 minutes ſpent in handling each others fingers below the ſhawl, the bargain is concluded, ſay for nine ſhips, without one word ever having been ſpoken on the ſubject, or pen or ink uſed in any ſhape whatever. There never was one inſtance of a diſpute happening in theſe ſales. But this is not all; the money is yet to be paid. A private Moor, who has nothing to ſupport him but his character, becomes reſponſible for the payment of theſe cargoes. This man delivers a number of coarſe hempen bags full of what is ſuppoſed to be money. He marks the contents upon the bag, and puts his ſeal upon the ſtring that ties the mouth of it. This is received for what is marked upon it without any one ever having opened one of the bags; and in India it is current for the value marked upon it as long as the bag laſts.

The port of Jidda is very extenſive, and contains numberleſs ſhoals, ſmall iſlands, and ſunk rocks, with deep channels, however, between them; but in the harbour itſelf ſhips may ride ſecure, whatever wind blows. The only danger is in the coming in or going out; but as the pilots are very ſkilful, accidents are never known to happen. The charts of this harbour, as Mr Bruce informs us, are exceedingly erroneous. While he ſtaid here, he was deſired by Captain Thornhill to make a new chart of the harbour; but finding that it had been undertaken by another gentleman, Captain Newland, he dropped it. He argues in the ſtrongeſt terms againſt the old maps, which he ſays, can be of no uſe, but the contrary; and he gives it as a characteriſtic of the Red Sea, "ſcarce to have ſoundings in any part of the channel, and often on both ſides; whilſt aſhore, ſoundings are hardly found a boat length from the main. To this, ſays he, I will add, that there is ſcarce one iſland on which I ever was, where the boltſprit was not over the land, while there were no ſoundings by a line heaved over the ſtern. Of all the veſſels in Jidda, only two had their log-lines properly divided, and yet all were ſo fond of their ſuppoſed accuracy, as to aver they had kept their courſe within five leagues between India and Babelmandel. Yet they had made no eſtimation of the currents without the ſtaits, nor the different very ſtrong ones ſoon after paſſing Socotra; their half-minute glaſſes, upon a medium, ran 57 ſeconds; they had made no obſervations on the tides or currents in the Red ſea, either in the channel or in the inward paſſage; yet there is delineated in this map a courſe of Captain Newland, which he kept in the middle of the channel, full of ſharp angles and ſhort ſtretches; you would think every yard was meaſured and ſounded!"

JIG. See Music, n° 252.

JIN. See Genii.

IKENILD ſtreet, one of the four famous ways which the Romans made in England, called *Stratum Icenorum*, becauſe it began in the country of the *Iceni*, who inhabited Norfolk, Suffolk, and Cambridgeſhire.

ILA, Ilay, or *Iſla*, one of the Weſtern Iſles of Scotland, lying to the weſt of Jura, from which it is ſeparated by a narrow channel. It extends 28 miles in length from north to ſouth, and is 18 in breadth from eaſt to weſt. On the eaſt ſide, it is full of mountains covered with heath; to the ſouthward, the land is tolerably well cultivated. In ſome parts the inhabitants have found great plenty of limeſtone, and lead-mines are worked in three different places. The only harbour in Iſla is at Lochdale, near the north end of the iſland. Here are ſeveral rivers and lakes well ſtored with trout, eels, and ſalmon. In the centre is Loch Finlagan, about three miles in circuit, with the little iſle of that name in the middle. Here the great lord of the iſles once reſided in all the pomp of royalty; but his palaces and offices are now in ruins. Inſtead of a throne, Macdonald ſtood on a ſtone ſeven feet ſquare, in which there was an impreſſion made to receive his feet; here he was crowned and anointed by the biſhop of Argyle and ſeven inferior prieſts, in preſence of the chieftains. This ſtone ſtill exiſts. The ceremony (after the new lord had collected his kindred and vaſſals) was truly patriarchal. After putting on his armour, his helmet, and his ſword, he took an oath to rule as his anceſtors had done; that is, to govern as a father would his children: his people in return ſwore that they would pay the ſame obedience to him as children would to their parent, The dominions of this potentate, about the year 1516, conſiſted only of Ilay, Jura, Knapdale, and Cantyre: ſo reduced were they from what they had been before the deprivation of the great earl of Roſs in the reign of James III. Near this is another little iſle, where he aſſembled his council, *Ilan na Corlle*, or "the iſland of council;" where 13 judges conſtantly ſat to decide differences among his ſubjects; and received for their trouble the 11th part of the value of the affair tried before them. In the firſt Iſland were buried the wives and children of the lords of the iſles; but their own perſons were depoſited in the more ſacred ground of Iona. On the ſhores of the lake are ſome marks of the quarters of his *Carnauch* and *Gilli-glaſſes*, "the military of the iſles:" the firſt ſignifying a ſtrong man, the laſt a grim looking fellow. The firſt were light-armed, and fought with darts and daggers; the laſt with ſharp hatchets. Theſe are the troops that Shakeſpeare alludes to, when he ſpeaks of a Donald, who

> ———From the Weſtern Iſles
> Of Kernes and Gallow glaſſes was ſupplied.

Beſides thoſe already mentioned, the lords had a houſe and chapel at Laganon, on the ſouth ſide of Loch-andaal: a ſtrong caſtle on a rock in the ſea, at Dunowaik, at the ſouth-eaſt end of the country; for they made this iſland their reſidence after their expulſion from that of Man in 1304.—There is a tradition, that while the Iſle of Man was part of the kingdom of the iſles, the rents were for a time paid in this country: thoſe in ſilver were paid on a rock, ſtill called *Creig-a-nione*, or "the rock of the ſilver-rent;" the other *Creig-a-nairgid*, or "the rock of rents in kind." Theſe lie oppoſite to each other, at the mouth of a harbour on the ſouth ſide of this iſland. There are ſeveral forts built on the iſles in freſh-water lakes, and divers caverns in different parts of the iſland, which have been uſed occaſionally as places of ſtrength. The iſland is divided into four pariſhes, *viz.* Kildalton, Kilaron, Kilchoman, and Kilmenie. The produce is corn of different kinds; ſuch as barley, which ſometimes yields eleven-fold; and oats ſix-fold. Much flax is raiſed here, and about L.2000 worth ſold out of the iſland in yarn, which might better be manufactured on the ſpot, to give employ to the poor natives. Notwithſtanding the excellency of the land, above L.1000 worth of meal is annually imported. Ale is frequently made in this iſland of the young tops of heath, mixing two-thirds of that plant with one of malt, ſometimes adding hops. Boethius relates, that this liquor was much uſed among the Picts; but when that nation was extirpated by the Scots, the ſecret of making it periſhed with them. Numbers of cattle are bred here, and about 1700 are annually exported at the price of 50 ſhillings each. The iſland is often overſtocked, and numbers die in March for want of fodder. None but milch-cows are houſed: cattle of all other kinds, except the ſaddle-horſes, run out during winter.

The number of inhabitants is computed to be between ſeven and eight thouſand. About 700 are employed in the mines and in the fiſhery: the reſt are gentlemen-farmers, and ſubtenants or ſervants. The women ſpin. The ſervants are paid in kind; the ſixth part of the crop. They have houſes gratis: the maſter gives them the ſeed for the firſt year, and lends them horſes to plough annually the land annexed.

The quadrupeds of this iſland, as enumerated by Mr Pennant[†], are ſtots, weeſels, otters, and hares: the laſt ſmall, dark-coloured, and bad runners. The birds are eagles, peregrine falcons, black and red game, and a very few ptarmigans. Red-breaſted gooſeanders breed on the ſhore among the looſe ſtones. wild geeſe in the moors, and herons in the iſland in Loch-guirm. The fiſh are plaiſe, ſmeardab, large dabs, mullets, ballan, lump-fiſh, black goby, greater dragonet, and that rare fiſh the lepadogaſter of M. Gouan. Vipers ſwarm in the heath: the natives retain the vulgar error of their ſtinging with their forked tongues; that a ſword on which the poiſon has fallen will hiſs in water like a red-hot iron; and that a poultice of human ordure is an infallible cure for the bite.

In this iſland, Mr Pennant informs us, ſeveral ancient diverſions and ſuperſtitions are ſtill preſerved: the laſt indeed are almoſt extinct, or at moſt lurk only among the very meaneſt of the people. The late-wakes or funerals, like thoſe of the Romans, were attended with ſports, and dramatic entertainments compoſed of many parts, and the actors often changed their dreſſes ſuitably to their characters. The ſubject of the drama was hiſtorical, and preſerved by memory.—The power of faſcination is as ſtrongly believed here as it was by the ſhepherds of Italy in times of old.

Neſcio quis teneros oculis mihi faſcinat agnos?

But here the power of the evil-eye affects more the milch-cows than lambs. If the good houſewife perceives the effect of the malicious on any of her kine, ſhe takes as much milk as ſhe can drain from the enchanted herd (for the witch commonly leaves very little). She then boils it with certain herbs, and adds to them flints and untempered ſteel: after that ſhe ſecures the door, and invokes the three ſacred perſons. This puts the witch into ſuch an agony, that ſhe comes nilling-willing to the houſe, begs to be admitted, to obtain relief by touching the powerful pot: the good woman then makes her terms; the witch reſtores the milk to the cattle, and in return is freed from her pains. But ſometimes, to ſave the trouble of thoſe charms (for it may happen that the diſorder may ariſe from other cauſes than an evil eye), the trial is made by immerging in milk a certain herb, and if the cows are ſupernaturally affected, it inſtantly diſtils blood. The unſucceſsful lover revenges himſelf on his happy rival by charms potent as thoſe of the ſhepherd Alpheſibæus, and exactly ſimilar:

Necte tribus nodis ternos, Amarylli, colores:
Necte, Amarylli, modo.

Donald takes three threads of different hues, and ties three knots on each, three times imprecating the moſt cruel diſappointments on the nuptial bed: but the bridegroom, to avert the harm, ſtands at the altar with an untied ſhoe, and puts a ſixpence beneath his foot.

Hiſtory furniſhes very few materials for the great events or revolutions of Ilay. It ſeems to have been long a ſeat of empire, probably jointly with the Iſle of Man, as being moſt conveniently ſituated for the government of the reſt of the Hebrides; for Crovan the Norwegian, after his conqueſt of that iſland in 1066, retired and finiſhed his days in Ilay. There are more Daniſh or Norwegian names of places in this iſland than any other: almoſt all the preſent farms derive their titles from them; ſuch as Perſibus, Torridale, Torribolſe, and the like. On the retreat of the Danes it became the ſeat of their ſucceſſors the lords of the iſles; and continued, after their power was broken, in the reign of James III. in their deſcendants the Macdonalds, who held or ought to have held it from the crown. It was in the poſſeſſion of a Sir James Macdonald, in the year 1598, the ſame who won the battle of Traii-dhruihnard. His power gave umbrage to James VI. who directed the lord of Macleod, Cameron of Lochiel, and the Macnieles of Barra, to ſupport the Macleans in another invaſion. The rival parties met near the hill of Benbigger, eaſt of Kilarow; a fierce engagement enſued, and the Macdonalds were defeated and almoſt entirely cut off. Sir James eſcaped to Spain; but returned in 1620, was pardoned, received a penſion, and died the ſame year at Glaſgow; and in him expired the laſt of the great Macdonalds. But the king, irritated by the diſturbances raiſed by private wars, waged between theſe and other clans, reſumed the grant made by his predeceſſor, and transferred it to Sir John Campbell of Calder, who held it on paying an annual feu-duty of five hundred pounds ſterling, which is paid to this day. The

iſland

[†] *Voyage to the Hebrides*, ii. 263.

Ilcheſter, Ildefonſo.

iſland was granted to Sir John, as a reward for his undertaking the conqueſt; but the family conſidered it as a dear acquiſition, by the loſs of many gallant followers, and by the expences incurred in ſupport of it.

ILCHESTER, a town of Somerſetſhire in England, ſeated on the river Yeovil, 129 miles from London, is ſo called, becauſe it once had a caſtle, and ſtands on the river Ivel. It is a place of great antiquity, as appears by the Roman coins which are ſometimes dug up. It is likewiſe evident, from the ruins and from two towers on the bridge, that it was once a large place, and encompaſſed with a double wall. It alſo had ſeveral pariſh churches, though now but one. It is governed by two bailiffs, who with the twelve burgeſſes are lords of the manor. In the reign of Edward III. the aſſizes for the county were fixed here, which have ſince been held alternately at Wells, Taunton, and Bridgewater. The knights of the ſhire are always choſen here, and it is the place for the county-courts and jail. On the latter is its chief dependence, and therefore it cannot be very polite. It is noted for being the birth-place of Roger the famous Friar Bacon. Ilcheſter is an earldom in the Fox family.

ILDEFONSO (St), a celebrated royal reſidence of Spain, diſtant about two miles from Segovia. It was erected by Philip V. in the midſt of a ſolitary wood, and in the boſom of ſteep mountains. It is chiefly remarkable for its gardens. There is nothing magnificent in the palace, particularly in its exterior appearance. The front on the ſide of the garden is of the Corinthian order, and not deſtitute of elegance. Here are the king's apartments, which look upon a parterre ſurrounded with vaſes and marble ſtatues, and a caſcade which, for the richneſs of its decorations, may be compared with the fineſt of the kind.

The purity and clearneſs of the water is indeed incomparable. Philip V. could not, in this reſpect, be better ſerved by nature. From the mountains which ſhade the palace deſcend ſeveral rivulets, which ſupply the reſervoirs. Theſe waters anſwer the double purpoſe of ſupplying numerous fountains, and of diffuſing life and verdure through the magnificent gardens, the ſight of which alone is a ſufficient recompence for a journey into Spain. They are on the inſide a league in circumference. The inequality of the ground affords every moment new points of view. The principal alleys anſwer to different ſummits of neighbouring mountains; and one in particular produces the moſt agreeable effect. It is terminated at one end by the grand front of the palace. From this point are ſeen, at one view, five fountains, ornamented with elegant groups, riſing into an amphitheatre, above which appear the ſummits of lofty mountains. The moſt elevated of theſe groups is that of Andromeda faſtened to a rock. When ſeen at a little diſtance it is perhaps defective, becauſe the rock appears too diminutive by the ſide of the monſter which threatens Andromeda: and of Perſeus, by whom it is attacked; but the whole contributes to the beauty of the view. The moſt remarkable of the five groups is that of Neptune.

Ildefonſo.

"Genius (ſays M. Bourgoanne†) preſided at the compoſition and in the choice of the ſituation; the deity of the ocean appears erect, ſurrounded by his marine court. His attitude, his threatening countenance, and the manner of holding his trident, announce that he has juſt impoſed ſilence on the mutinous waves; and the calm which reigns in the baſon, defended from every wind by the triple-wall of verdure by which it is ſurrounded, ſeems to indicate that he has not iſſued his commands in vain. Often have I ſeated myſelf, with Virgil in my hand, by the ſide of this ſilent water, under the ſhade of the verdant foliage, nor ever did I fail to recollect the famous *Quos Ego!*

"There are other fountains worthy of the attention of the curious; ſuch as that of Latona, where the limpid ſheaves, ſome perpendicularly, and others in every direction, fall from the hoarſe throats of the Lycian peaſants, half transformed into frogs, and ſpouting them forth in ſuch abundance, that the ſtatue of the goddeſs diſappears under the wide mantle of liquid cryſtal; that alſo of Diana in the bath, ſurrounded by her nymphs; in the twinkling of an eye all the chaſte court is hidden beneath the waters; the ſpectator imagines he hears the whiſtling of aquatic birds, and the roaring of lions, from the place whence this momentary deluge eſcapes by a hundred canals. The fountain of Fame is formed by a ſingle jet-d'eau, which riſes 130 feet, exhibiting to the diſtance of ſeveral leagues round the triumph of art over nature, and falls in a gentle ſhower upon the gazing ſpectators. There are ſome ſituations in the gardens of St Ildefonſo, whence the eye takes in the whole of the greater part of theſe fountains, and where the ear is delighted with the harmony of their murmurs. The traveller who wiſhes to charm all his ſenſes at once, muſt take his ſtation on the high flat ground in front of the king's apartment. In the thick part of the foliage are contrived two large arbours, from the top of which are ſeen twenty cryſtal columns riſing into the air to the height of the ſurrounding trees, mixing their reſplendent whiteneſs with the verdure of the foliage, uniting their confuſed noiſe to the ruſtling of the branches, and refreſhing and embalming the air: if the traveller here experience no pleaſing ſenſations, let him return home, he is utterly incapable of feeling either the beauties of art or nature.

"The reader may here imagine (continues our author) my enthuſiaſm too extravagant. He is miſtaken: let him follow me to the great reſervoir of abundant and limpid waters. He will have to climb for ſome minutes, but will not regret the trouble he has taken. Let us ſuppoſe ourſelves arrived at the long and narrow alley which takes up the whole of the upper part of the gardens; proceed to the middle, and turn your face toward the caſtle. To the vaſt horizon around you, no other boundaries are diſcovered but thoſe which limit the human ſight; theſe alone prevent you from diſcovering the Pyrenees. Obſerve the ſteeple, which ſeems but a point in the immenſe extent: you will perhaps imagine it to be that of the pariſh church of St Ildefonſo; but, in reality, it is the cathedral of Segovia, at two leagues diſtance. The gardens, through which you have paſſed, become narrower to the eye. You ſuppoſe yourſelf cloſe to the royal habitation; the alleys, fountains, and parterres, have all diſappeared; you ſee but one road, which, in the form of a veſſel, upon the prow of which you ſeem to ſtand, has its ſtern on the top of the palace. Afterward turn and take a view of the little lake behind

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† *Travels in Spain*, I. 68.

you, of which the irregular borders do not, like what we call Engliſh gardens, merely ape the diſorder of nature. Nature herſelf has traced them, except on the ſide where you ſtand. This ſtraight alley is united at each end to the curve which ſurrounds the reſervoir. The waters, which ſtream in abundance from the ſides of the mountain in front, meet in this reſervoir, and thence deſcend by a thouſand inviſible tubes to other reſervoirs, whence they are ſpouted in columns or ſheets upon the flowery ſoil to which they were ſtrangers. The birds, drawn by their clearneſs, come to ſkim and agitate their cryſtal. The image of the tufted woods which ſurround them is reflected from their immoveable ſurface, as is alſo that of ſome ſimple and rural houſes, thrown, as by accident, into this delightful picture, which Lorrain would have imitated, but perhaps could not have imagined. The oppoſite bank is obſcured by thick ſhades. Some hollows, overſhadowed by arching trees, ſeem to be the aſylums of the Naiades, Diſturb them not by indiſcreet loquacity, but ſilently admire and meditate.

" It is impoſſible, however, not to go to the ſource of theſe waters; let us follow the meandring of their courſe, and obſerve the winding paths which there terminate, after appearing and diſappearing at intervals through the copſe. Let us liſten to the bubbling of the rivulets which from time to time eſcape from our ſight, and haſten to the rendezvous aſſigned them by the deſcendants of Louis XIV. They formerly loſt themſelves in the valleys, where they quenched the thirſt of the humble inhabitants, but are now conſecrated to the pleaſures of kings. Aſcending the back of the pyramidical mountain, behind which their ſource is concealed, we arrive at the wall which confines a part of them in the garden, and which was hidden by the trees; nothing, however, ought here to recal to mind excluſive property and ſlavery. Woods, waters, and the majeſtic ſolitude of mountains, which are at a diſtance from the tumult of courts and cities, are the property of every man.—Beyond this wall, which forms the exterior incloſure of the gardens, is an empty and flat ground, where the infant Don Louis, brother to the king, choſe a place which he conſecrated to cultivation. Farther on, the mountain becomes more ſteep, and is covered with trees to its ſummit. Let us now return; as we ſeek amuſement and not fatigue. We will follow the courſe of the waters, they deſcend in bubbling ſtreams from one level of the gardens to the other. In their courſe, in one place they water the feet of the trees, in others they croſs an alley to nouriſh more ſlowly the plants of a parterre. From the baſon of Andromeda they run between two rows of trees in the form of a canal, the too ſudden inclination of which is taken off by caſcades and windings. They receive and carry with them from the gardens the rivulets; which after having played amongſt the gods and nymphs, and moiſtened the throats of the ſwans, tritons, and lions, humbly deſcend under ground, and run on into the boſom of the neighbouring meadows, where they fulfil purpoſes leſs brilliant but more uſeful.

" We muſt not quit theſe magnificent gardens without ſtopping at a place which appears to promiſe much, but produces not any very great effect. This is the ſquare of the eight alleys, *Plaça de las ocho calles*. In the centre is the group of Pandora, the only one which is of whitened ſtone, all the others are of white marble or lead painted of a bronze colour. Eight alleys anſwer to this centre, and each is terminated by a fountain. Plats of verdure fill up the intervals between the alleys, and each has an altar under a portico of white marble by the ſide of a baſon ſacred to ſome god or goddeſs. Theſe eight altars, placed at equal diſtances, and decorated among other jets-d'eau, have two which riſe in the form of tapers on each ſide of their divinities. This cold regularity diſpleaſed Philip V. who a little before his death, when viſiting the gardens, made ſome ſevere reproaches to the inventor upon the ſubject. Philip had not the pleaſure of completely enjoying what he had created; death ſurpriſed him when the works he had begun were but half finiſhed. The undertaking was however the moſt expenſive one of his reign. The finances of Spain, ſo deranged under the princes of the houſe of Auſtria (thanks to the wiſe calculations of Orry, to the ſubſidies of France, and ſtill more to the courageous efforts of the faithful Caſtilians), would have been ſufficient for three long and ruinous wars, and for all the operations of a monarchy which Philip V. had conquered and formed anew, as well as to have reſiſted the ſhocks of ambition and political intrigue; but they ſunk beneath the expenſive efforts of magnificence.

It is ſingular that the caſtle and gardens of St Ildefonſo ſhould have coſt about 45,000,000 of piaſtres, preciſely the ſum in which Philip died indebted. This enormous expence will appear credible, when it is known that the ſituation of the royal palace was at the beginning of this century the ſloping top of a pile of rocks; that it was neceſſary to dig and hew out the ſtones, and in ſeveral places to level the rock; to cut out of its ſides a paſſage for a hundred different canals, to carry vegetative earth to every place in which it was intended to ſubſtitute cultivation for ſterility, and to work a mine to clear a paſſage to the roots of the numerous trees which are there planted. All theſe efforts were crowned with ſucceſs. In the orchards, kitchen gardens, and parterres, there are but few flowers, eſpaliers, or plants, which do not thrive; but the trees, naturally of a lofty growth, and which conſequently muſt ſtrike their roots deep into the earth, already prove the inſufficiency of art when it attempts to ſtruggle againſt nature. Many of them languiſh with withered trunks, and with difficulty keep life in their almoſt naked branches. Every year it is neceſſary to call in the aid of gunpowder to make new beds for thoſe which are to ſupply their place; and none of them are covered with that tufted foliage which belongs only to thoſe that grow in a natural ſoil. In a word, there are in the groves of St Ildefonſo, marble ſtatues, baſons, caſcades, limpid waters, verdure, and delightful proſpects, every thing but that which would be more charming than all the reſt, thick ſhades.

The court of Spain comes hither annually during the heat of the dog-days. It arrives towards the end of July, and returns at the beginning of October. The ſituation of St Ildefonſo, upon the declivity of the mountains which ſeparate the two Caſtiles, and fronting a vaſt plain where there is no obſtacle to the paſſage of the north wind, renders this abode delightful in ſummer. The mornings and evenings of the hotteſt days are agreeably cool. Yet as this palace is upwards of 20 leagues from Madrid, and half of the road which leads to it croſſes the broad tops of mountains, extremely ſteep in many places, it is much more agreeable to the lovers of the chace and ſolitude than to others.

ILERDA (anc. geog.), the capital of the Iligertes; ſituated on an eminence between the rivers Sicoris and Cinga: An unhappy city, often beſieged, and often taken, becauſe lying expoſed to the incurſions from Gaul; and under Gallienus it was deſtroyed by the Germans. Now Lerida, in Catalonia, on the river Segra.

ILEX, the Holm or *Holly Tree*: A genus of the tetragynia order, belonging to the tetrandria claſs of plants: and in the natural method ranking under the 43d order, *Dumoſæ*. The calyx is quadridentated; the corolla rotaceous; there is no ſtyle; the berry is monoſpermous.

There are ſeveral ſpecies of this genus: but the moſt remarkable is the aquifolium, or common holly. Of this there are a great number of varieties with variegated leaves, which are propagated by the nurſery-gardeners for ſale, and ſome years paſt were in very great eſteem, but at preſent are but little regarded, the old taſte of filling gardens with ſhorn evergreens being pretty well aboliſhed; however, in the diſpoſition of clumps, or rather plantations, of evergreen trees and ſhrubs, a few of the moſt lively colours may be admitted, which will have a good effect in the winter-ſeaſon, if they are properly diſpoſed.

The beſt of theſe varieties are the painted lady-holly, Britiſh holly, Bradley's beſt holly, phyllis or cream-holly, milkmaid holly, Prichet's beſt holly, gold-edged hedgehog holly, Chyney's holly, glory-of-the-weſt holly, Broaderick's holly, Partridge's holly, Herefordſhire white holly, Blind's cream holly, Longſtaff's holly, Eales's holly, ſilver-edged hedgehog holly. All theſe varieties are propagated by budding or grafting them upon ſtocks of the common green holly; there is alſo a variety of the common holly with ſmooth leaves; but this is frequently found intermixed with the prickly-leaved on the ſame tree, and often on the ſame branch there are both ſorts of leaves.

The common holly grows naturally in woods and foreſts in many parts of England, where it riſes from 20 to 30 feet high, and ſometimes more, but their ordinary height is not above 25 feet; the ſtem by age becomes large, and is covered with a greyiſh ſmooth bark; and thoſe trees which are not loped or browſed by cattle, are commonly furniſhed with branches the greateſt part of their length, ſo form a ſort of cone; the branches are garniſhed with oblong oval leaves, of a lucid green on the upper ſurface, but are pale on their under, having a ſtrong midrib: the edges are indented and waved, with ſharp thorns terminating each of the points, ſo that ſome of the thorns are raiſed upward, and others are bent downward, and being very ſtiff they are troubleſome to handle. The leaves are placed alternate on every ſide of the branches; and from the baſe of their footſtalks come out the flowers in cluſters, ſtanding on very ſhort footſtalks; each of theſe ſuſtain five, ſix, or more flowers. They are of a dirty white, and appear in May; but are ſucceeded by roundiſh berries, which turn to a beautiful red about Michaelmas, and continue on the trees, if they are not deſtroyed, till after Chriſtmas.

The common holly is a very beautiful tree in winter; therefore deſerves a place in all plantations of evergreen trees and ſhrubs, where its ſhining leaves and red berries make a fine variety; and if a few of the beſt variegated kinds are properly intermixed, they will enliven the ſcene. It is propagated by ſeeds, which never come up the firſt year, but lie in the ground as the haws do; therefore the berries ſhould be buried in the ground one year, and then taken up and ſown at Michaelmas, upon a bed expoſed only to the morning ſun; the following ſpring the plants will appear, which muſt be kept clean from weeds; and if the ſpring ſhould prove dry, it will be of great ſervice to the plants if they are watered once a-week; but they muſt not have it oftener, nor in too great quantity, for too much moiſture is very injurious to theſe plants when young. In this ſeed-bed the plants may remain two years; and then ſhould be tranſplanted in the autumn, into beds at about ſix inches aſunder, where they may ſtand two years longer; during which time they muſt be conſtantly kept clean from weeds; and if the plants have thriven well, they will be ſtrong enough to tranſplant where they are deſigned to remain: for when they are tranſplanted at that age, there will be leſs danger of their failing, and they will grow to a larger ſize than thoſe which are removed when they are much larger; but if the ground is not ready to receive them at that time, they ſhould be tranſplanted into a nurſery in rows at two feet diſtance, and one foot aſunder in the rows, in which place the plants may remain two years longer; and if they are deſigned to be grafted or budded with any of the variegated kinds, that ſhould be performed after the plants have grown one year in the nurſery: but the plants ſo budded or grafted ſhould continue two years after in the nurſery, that they may make good ſhoots before they are removed; though the plain ones ſhould not ſtand longer than two years in the nurſery, becauſe when they are older they do not tranſplant ſo well. The beſt time for removing hollies is in the autum, eſpecially in dry land; but where the ſoil is cold and moiſt, they may be tranſplanted with great ſafety in the ſpring, if the plants are not too old, or have not ſtood long unremoved, for if they have, there is great doubt of their growing when removed.

Uſes. Sheep in the winter are fed with croppings of holly. Birds eat the berries. The bark fermented and afterwards waſhed from the woody fibres, makes the common bird-lime. The plant makes an impenetrable fence, and bears cropping; however, it is not found in all reſpects to anſwer for this purpoſe equally well with the hawthorn. The wood is uſed in fineering, and is ſometimes ſtained black to imitate ebony. Handles for knives and cogs for mill-wheels are made of it. It is alſo made into hones for whetting of razors. Mr Miller ſays, he has ſeen the floor of a room laid with compartments of holly and mahogany, which had a very pretty effect.

ILFRACOMB, a town of Devonſhire, ſeated on the Severn ſea, almoſt oppoſite to Swanſea in Glamorganſhire, 186 miles from London. It is a populous, rich, trading ſea-port, eſpecially with herrings in the

Briſtol-channel; noted for maintaining conſtant lights to direct the ſailors; for its convenience of building and repairing ſhips; and for the ſafe ſhelter ſhips from Ireland find here, when it is extremely dangerous for them to run into the mouth of the Taw, which they call Barnſtaple-water; and this is one reaſon why the Barnſtaple merchants do ſo much of their buſineſs at this port. The harbour, with its quay, warp-houſe, light-houſe, pilot-boats, and tow-boats, were formerly maintained at the expence of the anceſtors of the lord of the manor; and then it had a quay or pier 850 feet long; but by time and the violence of the ſea all went to decay; to remedy which, the parliament paſſed an act in 1731, for both repairing and enlarging the piers, harbour, &c. It is governed by a mayor, bailiffs, &c. and conſiſts chiefly of one ſtreet of ſcattered houſes almoſt a mile long. The pariſh is large, containing ſeveral tythings and manors.

ILIAC Passion, a violent and dangerous kind of colic: called alſo *volvulus*, *miſerere mei*, and *chordapſus*. It takes its name from the inteſtine *ilion*, on account of its being uſually affected in this diſtemper; or perhaps from the Greek verb ειλειν "to wind or twiſt"; whence alſo it is the Latins call it *volvulus*. See Medicine *Index*.

ILIAD, the name of an ancient epic poem, the firſt and fineſt of thoſe compoſed by Homer.

The poet's deſign in the Iliad was to ſhow the Greeks, who were divided into ſeveral little ſtates, how much it was their intereſt to preſerve a harmony and good underſtanding among themſelves; for which end he ſets before them the calamities that befel their anceſtors from the wrath of Achilles, and his miſunderſtanding with Agamemnon; and the advantages that afterwards accrued to them from their union. The iliad is divided inth 24 books or rhapſodies, which are marked with the letters of the alphabet.

ILISSUS, a river running to the eaſt of Athens; which, with the Eridanus running on the weſt ſide, falls below the city into the ſea. Sacred to the muſes, called *Iliſſiades*; on whoſe bank their altar ſtood, and where the luſtration in the leſs myſteries was uſually performed.

ILIUM, Ilion, or *Ilios*, (anc. geog.) a name for the city of Troy, but moſt commonly uſed by the poets, and diſtinguiſhed by the epithet *Vetus*; at a greater diſtance from the ſea than what was afterwards called *Ilium Novum*, and thought to be the *Ilienſium Pagus* of Strabo. New or modern Ilium was a village nearer the ſea, with a temple of Minerva; where Alexander, after the battle of Granicus, offered gifts, and called it a city, which he ordered to be enlarged. His orders were executed by Lyſimachus, who encompaſſed it with a wall of 40 ſtadia. It was afterwards adorned by the Romans, who granted it immunities as to their mother city. From this city the *Ilias* of Homer takes its name, containing an account of the war carried on between the Greeks and Trojans on account of the rape of Helen; a variety of diſaſters being the conſequence, gave riſe to the proverb *Ilias Malorum*.

ILKUCH, a royal town of Poland, in the palatinate of Cracow, remarkable for its ſilver mines mixed with lead. It is ſeated in a barren and mountainous country, in E. Long. 20. 0. N. Lat. 50. 26.

ILLECEBRUM, in botany: A genus of the monogynia order, belonging to the pentandria claſs of plants; and in the natural method ranking under the 12th order, *Holoraceæ*. The calyx is pentaphyllous, and cartilaginous; there is no corolla; the ſtigma is ſimple; the capſule quinquevalved, and monoſpermous. There are ſeveral ſpecies, of which the moſt remarkable are the paronychia and the capitatum. Both theſe have trailing ſtalks near two feet long, which ſpread on the ground, garniſhed with ſmall leaves like thoſe of knot-graſs. The heads of the flowers come out from the joints of the ſtalks, having neat ſilvery bractea ſurrounding them, which make a pretty appearance. Their flowers appear in June, and there is generally a ſucceſſion of them for at leaſt two months; and when the autumn proves warm, they will ripen their ſeeds in October. They are propagated by ſeeds which ſhould be ſown in a bed of light earth in the beginning of April: the plants will come up in May, when they ſhould be kept clean from weeds till they are fit to remove. Some ſhould be planted in ſmall pots and the reſt in a warm border, obſerving to water and ſhade them till they have taken new root. Theſe plants are ſometimes killed in ſevere winters; for which reaſon it is directed to plant ſome of them in pots, that they may be ſheltered during that ſeaſon.

ILLENOIS, a people of North America, inhabiting a country lying near a large lake of the ſame name (called alſo *Michigan*), formed by the river St Laurence. The country is fertile; and the people plant Indian corn, on which they chiefly ſubſiſt. They are civil, active, lively, and robuſt; and are much leſs cruel in their diſpoſitions than the other Indian nations. They are, however, ſaid to be great libertines, and to marry a number of wives; but ſome of their villages have embraced Chriſtianity.

ILLICIUM, in botany: A genus of the pentagynia order, belonging to the dodecandria claſs of plants; and in the natural method ranking with thoſe of which the order is doubtful. The calyx is tetraphyllous, and deciduous; there are eight petals, and eight petaloid ſubulated nectaria. There are 16 ſtamina with bifid antheræ; the capſules are ovate, compreſſed, and monoſpermous. There are two ſpecies, viz. 1 The floridanum, with red flowers, and very odorous fruit. It is a native of China. 2. The aniſatum, a native of the woods of China and Japan. It riſes with an erect branched ſtem to the height of a cherry-tree; and is covered with an aſh-coloured bark, under which is another bark that is green, fleſhy, ſomewhat mucous, and of an aromatic taſte, combined with a ſmall degree of aſtringency. The wood is hard and brittle; the pith ſmall in quantity, fungous, and of a green herbaceous colour. The leaves reſemble thoſe of laurel; the flowers, in ſome ſort, thoſe of narciſſus. Theſe laſt generally ſtand ſingle, are of a pale white, and conſiſt of 16 petals, which differ in their form The extremity of the flower-ſtalk being continued into the germen or ſeed-bud of the flower, forms eight conjoined capſules, or one deeply divided into eight parts. Of theſe capſules, ſome frequently decay; the reſt incloſe each a ſingle ſeed, ſomewhat reſembling that of palma chriſti, and which, when the hardiſh corticle that cloſely covers and involves it is broken, exhibits a kernel that is white, fleſhy, ſoft, and of a vapid taſte. The bonzes, or prieſts of China and Japan, infuſe into the inhabitants a ſuperſtitious belief, that the gods are delighted with the preſence of this tree. Hence they generally place before their idols garlands and bundles made of the branches. A ſimilar opinion the Bramins inculcate into the Indians, of the Malabar fig, or *ficus religioſa*. The bark of the aniſe-tree, reduced to powder, and equally burnt, the public watchmen in Japan, by a very curious contrivance deſcribed by Kempfer, render uſeful in the meaſuring of time during the darkneſs of the night. The ſame powder is frequently burnt in brazen veſſels on the Japaneſe altars, as incenſe is in other countries, from a belief that the idols in whoſe honour the ceremony is performed are greatly refreſhed with the agreeable fragrancy of its odour. It is remarkable, that a branch of this tree being added to the decoction of the poiſonous fiſh, termed by the Dutch *de opblaſer* (a fiſh the moſt delicate, if the poiſonous matter be firſt properly expelled), increaſes its noxious quality, and exaſperates the poiſon to an aſtoniſhing degree of activity and power.

ILLUMINATING, a kind of miniature-painting, anciently much practiſed for illuſtrating and adorning books. Beſides the writers of books, there were artiſts whoſe profeſſion was to ornament and paint manuſcripts, who were called *illuminators*; the writers of books firſt finiſhed their part, and the illuminators embelliſhed them with ornamented letters and paintings. We frequently find blanks left in manuſcripts for the illuminators, which were never filled up. Some of the ancient manuſcripts are gilt and burniſhed in a ſtyle ſuperior to later times. Their colours were excellent, and their ſkill in preparing them muſt have been very great.

The practice of introducing ornaments, drawings, emblematical figures, and even portraits, into manuſcripts, is of great antiquity. Varro wrote the lives of ſeven hundred illuſtrious Romans, which he enriched with their portraits, as Pliny atteſts in his Natural Hiſtory (lib. xxxv. chap. 2.) Pomponious Atticus, the friend of Cicero, was the author of a work on the actions of the great men amongſt the Romans, which he ornamented with their portraits, as appears in his life by Cornelius Nepos (chap. 18.) But theſe works have not been tranſmitted to poſterity. There are, however, many precious documents remaining, which exhibit the advancement and decline of the arts in different ages and countries. Theſe ineſtimable paintings and illuminations diſplay the manners, cuſtoms, habits, eccleſiaſtical, civil, and military, weapons and inſtruments of war, utenſils, and architecture of the ancients; they are of the greateſt uſe in illuſtrating many important facts relative to the hiſtory of the times in which they were executed. In theſe treaſures of antiquity are preſerved a great number of ſpecimens of Grecian and Roman art, which were executed before the arts and ſciences fell into neglect and contempt. The manuſcripts containing theſe ſpecimens form a valuable part of the riches preſerved in the principal libraries of Europe. The Royal, Cottonian, and Harleian libraries, as alſo thoſe in the two univerſities in England, the Vatican at Rome, the imperial at Vienna, the royal at Paris, St Mark's at Venice, and many others.

A very ancient MS. of Geneſis, which was in the Cottonian library, and almoſt deſtroyed by a fire in 1731, contained two hundred and fifty curious paintings in water colours. Twenty-one fragments, which eſcaped the fire, are engraven by the ſociety of antiquaries of London. Several ſpecimens of curious pantings alſo appear in Lambecius's catalogue of the imperial library at Vienna, particularly in Vol. III. where forty-eight drawings of nearly equal antiquity with thoſe in the Cottonian library are engraven; and ſeveral others may be found in various catalogues of the Italian libraries. The drawings in the Vatican Virgil made in the fourth century, before the arts were entirely neglected, illuſtrate the different ſubjects treated of by the Roman poet. A miniature drawing is prefixed to each of the goſpels brought over to England by St Auguſtin in the ſixth century, which is preſerved in the library of Corpus Chriſti college, Cambridge: in the compartments of theſe drawings are depicted repreſentations of ſeveral tranſactions in each goſpel. The curious drawings, and elaborate ornaments in St Cuthbert's goſpels made by St Ethelwald, and now in the Cottonian library, exhibit a ſtriking ſpecimen of the ſtate of the arts in England in the ſeventh century. The ſame may be obſerved with reſpect to the drawings in the ancient copy of the four goſpels preſerved in the cathedral church of Litchfield, and thoſe in the Codex Ruſhworthianus in the Bodleian library at Oxford. The life of St Paul the hermit, now remaining in Corpus Chriſti college, Cambridge, (G 2), affords an example of the ſtyle of drawing and ornamenting letters in England in the eighth century; and the copy of Prudentius's *Pſycomachia* in the Cottonian library (Cleop. c. 8.) exhibits the ſtyle of drawing in Italy in the ninth century. Of the tenth century there are Roman drawings of a ſingular kind in the Harleian library (N° 2820.) Nos 5280, 1802, and 432, in the ſame library, contain ſpecimens of ornamented letters, which are to be found in Iriſh MSS. from the twelfth to the fourteenth century. Cædmon's Poetical Paraphraſe of the book of Geneſis, written in the eleventh century, which is preſerved amongſt F. Junius's MSS. in the Bodleian library, exhibits many ſpecimens of utenſils, weapons, inſtruments of muſic, and implements of huſbandry uſed by the Anglo-Saxons. The like may be ſeen in extracts from the Pentateuch of the ſame age, in the Cottonian library (Claud. B. 4.) The manuſcript copy of Terence in the Bodleian library (D. 17.) diſplays the dreſſes, maſks, &c. worn by comedians in the twelfth century, if not earlier. The very elegant Pſalter in the library of Trinity College, Cambridge, exhibits ſpecimens of the art of drawing in England in the ſame century. The Virgil in the Lambeth library of the 13th century (N° 471.), written in Italy, ſhows both by the drawings and writing, that the Italians produced works much inferior to the Britons at that period. The copy of the Apocalypſe in the ſame library (N° 209), contains a curious example of the manner of painting in the fourteenth century.—The beautiful paintings in the hiſtory of the latter part of the reign of king Rich. II. in the Harleian library (N° 1319), afford curious ſpecimens of manners and cuſtoms, both civil and military, at the cloſe of the fourteenth and in the beginning of the fifteenth century; as does N° 2278 in the ſame library.—Many other inſtances might be produced; but thoſe who deſire farther information may conſult Strutt's Regal and Eccleſiaſtical Antiquities, 4to, and his Horda-Angel-cynnan lately publiſhed in three vols.

This art was much practiſed by the clergy, and even by ſome in the higheſt ſtations in the church. "The famous Oſmund (ſays Bromton), who was conſecrated biſhop of Saliſbury A. D. 1076, did not diſdain to ſpend ſome part of his time in writing, binding, and *illuminating* books." Mr Strutt, as already noticed, has given the public an opportunity of forming ſome judgment of the degree of delicacy and art with which theſe illuminations were executed, by publiſhing prints of a prodigious number of them, in his *Regal and eccleſiaſtical antiquities of England*, and *View of the cuſtoms, &c. of England.* In the firſt of theſe works we are preſented with the genuine portraits, in miniature, of all the kings, and ſeveral of the queens of England, from Edward the Confeſſor to Henry VII. moſtly in their crowns and royal robes, together with the portraits of many other eminent perſons of both ſexes.

The illuminators and painters of this period ſeem to have been in poſſeſſion of a conſiderable number of colouring materials, and to have known the arts of preparing and mixing them, ſo as to form a great variety of colours: for in the ſpecimens of their miniature-paintings that are ſtill extant, we perceive not only the five primary colours, but alſo various combinations of them. Though Strutt's prints do not exhibit the bright and vivid colours of the originals, they give us equally a view, not only of the perſons and dreſſes of our anceſtors, but alſo of their cuſtoms, manners, arts, and employments, their arms, ſhips, houſes, furniture, &c. and enable us to judge of their ſkill in drawing. The figures in thoſe paintings are often ſtiff and formal; but the ornaments are in general fine and delicate, and the colours clear and bright, particularly the gold and azure. In ſome of theſe illuminations the paſſions are ſtrongly painted. How ſtrongly, for example, is terror painted in the faces of the earl of Warwick's ſailors, when they were threatened with a ſhipwreck, and grief in the countenances of thoſe who were preſent at the death of that hero*? After the introduction of printing, this elegant art of illuminating gradually declined, and at length was quite neglected.

Before concluding, it may not be improper to obſerve, that from the fifth to the tenth century, the miniature paintings which we meet with in Greek MSS. are generally good, as are ſome which we find among thoſe of Italy, England and France. From the tenth to the middle of the fourteenth century they are commonly very bad, and may be conſidered as ſo many monuments of the barbarity of thoſe ages; towards the latter end of the fourteenth, the paintings in manuſcripts were much improved; and in the two ſucceeding centuries, many excellent performances were produced, eſpecially after the happy period of the reſtoration of the arts, when great attention was paid to the works of the ancients, and the ſtudy of antiquity became faſhionable.

ILLUMINATORS. See ILLUMINATING.

ILLUMINED, ILLUMINATI, a church term, anciently applied to ſuch perſons as had received baptiſm. This name was occaſioned by a ceremony in the baptiſm of adults; which conſiſted in putting a lighted taper in the hand of the perſon baptized, as a ſymbol of the faith and grace he had received in the ſacrament.

ILLUMINED, *Illuminati*, is alſo the name of a ſect of heretics, who ſprang up in Spain about the year 1575, and were called by the Spaniards *Alambrados*. Their principal doctrines were, that by means of a ſublime manner of prayer, which they had attained to, they entered into ſo perfect a ſtate, that they had no occaſion for ordinances, ſacraments, nor good works; and that they could give way, even to the vileſt actions, without ſin. The ſect of Illumined was revived in France in the year 1634. and were ſoon after joined by the Guerinets, or diſciples of Peter Guerin, who together made but one body, called alſo ILLUMINED: but they were ſo hotly purſued by Louis XIII. that they were ſoon deſtroyed. The brothers of the Roſy Croſs are ſometimes alſo called Illumined. See ROSYCRUSIAN.

ILLUSTRIOUS, ILLUSTRIS, was heretofore, in the Roman empire, a title of honour peculiar to people of a certain rank. It was firſt given to the moſt diſtinguiſhed among the knights, who had a right to bear the latus clavus: afterwards, thoſe were intitled *illuſtrious* who held the firſt rank among thoſe called *honorati*; that is, the præfecti prætorii, præfecti urbis, tribunes, comites, &c.

There were, however, different degrees among the *illuſtrious*: as in Spain they have grandees of the firſt and ſecond claſs, ſo in Rome they had their *Illuſtres*, whom they called great, *majores*; and others leſs, called *illuſtres minores*.—For inſtance; the præfectus prætorii was a degree below the maſter of the offices, though they were both *illuſtres*.

The Novels of Valentinian diſtinguiſh as far as five kinds of *illuſtres*; among whom, the *illuſtres adminiſtratores* bear the firſt rank.

ILLYRICUM, (*Solum* perhaps underſtood) Livy, Herodian, St. Paul; called *Illyris* by the Greeks, and ſometimes *Illyria*: the country extending from the Adriatic to Pannonia thus called. Its boundaries are variouſly aſſigned. Pliny makes it extend in length from the river Arſia to the Drinius, thus including Liburnia to the weſt, and Dalmatia to the eaſt: which is alſo the opinion of Ptolemy; who ſettles its limits from mount Scardus and the Upper Moeſia on the eaſt, to Iſtria in the weſt. A Roman province, divided by Auguſtus into the Superior and Inferior, but of which the limits are left undetermined both by ancient hiſtorians and geographers. *Illyrii* the people; called *Illyres* by the Greeks. The country is now called *Sclavonia*.

ILLYRIUS, (Matthias, Flaccus, or Francowitz), one of the moſt learned divines of the Augſburgh confeſſion, born in Iſtria, anciently called *Illyrica*, in 1520. He is ſaid to have been a man of vaſt genius, extenſive learning, of great zeal againſt Popery; but of ſuch a reſtleſs and paſſionate temper, as overbalanced all his good qualities, and occaſioned much diſturbance in the Proteſtant church. He publiſhed a great number of books, and died in 1575.

IMAGE, in a religious ſenſe, is an artificial repreſentation or ſimilitude of ſome perſon or thing, uſed either by way of decoration and ornament, or as an object of religious worſhip and adoration; in which laſt ſenſe, it is uſed indifferently with the word Idol.

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* See Strutt, vol. ii. plates 56, 58.

The noble Romans preſerved the *images* of their anceſtors with a great deal of care and concern, and had them carried in proceſſion at their funerals and triumphs: theſe were commonly made of wax, or wood, though ſometimes of marble or braſs. They placed them in the veſtibules of their houſes; and they were to ſtay there, even if the houſes happened to be ſold, it being accounted impious to diſplace them. Appius Claudius was the firſt who brought them into the temples, in the year of Rome 259, and he added inſcriptions to them, ſhowing the origin of the perſons repreſented, and their brave and virtuous atchievements.—It was not, however, allowed for all, who had the *images* of their anceſtors in their houſes, to have them carried at their funerals; this was a thing only granted to ſuch as had honourably diſcharged themſelves of their offices: for thoſe who failed in this reſpect forfeited that privilege; and in caſe they had been guilty of any great crime, their *images* were broken in pieces. See Ignobiles and Jus.

The Jews abſolutely condemn all *images*, and do not ſo much as ſuffer any ſtatues or figures in their houſes, much leſs in their ſynagogues and places of worſhip.

The uſe and adoration of *images* are things that have been a long time controverted in the world.

It is plain, from the practice of the primitive church, recorded by the earlier fathers, that Chriſtians, for the firſt three centuries after Chriſt, and the greater part of the fourth, neither worſhipped *images* nor uſed them in their worſhip. However, the greater part of the Popiſh divines maintain, that the uſe and worſhip of *images* were as ancient as the Chriſtian religion itſelf: to prove this, they alledge a decree, ſaid to have been made in a council held by the Apoſtles at Antioch, commanding the faithful, that they may not err about the object of their worſhip, to make *images* of Chriſt and worſhip them. Baron. ad ann. 102. But no notice is taken of this decree, till 700 years after the Apoſtolic times, after the diſpute about *images* had commenced. The firſt inſtance that occurs in any credible author of *images* among Chriſtians, is that recorded by Tertullian de Pudicit. c. 10 of certain cups, or chalices, as Bellarmine pretends, on which was repreſented the parable of the good ſhepherd carrying the loſt ſheep on his ſhoulders: but this inſtance only proves, that the church, at that time, did not think emblematical figures unlawful ornaments of cups or chalices. Another inſtance is taken from Euſebius, Hiſt. Eccl. lib. vii. cap. 18. who ſays, that in his time there were to be ſeen two braſs ſtatues in the city of Paneas or Cæſarea Philippi; the one of a woman on her knees, with her arms ſtretched out, the other of a man over againſt her, with his hand extended to receive her: theſe ſtatues were ſaid to be the *images* of our Saviour and the woman whom he cured of an iſſue of blood. From the foot of the ſtatue repreſenting our Saviour, ſays the hiſtorian, ſprung up an exotic plant, which, as ſoon as it grew to touch the border of his garment, was ſaid to cure all ſorts of diſtempers. Euſebius, however, vouches none of theſe things; nay, he ſuppoſes that the woman who erected this ſtatue of our Saviour was a pagan, and aſcribes it to a pagan cuſtom. Father Philoſtorgius, Eccl. Hiſt. lib. vii. c. 3. expreſsly ſays, that this ſtatue was carefully preſerved by the Chriſtians, but that they paid no kind of worſhip to it, becauſe it is not lawful for Chriſtians to worſhip braſs or any other matter. The primitive Chriſtians abſtained from the worſhip of *images*, not, as the Papiſts pretend, from tenderneſs to heathen idolaters, but becauſe they thought it unlawful in itſelf to make any *images* of the Deity. Juſtin Mart. Apol. ii. p. 44. Clem. Alex. Strom. 5. Strom. 1. and Protr. p. 46. Aug. de Civit. Dei. lib. vii. c. 5. and lib. iv. c. 32. Id. de Fide et Symb. c. 7. Lactant. lib. ii. c. 3. Tertull. Apol. c. 12. Arnob. lib. vi. p. 202. Some of the fathers, as Tertullian, Clemens Alexandrinus, and Origen, were of opinion, that, by the ſecond commandment, the arts of painting and engraving were rendered unlawful to a Chriſtian, ſtyling them evil and wicked arts. Tert. de Idol. cap. 3. Clem. Alex. Admon. ad Gent. p. 41. Orig. contra Celſum lib. vi. p. 182. The uſe of *images* in churches as ornaments, was firſt introduced by ſome Chriſtians in Spain, in the beginning of the fourth century; but the practice was condemned as a dangerous innovation, in a council held at Eliberis in 305. Epiphanius, in a letter preſerved by Jerom, tom. ii. ep. 6. bears ſtrong teſtimony againſt *images*, and may be conſidered as one of the firſt Iconoclasts. The cuſtom of admitting pictures of ſaints and martys into the churches (for this was the firſt ſource of *image*-worſhip) was rare in the latter end of the fourth century; but became common in the fifth: however they were ſtill conſidered only as ornaments; and even in this view, they met with very conſiderable oppoſition. In the following century the cuſtom of thus adorning churches became almoſt univerſal, both in the eaſt and weſt. Petavius expreſsly ſays, (de Incar. lib. xv. cap. 14.) that no ſtatues were yet allowed in the churches; becauſe they bore too near a reſemblance to the idols of the Gentiles. Towards the cloſe of the fourth or beginning of the fifth century, *images*, which were introduced by way of ornament, and then uſed as an aid to devotion, began to be actually worſhipped. However, it continued to be the doctrine of the church in the ſixth and in the beginning of the ſeventh century, that *images* were to be uſed only as helps to devotion, and not as objects of worſhip. The worſhip of them was condemned in the ſtrongeſt terms by Pope Gregory the Great; as appears in two letters of his written in 601. From this time to the beginning of the eighth century, there occurs no ſingle inſtance of any worſhip given or allowed to be given to *images* by any council or aſſembly of biſhops whatever. But they were commonly worſhipped by the monks and populace in the beginning of the eighth century; inſomuch, that in the year 726, when Leo publiſhed his famous edict, it had already ſpread into all the provinces ſubject to the empire.

The Lutherans condemn the Calviniſts for breaking the *images* in the churches of the Catholics, looking on it as a kind of ſacrilege; and yet they condemn the Romaniſts (who are profeſſed *image-worſhipers*) as idolaters: nor can theſe laſt keep pace with the Greeks, who go far beyond them in this point; which has occaſioned abundance of diſputes among them. See Iconoclasts.

The Mahometans have a perfect averſion to *images*;

which was what led them to deſtroy moſt of the beautiful monuments of antiquity, both ſacred and profane, at Conſtantinople,

Image, in *Rhetoric*, alſo ſignifies a lively deſcription of any thing in a diſcourſe.

Images in diſcourſe are defined by Longinus, to be, in general, any thoughts proper to produce expreſſions, and which preſent a kind of picture to the mind.

But, in the more limited ſenſe, he ſays, *images* are ſuch diſcourſes as come from us, when by a kind of enthuſiaſm, or an extraordinary emotion of the ſoul, we ſeem to ſee the things whereof we ſpeak, and preſent them before the eyes of thoſe who hear us.

Images, in rhetoric, have a very different uſe from what they have among the poets: the end principally propoſed in poetry is, aſtoniſhment and ſurprize; whereas the thing chiefly aimed at in proſe, is to paint things naturally, and to ſhow them clearly. They have this, however, in common, that they both tend to move, each in its kind.

Theſe *images* or *pictures*, are of vaſt uſe, to give weight, magnificence, and ſtrength, to a diſcourſe. They warm and animate it; and, when managed with art, according to Longinus, ſeem, as it were, to tame and ſubdue the hearer, and put him in the power of the ſpeaker.

Image, in *Optics*, a figure in the form of any object, made by the rays of light iſſuing from the ſeveral points of it, and meeting in ſo many other points, either at the bottom of the eye, or on any other ground, or on any tranſparent medium, where there is no ſurface to reflect them. Thus we are ſaid to ſee all objects by means of their images formed in the eye.

IMAGINATION, a power or faculty of the mind, whereby it conceives and forms ideas of things communicated to it by the outward organs of ſenſe. See Metaphysics.

Force of Imagination. See Monster.

IMAGO, in *Natural Hiſtory*, is a name given by Linnæus to the third ſtate of inſects, when they appear in their proper ſhape and colours, and undergo no more transformation.

IMAM, or Iman, a miniſter in the Mahometan church, aſwering to a pariſh prieſt among us. The word properly ſignifies what we call a prelat, *antiſtes*, one who preſides over others; but the Muſſulmen frequently apply it to a perſon who has the care and intendancy of a moſque, who is always there at firſt, and reads prayers to the people, which they repeat after him.

Imam is alſo applied, by way of excellence, to the four chiefs or founders of the four principle ſects in the Mahometan religion. Thus Ali is the *imam* of the Perſian, or of the ſect of the Schiaites; Abu-beker the *imam* of the Sunnites, which is the ſect followed by the Turks; Saphii, or Safi-y, the *imam* of another ſect, &c.

The Mahometans do not agree among themſelves about this *imamate* or dignity of the *imam*. Some think it of divine right, and attached to a ſingle family, as the pontificate of Aaron.—Others hold, that it is indeed of divine right, but deny it to be ſo attached to any ſingle family, as that it may not be transferred to another. They add, that the *imam* is to be clear of all groſs ſins; and that otherwiſe he may be depoſed, and his dignity may be conferred on another. However this be, it is certain, that after an *imam* has once been owned as ſuch by the Muſſulmen, he who denies that his authority comes immediately from God is accounted impious; he who does not obey him is a rebel; and he who pretends to contradict what he ſays is eſteemed a fool, among the orthodox of that religion. The *Imams* have no outward mark of diſtinction; their habit is the ſame with that of the Turks in common, except that the turban is a little larger, and folded ſomewhat differently.

IMAUS, (anc. geog.), the largeſt mountain of Aſia, (Strabo); and a part of Taurus, (Pliny); from which the whole of India runs off into a vaſt plain, reſembling Egypt. It extends far and wide through Scythia, as far as to the Mare Glaciale, dividing it into the Hither or *Scythia intra Imaum*, and into the Farther or *Scythia extra Imaum*, (Ptolemy): and alſo ſtretching out along the north of India to the eaſtern ocean, ſeparates it from Scythia. It had various names according to the different countries it run through: Poſtellus thinks it is the *Sephar* of Scripture.

IMBECILLITY, a languid, infirm ſtate of body, which being greatly impaired, is not able to perform its uſual exerciſes and functions.

IMBIBING, the action of a dry porous body, that abſorbs or takes up a moiſt or fluid one: thus, ſugar imbibes water; a ſpunge, the moiſture of the air, &c.

IMBRICATED, is uſed by ſome botaniſts, to expreſs the figure of the leaves of ſome plants, which are hollowed like an *imbrex*, or gutter-tile, or are laid in cloſe ſeries over one another like the tiles of an houſe.

IMERETIA, or Immeretta, the name of a kingdom, or rather principallty, of Georgia, conſiſting of four provinces, is under the dominion of a prince named *David*. See Georgia.

The capital, where prince David reſides, is called *Curtays*. The remains of a Church announce that Curtays was formerly a large city; but at preſent it can ſcarcely be accounted a village.

Solomon, the father of the preſent ſovereign, ordered the citadel to be deſtroyed as well as the ramparts of the city; for he thought, and very wiſely, that Caucaſus was the only fortification capable of being defended by an army of 6000 men undiſciplined and deſtitute of artillery.

The number of the inhabitants of Imeretta is reckoned to be 20,000 families; but the greater part of them live neither in towns nor villages, but are diſperſed throughout the level country, each of them poſſeſſing a ſmall hut or cottage. Theſe people have fewer ſtrangers among them, and they are more engaging in their appearance, that the Georgians. They are of a milder and leſs puſillanimous character; and the principal branch of their commerce conſiſts in wines, a conſiderable quantity of which they export in ſkins as far as the confines of Georgia. They are acquainted with no other trade; for they are poor and miſerable and greatly oppreſſed by their lords.

The ordinary revenues of Imeretta, like thoſe of Georgia, ariſe from a tythe which vaſſals are obliged to pay in wine, cattle, and corn, and ſome ſubſidies furniſhed annually by neighbouring princes. The extraordinary revenues for the moſt part ariſe from confiſcations of every kind; but notwithſtanding this, the finances of the prince are ſo limited, that he is often under the neceſſity of going from houſe to houſe, to live at the expence of his vaſſals, never quitting their habitations until the preſſing wants of his hoſts abſolutely compel him. It is therefore probable, that the court of the ſovereign of Imeretta is as deficient in brilliancy as his table is in ſplendor when he dines at home. His principal diſhes conſiſt of a certain food called *gom*, which is a kind of millet boiled, and a piece of roaſt meat, with ſome high-ſeaſoned ſauce. He never eats but with his fingers, for forks and ſpoons are unknown in Imeretta. At table he generally gives audiences reſpecting affairs of the firſt conſequence, which he determines as he thinks proper; for in every country ſubject to his dominions there is no other law but his will.

On Friday, which is the market-day, all his new edicts are publiſhed by a kind of herald, who climbs up into ſome tree, in order to proclaim the will of his ſovereign. The Imerettans profeſs the religion of the Greek church. Their patriarch muſt be of the royal family; but it is ſeldom that he can either read or write: the prieſts who compoſe the reſt of the clergy are not much more enlightened. The greater part of their churches are pitiful edifices, which can ſcarcely be diſtinguiſhed from the common huts of the inhabitants but by a paſteboard crucifix, and a few coarſe paintings of the Virgin, which are ſeen in them.

IMITATION, derived from the Latin *imitare*, to "repreſent or repeat," a ſound or action, either exactly or nearly in the ſame manner as they were originally exhibited.

IMITATION, in muſic, admits of two different ſenſes. Sound and motion are either capable of imitating themſelves by a repetition of their own particular modes; or of imitating other objects of a nobler and more abſtracted nature. Nothing perhaps is ſo purely mental, nothing ſo remote from external ſenſe, as not to be imitable by muſic. But as the deſcription of this in M. Rouſſeau, article *Imitation*, is nobly animated, and comprehends all that is neceſſary to be ſaid on the ſubject, we tranſlate it as follows.

"Dramatic or theatrical muſic (ſays he) contributes to imitation no leſs than painting or poetry: it is in this common principle that we muſt inveſtigate both the origin and the final cauſe of all the fine arts; as M. le Batteaux has ſhown †. But this imitation is not equally extenſive in all the imitative arts. Whatever the imagination can repreſent to itſelf is in the department of poetry. Painting, which does not preſent its pictures to the imagination immediately, but to external ſenſe and to one ſenſe alone, paints only ſuch objects as are diſcoverable by ſight. Muſic might appear ſubjected to the ſame limits with reſpect to the ear; yet it is capable of painting every thing, even ſuch images as are objects of ocular perception alone: by a magic almoſt inconceivable, it ſeems to tranſform the ears into eyes, and endow them with the double function of perceiving viſible objects by the mediums of their own; and it is the greateſt miracle of an art, which can only act by motion, that it can make that very motion repreſent abſolute quieſcence. Night, ſleep, ſilence, ſolitude, are the noble efforts, the grand images, repreſented by a pictureſque muſic. We know that noiſe can produce the ſame effect with ſilence, and ſilence the ſame effect with noiſe; as when one ſleeps at a lecture inſipidly and monotonically delivered, but wakes the inſtant when it ends. But muſic acts more intimately upon our ſpirits, in exciting by one ſenſe diſpoſitions ſimilar to thoſe which we find excited by another; and, as the relation between theſe images cannot be ſenſible unleſs the impreſſion be ſtrong, painting, when diveſted of this energy, cannot reſtore to muſic that aſſiſtance in imitations which ſhe borrows from it. Though all nature ſhould be aſleep, he who contemplates her does not ſleep; and the art of the muſician conſiſts in ſubſtituting, for this image of inſenſibility in the object, thoſe emotions which its preſence excites in the heart of the contemplator. He not only ferments and agitates the ocean, animates the flame to conflagration, makes the fountain murmur in his harmony, calls the rattling ſhower from heaven, and ſwells the torrent to reſiſtleſs rage; but he paints the horrors of a boundleſs and frightful deſart, involves the ſubterraneous dungeon in tenfold gloom, ſoothes the tempeſt, tranquillizes the diſturbed elements, and from the orcheſtra diffuſes a recent fragrance through imaginary groves; nay, he excites in the ſoul the ſame emotions which we feel from the immediate perception and full influence of theſe objects."

Under the word *Harmony*, Rouſſeau has ſaid, that no aſſiſtance can be drawn from thence, no original principle which leads to muſical imitation; ſince there cannot be any relation between chords and the objects which the compoſer would paint, or the paſſions which he would expreſs. In the article *Melody*, he imagines he has diſcovered that principle of imitation which harmony cannot yield, and what reſources of nature are employed by muſic in repreſenting theſe objects and theſe paſſions.

It is hoped, however, that in our article of MELODY, we have ſhown upon what principle muſical imitation may be compatible with harmony; though we admit, that from melody it derives its moſt powerful energy, and its moſt attractive graces. Yet we muſt either be deceived beyond all poſſibility of cure, or we have felt the power of imitative harmony in a high degree. We are certain that the fury, the impetuoſity, the rapid viciſſitudes, of a battle, may be ſucceſsfully and vividly repreſented in harmony. We have participated the exultation and triumph of a conqueſt, inſpired by the ſound of a full chorus. We have felt all the ſolemnity and grandeur of devotion from the ſlow movement, the deep chords, the ſwelling harmony, of a ſentimental compoſition played upon the organ. Nor do we imagine harmony leſs capable of preſenting the tender depreſſion, the fluctuating and tremulous agitation, of grief. As this kind of imitation is the nobleſt effort of muſic, it is aſtoniſhing that it ſhould have been overlooked by M. D'Alembert. He has indeed apologized, by informing us, that his treatiſe is merely elementary: but we are uncertain how far this apology ought to be regarded as ſufficient, when it is at the ſame time conſidered, that he has given an account of imitation in its mechanical, or what Rouſſeau calls its

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† See *Beaux Arts reduits a une meme principe*.

technical, ſenſe; which, however, to prevent ambiguity, we ſhould rather chooſe to call *mymeſis*, or *anacephalioſis*. To Rouſſeau's account of the word in this acceptation, we return.

"Imitation (ſays he), in its technical ſenſe, is a reiteration of the ſame air, or of one which is ſimilar, in ſeveral parts where it is repeated by one after the other, either in uniſon, or at the diſtance of a fourth, a fifth, a third, or any other interval whatever. The imitation may be happily enough purſued even though ſeveral notes ſhould be changed; provided the ſame air may always be recogniſed, and that the compoſer does not deviate from the laws of proper modulation. Frequently, in order to render the imitation more ſenſible, it is preceded by a general reſt, or by long notes which ſeem to obliterate the impreſſion formerly made by the air till it is renewed with greater force and vivacity by the commencement of the imitation. The imitation may be treated as the compoſer chooſes; it may be abandoned, reſumed, or another begun, at pleaſure; in a word, its rules are as much relaxed as thoſe of the fugue are ſevere: for this reaſon, it is deſpiſed by the moſt eminent maſters; and every imitation of this kind too much affected, almoſt always betrays a novice in compoſition."

Imitation, in oratory, is an endeavour to reſemble a ſpeaker or writer in thoſe qualities with regard to which we propoſe them to ourſelves as patterns. The firſt hiſtorians among the Romans, ſays Cicero, were very dry and jejune, till they began to imitate the Greeks, and then they became their rivals. It is well known how cloſely Virgil has imitated Homer in his Æneid, Heſiod in his Georgics, and Theocritus in his Eclogues. Terence copied after Menander; and Plautus after Epicarmus, as we learn from Horace, lib. ii. ep. ad Auguſt. who himſelf owes many of his beauties to the Greek lyric poets. Cicero appears, from many paſſages in his writings, to have imitated the Greek orators. Thus Quintilian ſays of him, that he has expreſſed the ſtrength and ſublimity of Demoſthenes, the copiouſneſs of Plato, and the delicacy of Iſocrates.

IMMACULATE, ſomething without ſtain, chiefly applied to the conception of the holy Virgin. See Conception *Immaculate*.

IMMATERIAL, ſomething devoid of matter, or that is pure ſpirit. See Metaphysics.

IMMEDIATE, whatever is capable of producing an effect without the intervention of external means; thus we ſay, an immediate cauſe, in oppoſition to a mediate or remote one.

IMMEMORIAL, an epithet given to the time or duration of any thing whoſe beginning we know nothing of.

In a legal ſenſe, a thing is ſaid to be *of time immemorial*, or *time out of mind*, that was before the reign of king Edward II.

IMMENSITY, an unlimited extenſion, or which no finite and determinate ſpace, repeated ever ſo often, can equal.

IMMER, the moſt eaſterly iſland of all the New Hebrides in the South Sea. It lies about four leagues from Tanna, and ſeems to be about five leagues in circumference; it is of a conſiderable height, with a flat-top.

IMMERETTA, or Imeretia. See Imeretia.

IMMERSION, that act by which any thing is plunged into water or other fluid.

It is uſed in chemiſtry for a ſpecies of calcination, when any body is immerſed in a fluid to be corroded: or it is a ſpecies of lotion; as when a ſubſtance is plunged into any fluid in order to deprive it of a bad quality, or communicate to it a good one.

Immersion, in aſtronomy, is when a ſtar or planet is ſo near the ſun with regard to our obſervations, that we cannot ſee it; being, as it were, inveloped and hid in the rays of that luminary. It alſo denotes the beginning of an eclipſe of the moon, or that moment when the moon begins to be darkened, and to enter into the ſhadow of the earth.

IMMOLATION, a ceremony uſed in the Roman ſacrifices; it conſiſted in throwing upon the head of the victim ſome ſort of corn and Frankincenſe, together with the *mola* or ſalt cake, and a little wine.

IMMORTAL, that which will laſt to all eternity, as having in it no principle of alteration or corruption.

IMMUNITY, a privilege or exemption from ſome office, duty, or impoſition, as an exemption from tolls, &c.

Immunity is more particularly underſtood of the liberties granted to cities and communities.

IMMUTABILITY, the condition of a thing that cannot change. Immutability is one of the divine attributes. See God.

IMOLA, a town of Italy, in the territory of the church, and in Romagna, with a biſhop's ſee. It is a very handſome populous place; and is ſeated on the river Santerno, in E. Long. 11. 43. N. Lat. 44. 28.

IMPALE, in heraldry, is to conjoin two coats of arms pale-wiſe. Women impale their coats of arms with thoſe of their huſbands. See Heraldry.

To impale cities, camps, fortifications, &c. is to incloſe them with palliſadoes.

To Impale, or *Empale*, ſignifies alſo to put to death by ſpitting on a ſtake fixed upright.

IMPALPABLE, that whoſe parts are ſo extremely minute, that they cannot be diſtinguiſhed by the ſenſes, particularly by that of feeling.

IMPANATION, a term uſed by divines to ſignify the opinion of the Lutherans with regard to the euchariſt, who believe that the ſpecies of bread and wine remain together with the body of our Saviour after conſecration.

IMPANNELING, in law, ſignifies the writing down or entering into a parchment, liſt, or ſchedule, the names of a jury ſummoned by the ſheriff to appear for ſuch public ſervices as juries are employed in.

IMPARLANCE, in law, a petition in court for a day to conſider or adviſe what anſwer the defendant ſhall make to the plaintiff's action; and is the continuance of a cauſe till another day, or a longer time given by the court.

IMPASSIBLE, that which is exempt from ſuffering; or which cannot undergo pain, or alteration. The Stoics place the ſoul of their wiſe man in an impaſſible, imperturbable ſtate. See Apathy.

IMPASTATION, the mixtion of various materials of different colours and conſiſtencies, baked or bound to-

together with ſome cement, and hardened either by the air or by fire.

IMPATIENS, TOUCH-ME-NOT, and *Balſamine:* A genus of the monogamia order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 24th order, *Corydales.* The calyx is diphyllous; the corolla pentapetalous, and irregular, with an hooded nectarium; the capſule ſuperior and quinquevalved.

Species. 1. The noli-me-tangere, or common yellow balſamine, is a native of Britain, but is cultivated in many gardens for curioſity. It has a fibrous root, an upright, jointed, ſucculent, ſtalk, about 18 inches high, with alternate oval leaves; and, from the axillas of the ſtalks, long, ſlender, branching footſtalks, each ſuſtaining many yellow flowers; ſucceeded by taper capſules, that burſt open and dart forth their ſeeds with great velocity, whence its name. 2. The balſamina, or balſam, is a native of India. It hath a fibrous root, an upright, thick, ſucculent ſtalk, branching all around a foot and an half or two feet high; with long, ſpear-ſhaped, ſawed leaves, the upper ones alternate; and from the joints of the ſtalk and branches cluſters of ſhort foot-ſtalks, each ſuſtaining one large irregular flower, of different colours in the varieties; flowering from June or July till September.

Culture. The firſt ſpecies is very hardy, and will grow freely from the ſeeds in any common border; but the ſecond requires artificial warmth. The ſeeds will indeed grow in the full ground, but rarely before the month of May; and more freely then, if covered with a hand-glaſs, &c. But the plants raiſed by artificial heat will flower five or ſix weeks ſooner than thoſe raiſed in the natural ground. The ſeeds ought therefore always to be ſowed on a hot-bed in March or April, and the plants continued therein till June; and if the frames be deep, they will then be drawn up to the length of two or three feet; after which they may be planted in pots, which muſt likewiſe be continued in the hot-bed till the plants have taken freſh root.

IMPEACHMENT, an accuſation and proſecution for treaſon and other crimes and miſdemeanors. Any member of the Britiſh lower houſe of parliament may impeach any one belonging either to that body or to the houſe of lords. The method of proceeding is to exhibit articles on the behalf of the commons, by whom managers are appointed to make good their charge. Theſe articles are carried to the lords, by whom every perſon impeached by the commons is always tried; and if they find him guilty, no pardon under the great ſeal can be pleaded to ſuch an impeachment. 12 Will. III. cap. ii.

IMPECCABILES, in church hiſtory, a name given to thoſe heretics who boaſted that they were impeccable, and that there was no need of repentance: ſuch were the Gnoſtics, Priſcillianiſts, &c.

IMPECCABILITY, the ſtate of a perſon who cannot ſin: or a grace, privilege, or principle, which puts him out of a poſſibility of ſinning.

The ſchoolmen diſtinguiſh ſeveral kinds and degrees of impeccability: that of God belongs to him by nature: that of Jeſus Chriſt, conſidered as man, belongs to him by the hypoſtatical union: that of the bleſſed is a conſequence of their condition: that of men is the effect of a confirmation in grace, and is rather called *impeccance* than *impeccability;* accordingly divines diſtinguiſh between theſe two: this diſtinction is found neceſſary in the diſputes againſt the Pelagians, in order to explain certain terms in the Greek and Latin fathers, which without this diſtinction are eaſily confounded.

IMPEDIMENTS, in law, are ſuch hindrances as put a ſtop or ſtay to a perſon's ſeeking for his right by a due courſe of law. Perſons under impediments are thoſe under age or coverture, *non compos mentis*, in priſon, beyond ſea, &c. who, by a ſaving in our laws, have time to claim and proſecute their rights, after the impediments are removed, in caſe of fines levied, &c.

IMPENETRABILITY, in philoſophy, that property of body, whereby it cannot be pierced by another: thus, a body which ſo fills a ſpace as to exclude all others, is ſaid to be impenetrable.

IMPERATIVE, one of the moods of a verb, uſed when we would command, intreat, or adviſe: thus, *go read, take pity, be adviſed*, are imperatives in our language. But in the learned languages, this mood has a peculiar termination to diſtinguiſh it from others, as *i*, or *ito*, "go;" *lege*, or *legito*, "read," &c. and not only ſo, but the termination varies, according as you addreſs one or more perſons, as *audi* and *audite;* ακȣετω, ακȣετων, ακȣετωσαν, &c.

IMPERATOR, in Roman antiquity, a title of honour conferred on victorious generals by their armies, and afterwards confirmed by the ſenate.

Imperator was alſo the title adopted by the Roman emperors.

IMPERATORIA, MASTERWORT: A genus of the digynia order, belonging to the pentandria claſs of plants; and in the natural method ranking under the 45th order, *Umbellatæ.* The fruit is roundiſh, compreſſed in the middle, gibbous, and ſurrounded with a border; the petals are inflexo-emarginated. There is but one ſpecies, *viz.* the oſtruthium, a native of the Auſtrian and Styrian Alps, and other mountainous places of Italy. Mr Lightfoot informs us, that he has found it in ſeveral places on the banks of the Clyde in Scotland; but whether indigenous or not, is uncertain. The root is as thick as a man's thumb, running obliquely in the ground; it is fleſhy, aromatic, and has a ſtrong acrid taſte, biting the tongue like pellitory of Spain: the leaves ariſe immediately from the root; they have long foot-ſtalks, dividing into three very ſhort ones at the top, each ſuſtaining a trilobate leaf, indented on the border. The footſtalks are deeply channeled, and, when broken, emit a rank odour. The flower ſtalks riſe about two feet high, dividing into two or three branches, each being terminated by a pretty large umbel of white flowers whoſe petals are ſplit; theſe are ſucceeded by oval compreſſed ſeeds, ſomewhat like thoſe of dill, but larger.—The plant is cultivated in gardens for the ſake of its roots, which are uſed in medicine. It may be propagated either by ſeeds, or by parting the roots in autumn. They thrive beſt in a ſhady ſituation.—The root has a flavour ſimilar to that of angelica, and is eſteemed a good ſudorific. There are inſtances of its having cured the ague when the bark had failed. It ſhould be dug up in winter, and a ſtrong infuſion made in wine.

IMPERFECT, ſomething that is defective, or that wants ſome of the properties found in other beings of the ſame kind.

Imperfect Tenſe, in grammar, a tenſe that denotes ſome preterite caſe, or denotes the thing to be at that time preſent, and not quite finiſhed; as *ſcribebam*, "I was writing." See GRAMMAR.

IMPERIAL, ſomething belonging to an emperor, or empire. See EMPEROR and EMPIRE.—Thus we ſay, his *imperial* majeſty, the *imperial* crown, *imperial* arms, &c.

Imperial Crown. See HERALDRY, p. 462.

Imperial Chamber, is a ſovereign court, eſtabliſhed for the affairs of the immediate ſtates of the empire. See CHAMBER, and GERMANY.

Imperial Cities, in Germany, are thoſe which own no other head but the emperor.

Theſe are a kind of little commonwealths; the chief magiſtrate whereof does homage to the emperor, but in other reſpects, and in the adminiſtration of juſtice, is ſovereign.

Imperial cities have a right of coining money, and of keeping forces and fortified places. Their deputies aſſiſt at the imperial diets, where they are divided into two branches, that of the Rhine and that of Suabia. There were formerly 22 in the former and 37 in the latter; but there are now only 48 in all.

Imperial Diet, is an aſſembly or convention of all the ſtates of the empire. See DIET and GERMANY.

IMPERIAL (John Baptiſt), a celebrated phyſician of Vicenza, where he was born in 1568. He compoſed ſeveral eſteemed works both in proſe and verſe, written in good Latin; and died in 1623.

IMPERSONAL VERB, in grammar, a verb to which the nominative of any certain perſon cannot be prefixed; or, as others define it, a verb deſtitute of the two firſt and primary perſons, as *decet*, *oportet*, &c. The imperſonals verbs of the active voice end in *t*, and thoſe of the paſſive in *tur*; they are conjugated through the third perſon ſingular of almoſt all the tenſes and moods: they want the imperative, inſtead of which we uſe the preſent of the ſubjunctive; as *pœniteat*, *pugnetur*, &c. nor, but a few excepted, are they to be met with in the ſupines, participles, or gerunds,

IMPERVIOUS, a thing not to be pervaded or paſſed through, either, by reaſon of the cloſeneſs of its pores, or the particular configuration of its parts.

IMPETIGO, in *Medicine*, on extreme roughneſs and foulneſs of the ſkin, attended with an itching and plentiful ſcurf.

The *impetigo* is a ſpecies of dry puriginous itch, wherein ſcales or ſcurf ſucceed apace; ariſing from ſaline corroſive humours thrown out upon the exterior parts of the body, by which means the internal parts are uſually relieved.

IMPETRATION, the act of obtaining any thing by requeſt or prayer.

IMPETRATION was more particularly uſed in Britiſh ſtatutes for the pre-obtaining of benefices and church-officers in England from the court of Rome, which did belong to the diſpoſal of the king and other lay patrons of the realm; the penalty whereof is the ſame with that of proviſors, 25 E. III.

IMPETUS, in mechanics, the force with which one body ſtrikes or impels another.

IMPLICATION, in law, is where ſomething is implied that is not expreſſed by the parties themſelves in their deeds, contracts, or agreements.

To IMPLY, or CARRY, in *Muſic*. Theſe we have uſed as ſynonymous terms in that article. They are intended to ſignify thoſe ſounds which ought to be the proper concomitants of any note, whether by its own nature, or by its poſition in artificial harmony. Thus every note, conſidered as an independent ſound, may be ſaid to *carry* or *imply* its natural harmonics, that to ſay, its octave, its twelfth, and its ſeventeenth; or, when reduced, its eighth, its fifth, and its third. But the ſame ſound, when conſidered as conſtituting any part of harmony, is ſubjected to other laws and different limitations. It can then only be ſaid to *carry* or *imply* ſuch ſimple ſounds, or complications of ſound, as the preceding and ſubſequent chords admit or require. For theſe the laws of melody and harmony muſt be conſulted. See MELODY and HARMONY.

IMPORTATION, in commerce, the bringing merchandiſe into a place from foreign countries; in contradiſtinction to exportation. See EXPORTATION.

For the principal laws relating to importation, ſee *cuſtom-houſe Laws*.

IMPOSITION of hands, an eccleſiaſtical action by which a biſhop lays his hand on the head of a perſon, in ordination, confirmation, or in uttering a bleſſing. This practice is alſo frequently obſerved by the diſſenters at the ordination of their miniſters, when all the miniſters preſent place their hands on the head of him whom they are ordaining, while one of them prays for a bleſſing on him and his future labours. This ſome of them retain as an ancient practice, juſtified by the example of the apoſtles, when no extraordinary gifts are conveyed. However, they are not agreed as to the propriety of this ceremony; nor do they conſider it as an eſſential part of ordination.

Impoſition of hands was a Jewiſh ceremony, introduced not by any divine authority, but by cuſtom; it being the practice among thoſe people whenever they prayed to God for any perſon to lay their hands on his head.

Our Saviour obſerved the ſame cuſtom, both when he conferred his bleſſing on children and when he cured the ſick; adding prayer to the ceremony. The apoſtles likewiſe laid hands on thoſe upon whom they beſtowed the Holy Ghoſt.—The prieſts obſerved the ſame cuſtom when any one was received into their body.—And the apoſtles themſelves underwent the impoſition of hands afreſh every time they entered upon any new deſign. In the ancient church impoſition of hands was even practiſed on perſons when they married, which cuſtom the Abyſſinians ſtill obſerve.

IMPOSSIBLE, that which is not poſſible, or which cannot be done or effected. A propoſition is ſaid to be impoſſible, when it contains two ideas which mutually deſtroy each other, and which can neither be conceived nor united together. Thus it is impoſſible that a circle ſhould be a ſquare; becauſe we conceive clearly that ſquareneſs and roundneſs deſtroy each other by the contrariety of their figure.

There are two kinds of impoſſibilities, *phyſical* and *moral*.

Impoſt
||
Impotency.

Phyſical impoſſibility is that which is contrary to the law of nature.

A thing is morally impoſſible, when of its own nature it is poſſible, but yet is attended with ſuch difficulties, as that, all things conſidered, it appears impoſſible. Thus it is morally impoſſible that all men ſhould be virtuous; or that a man ſhould throw the ſame number with three dice a hundred times ſucceſſively.

A thing which is impoſſible in law, is the ſame with a thing impoſſible in nature: and if any thing in a bond or deed be impoſſible to be done, ſuch deed, &c. is void. 21 Car. I.

IMPOST, in law, ſignifies in general a tribute or cuſtom, but is more particularly applied to ſignify that tax which any ſtate receives for merchandiſes imported into any port or haven.

IMPOSTHUME, or abſceſs, a collection of matter or pus in any part of the body, either owing to an obſtruction of the fluids in that part which makes them change into ſuch matter, or to a tranſlation of it from ſome other part where it was generated. See SURGERY.

IMPOSTOR, in a general ſenſe, denotes a perſon who cheats by a fictitious character.

Religious IMPOSTORS, are ſuch as falſely pretend to an extraordinary commiſſion from heaven; and who terrify and abuſe the people with falſe denunciations of judgments. Theſe are puniſhable in the temporal courts with fine, impriſonment, and infamous corporal puniſhment.

IMPOTENCE, or IMPOTENCY, in general denotes want of ſtrength, power, or means to perform any thing.

Divines and philoſophers diſtinguiſh two ſorts of impotency; natural and moral. The firſt is a want of ſome phyſical principle, neceſſary to an action; or where a being is abſolutely defective, and not free and at liberty [illegible] act: The ſecond only imports a great difficulty; as a ſtrong habit to the contrary, a violent paſſion, or the like.

IMPOTENCY is a term more particularly uſed for a natural inability to coition. Impotence with reſpect to men is the ſame as ſterility in women; that is, an inability of propagating the ſpecies. There are many cauſes of impotence; as a natural defect in the organs of generation, which ſeldom admits of a cure: accidents or diſeaſes; and in ſuch caſes the impotence may or may not be remedied, according as theſe are curable or otherwiſe. The moſt common cauſes are early and immoderate venery, or the venereal diſeaſe. We have inſtances, however, of unfitneſs for generation in men by an impediment to the ejection of the ſemen in coition, from a wrong direction which the orifice at the *verumontanum* got, whereby the ſeed was thrown up into the bladder. M. Petit cured one patient under ſuch a difficulty of emiſſion, by making an inciſion like to that commonly made in the great operation for the ſtone.

On this ſubject we have ſome curious and original obſervations by the late Mr John Hunter in his Treatiſe on the Venereal Diſeaſe*. He conſiders impotency as depending upon two cauſes. One he refers to the mind; the other to the organs.

Impotency.

1. *As to impotency depending upon the mind*, he obſerves, that as the "parts of generation are not neceſſary for the exiſtence or ſupport of the individual, but have a reference to ſomething elſe in which the mind has a principal concern; ſo a complete action in thoſe parts cannot take place without a perfect harmony of body and of mind: that is, there muſt be both a power of body and diſpoſition of mind; for the mind is ſubject to a thouſand caprices, which affect the actions of theſe parts.

"Copulation is an act of the body, the ſpring of which is in the mind; but it is not volition: and according to the ſtate of the mind, ſo is the act performed. To perform this act well, the body ſhould be in health, and the mind ſhould be perfectly confident of the powers of the body: the mind ſhould be in a ſtate entirely diſengaged from every thing elſe: it ſhould have no difficulties, no fears, no apprehenſions, not even an anxiety to perform the act well; for even this anxiety is a ſtate of mind different from what ſhould prevail; there ſhould not be even a fear that the mind itſelf may find a difficulty at the time the act ſhould be performed. Perhaps no function of the machine depends ſo much upon the ſtate of the mind as this.

"The will and reaſoning faculty have nothing to do with this power; they are only employed in the act, ſo far as voluntary parts are made uſe of: and if they ever interfere, which they ſometimes do, it often produces another ſtate of mind which deſtroys that which is proper for the performance of the act; it produces a deſire, a wiſh, a hope, which are all only diffidence and uncertainty, and create in the mind the idea of a poſſibility of the want of ſucceſs, which deſtroys the proper ſtate of mind or neceſſary confidence.

"There is perhaps no act in which a man feels himſelf more intereſted, or is more anxious to perform well; his pride being engaged in ſome degree, which if within certain bounds would produce a degree of perfection in an act depending upon the will, or an act in voluntary parts; but when it produces a ſtate of mind contrary to that ſtate on which the perfection of the act depends, a failure muſt be the conſequence.

"The body is not only rendered incapable of performing this act by the mind being under the above influence, but alſo by the mind being, tho' perfectly confident of its power, yet conſcious of an impropriety in performing it; this, in many caſes, produces a ſtate of mind which ſhall take away all power. The ſtate of a man's mind reſpecting his ſiſter takes away all power. A conſcientious man has been known to loſe his powers on finding the woman he was going to be connected with unexpectedly a virgin.

"Shedding tears ariſes entirely from the ſtate of the mind, although not ſo much a compound action as the act in queſtion; for none are ſo weak in body that they cannot ſhed tears: it is not ſo much a compound action of the mind and ſtrength of body joined, as the other act is; yet if we are afraid of ſhedding tears, or are deſirous of doing it, and that anxiety is kept up through the whole of an affecting ſcene, we certainly ſhall not ſhed tears, or at leaſt not ſo freely as would have happened from our natural feelings.

"From this account of the neceſſity of having the mind

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* P. 201, &c. 2d edit.

Impotency. mind independent reſpecting the act, we muſt ſee that it may very often happen that the ſtate of mind will be ſuch as not to allow the animal to exert its natural powers; and every failure increaſes the evil. We muſt alſo ſee from this ſtate of the caſe, that this act muſt be often interrupted; and the true cauſe of this interruption not being known, it will be laid to the charge of the body or want of powers. As theſe caſes do not ariſe from real inability, they are to be carefully diſtinguiſhed from ſuch as do; and perhaps the only way to diſtinguiſh them is, to examine into the ſtate of mind reſpecting this act. So trifling often is the circumſtance which ſhall produce this inability depending on the mind, that the very deſire to pleaſe ſhall have that effect, as in making the woman the ſole object to be gratified.

"Caſes of this kind we ſee every day; one of which I ſhall relate as an illuſtration of this ſubject, and alſo of the method of cure.—A gentleman told me, that he had loſt his virility. After above an hour's inveſtigation of the caſe, I made out the following facts: that he had at unneceſſary times ſtrong erections, which ſhowed that he had naturally this power; that the erections were accompanied with deſire, which are all the natural powers wanted; but that there was ſtill a defect ſomewhere, which I ſuppoſed to be from the mind. I inquired if all women were alike to him? his anſwer was, No; ſome women he could have connection with as well as ever. This brought the defect, whatever it was, into a ſmaller compaſs: and it appeared there was but one woman that produced this inability, and that it aroſe from a deſire to perform the act with this woman well; which deſire produced in the mind a doubt or fear of the want of ſucceſs, which was the cauſe of the inability of performing the act. As this aroſe entirely from the ſtate of the mind produced by a particular circumſtance, the mind was to be applied to for the cure; and I told him that he might be cured, if he could perfectly rely on his own power of ſelf-denial. When I explained what I meant, he told me that he could depend upon every act of his will or reſolution. I then told him, that, if he had a perfect confidence in himſelf in that reſpect, he was to go to bed to this woman, but firſt promiſe to himſelf that he would not have any connection with her for ſix nights, let his inclinations and powers be what they would; which he engaged to do, and alſo to let me know the reſult. About a fortnight after, he told me, that this reſolution had produced ſuch a total alteration in the ſtate of his mind, that the power ſoon took place; for inſtead of going to bed with the fear of inability, he went with fears that he ſhould be poſſeſſed with too much deſire, too much power, ſo as to become uneaſy to him: which really happened; for he would have been happy to have ſhortened the time; and when he had once broke the ſpell, the mind and powers went on together, and his mind never returned to its former ſtate."

2. *Of impotency from a want of proper correſpondence between the actions of the different organs.* Our author, in a former part of his Treatiſe, when conſidering the diſeaſes of the urethra and bladder, had remarked, that every organ in an animal body, without exception, was made up of different parts, whoſe functions or actions were totally different from one another, although all tending to pro[illegible]ce one ultimate effect. In all ſuch organs when p[illegible]ct (he obſerves), there is a ſucceſſion of motion[illegible]naturally ariſing out of the other, which in th[illegible] produces the ultimate effect; and an irregularit[illegible]e in theſe actions will conſtitute diſeaſe, at leaſt [illegible]roduce very diſagreeable effects, and often totall[illegible]trate the intention of the organ. This principle M[illegible]Hunter, on the preſent occaſion, applies to the "actions of the teſticles and penis: for we find that an irregularity in the actions of theſe parts ſometimes happen in men, producing impotence; and ſomething ſimilar probably may be one cauſe of barrenneſs in women.

Impotency.

"In men, the parts ſubſervient to generation may be divided into two; the eſſential and the acceſſory. The teſticles are the eſſential; the penis, &c. the acceſſory. As this diviſion ariſes from their uſes or actions in health, which exactly correſpond with one another, a want of exactneſs in the correſpondence or ſuſceptibility of thoſe actions may alſo be divided into two: where the actions are reverſed, the acceſſory taking place without the firſt or eſſential, as in erections of the penis, where neither the mind nor the teſticles are ſtimulated to action; and the ſecond is where the teſticles perform the action of ſecretion too readily for the penis, which has not a correſponding erection. The firſt is called *priapiſm*; and the ſecond is what ought to be called *ſeminal weakneſs*.

"The mind has conſiderable effect on the correſpondence of the actions of theſe two parts: but it would appear in many inſtances, that erections of the penis, depend more on the ſtate of the mind than the ſecretion of the ſemen does; for many have the ſecretion, but not the erection; but in ſuch, the want of erection appears to be owing to the mind only.

"Priapiſm often ariſes ſpontaneouſly; and often from viſible irritation of the penis, as in the venereal gonorrhœa, eſpecially when violent. The ſenſation of ſuch erections is rather uneaſy than pleaſant; nor is the ſenſation of the glans at the time ſimilar to that ariſing from the erections of deſire, but more like to the ſenſation of the parts immediately after coition. Such as ariſe ſpontaneouſly are of more ſerious conſequence than thoſe from inflammation, as they proceed probably from cauſes not curable in themſelves or by any known methods. The priapiſm ariſing from inflammation of the parts, as in a gonorrhœa, is attended with nearly the ſame ſymptoms; but generally the ſenſation is that of pain, proceeding from the inflammation of the parts. It may be obſerved, that what is ſaid of priapiſm is only applicable to it when a diſeaſe in itſelf, and not when a ſymptom of other diſeaſes, which is frequently the caſe.

"The common practice in the cure of this complaint is to order all the nervous and ſtrengthening medicines; ſuch as bark, valerian, muſk, camphor, and alſo the cold bath. I have ſeen good effects from the cold bath; but ſometimes it does not agree with the conſtitution, in which caſe I have found the warm bath of ſervice. Opium appears to be a ſpecific in many caſes; from which circumſtance I ſhould be apt, upon the whole, to try a ſoothing plan.

"Seminal weakneſs, or a ſecretion and emiſſion of the ſemen without erections, is the reverſe of a priapiſm, and is by much the worſt diſeaſe of the two. There

Impotency.
Impotency || Impregnation.

There is great variety in the degrees of this diſeaſe, there being all the gradations from the exact correſpondence of the actions of all the parts to the teſticles acting alone; in every caſe of the diſeaſe, there is too quick a ſecretion and evacuation of the ſemen. Like to the priapiſm, it does not ariſe from deſires and abilities; although when mild it is attended with both, but not in a due proportion; a very ſlight deſire often producing the full effect. The ſecretion of the ſemen ſhall be ſo quick, that ſimple thought, or even toying, ſhall make it flow.

“ Dreams have produced this evacuation repeatedly in the ſame night; and even when the dreams have been ſo ſlight, that there has been no conſciouſneſs of them when the ſleep has been broken by the act of emiſſion. I have known caſes where the teſticles have been ſo ready to ſecrete, that the leaſt friction on the glans has produced an emiſſion: I have known the ſimple action of walking or riding produce this effect, and that repeatedly, in a very ſhort ſpace of time.

“ A young man, about four or five and twenty years of age, not ſo much given to venery as moſt young men, had theſe laſt mentioned complaints upon him. Three or four times in the night he would emit; and if he walked faſt, or rode on horſeback, the ſame thing would happen. He could ſcarcely have connection with a woman before he emitted, and in the emiſſion there was hardly any ſpaſm. He tried every ſuppoſed ſtrengthening medicine, as alſo the cold bath and ſea-bathing, but with no effect. By taking 20 drops of laudanum on going to bed, he prevented the night emiſſions; and by taking the ſame quantity in the morning, he could walk or ride without the before mentioned inconvenience. I directed this practice to be continued for ſome time, although the diſeaſe did not return, that the parts might be accuſtomed to this healthy ſtate of action; and I have reaſon to believe the gentleman is now well. It was found neceſſary, as the conſtitution became more habituated to the opiate, to increaſe the doſe of it.

“ The ſpaſms, upon the evacuation of the ſemen in ſuch caſes, are extremely ſlight, and a repetition of them ſoon takes place; the firſt emiſſion not preventing a ſecond; the conſtitution being all the time but little affected (A). When the teſticles act alone, without the acceſſory parts taking up the neceſſary and natural conſequent action, it is ſtill a more melancholy diſeaſe; for the ſecretion ariſes from no viſible or ſenſible cauſe, and does not give any viſible or ſenſible effect, but runs off ſimilar to involuntary ſtools or urine. It has been obſerved that the ſemen is more fluid than natural in ſome of theſe caſes.

“ There is great variety in the diſeaſed actions of theſe parts; of which the following caſe may be conſidered as an example. A gentleman has had a ſtricture in the urethra for many years, for which he has frequently uſed a bougie, but of late has neglected it. He has had no connection with women for a conſiderable time, being afraid of the conſequences. He has often in his ſleep involuntary emiſſions, which generally awake him at the paroxyſm; but what ſurpriſes him moſt is, that often he has ſuch without any ſemen paſſing forwards through the penis, which makes him think that at thoſe times it goes backwards into the bladder. This is not always the caſe, for at other times the ſemen paſſes forwards. At the time the ſemen ſeems to paſs into the bladder, he has the erection, the dream; and is awaked with the ſame mode of action, the ſame ſenſation, and the ſame pleaſure, as when it paſſes through the urethra, whether dreaming or waking. My opinion is, that the ſame irritation takes place in the bulb of the urethra without the ſemen, that takes place there when the ſemen enters, in conſequence of all the natural preparatory ſteps, whereby the very ſame actions are excited as if it came into the paſſage: from which one would ſuppoſe, that either ſemen is not ſecreted; or if it be, that a retrograde motion takes place in the actions of the acceleratores urinæ. But if the firſt be the caſe, then we may ſuppoſe, that in the natural ſtate the actions of thoſe muſcles do not ariſe ſimply from the ſtimulus of the ſemen in the part, but from their action being a termination of a preceeding one making part of a ſeries of actions. Thus they may depend upon the friction, or the imagination of a friction, on the penis; the teſticles not doing their part, and the ſpaſm in ſuch caſes ariſing from the friction and not from the ſecretion. In many of thoſe caſes of irregularity, when the erection is not ſtrong, it ſhall go off without the emiſſion; and at other times an emiſſion ſhall happen almoſt without an erection; but theſe ariſe not from debility, but affections of the mind.

“ In many of the preceding caſes, waſhing the penis, ſcrotum, and perinæum, with cold water, is often of ſervice; and to render it colder than we find it in ſome ſeaſons of the year, common ſalt may he added to it, and the parts waſhed when the ſalt is almoſt diſſolved.”

IMPOTENCY is a cannonical diſability, to avoid marriage in the ſpiritual court. The marriage is not void *ab initio*, but voidable only by ſentence of ſeparation during the life of the parties.

IMPRECATION, (derived from *in*, and *precor*, “ I pray;”) a curſe or wiſh that ſome evil may befal any one.

The ancients had their goddeſſes called *Imprecations*, in Latin *Diræ*, i. e. *Deorum iræ*, who were ſuppoſed to be the executioners of evil conſciences. They were called *Diræ* in heaven, *Furies* on earth, and *Eumenides* in hell. The Romans owned but three of theſe *Imprecations*, and the Greeks only two. They invoked them with prayers and pieces of verſes to deſtroy their enemies.

IMPREGNATION, the getting a female with child. See CONCEPTION.

The term *impregnation* is alſo uſed, in pharmacy, for communicating the virtues of one medicine to another, whether by mixture, coction, digeſtion, &c.

(A) “ It is to be conſidered, that the conſtitution is commonly affected by the ſpaſms only, and in proportion to their violence, independent of the ſecretion and evacuation of the ſemen. But in ſome caſes even the erection going off without the ſpaſms on the emiſſion, ſhall produce the ſame debility as if they had taken place.”

IMPRESSING SEAMEN. The power of impreſſing ſea-faring men in Britain for the ſea-ſervice by the king's commiſſion, has been a matter of ſome diſpute, and ſubmitted to with great reluctance; though it hath very clearly and learnedly been ſhown by Sir Michael Foſter, that the practice of impreſſing, and granting powers to the admiralty for that purpoſe, is of very ancient date, and hath been uniformly continued by a regular ſeries of precedents to the preſent time: whence he concludes it to be part of the common law. The difficulty ariſes from hence, that no ſtatute has expreſsly declared this power to be in the crown, though many of them very ſtrongly imply it. The ſtatute 2 Ric. II. c. 4. ſpeaks of mariners being arreſted and retained for the king's ſervice, as of a thing well known, and practiſed without diſpute; and provides a remedy againſt their running away. By a later ſtatute, if any waterman, who uſes the river Thames, ſhall hide himſelf during the execution of any commiſſion of preſſing for the king's ſervice, he is liable to heavy penalties. By another (5 *Eliz.* c. 5.) no fiſherman ſhall be taken by the queen's commiſſion to ſerve as a mariner; but the commiſſion ſhall be firſt brought to two juſtices of the peace, inhabiting near the ſea-coaſt where the mariners are to be taken, to the intent that the juſtices may chooſe out and return ſuch a number of able-bodied men, as in the commiſſion are contained, to ſerve her majeſty. And by others, eſpecially protections are allowed to ſeamen in particular circumſtances, to prevent them from being impreſſed. Ferrymen are alſo ſaid to be privileged from being impreſſed, at common law. All which do moſt evidently imply a power of impreſſing to reſide ſomewhere; and if any where, it muſt, from the ſpirit of the Britiſh conſtitution, as well as from the frequent mention of the king's commiſſion, reſide in the crown alone.—After all, however, this method of manning the navy is to be conſidered as only defenſible from public neceſſity, to which all private conſiderations muſt give way.

The following perſons are exempted from being impreſſed: Apprentices for three years; the maſter, mate, and carpenter, and one man for every 100 tons, of veſſels employed in the coal-trade; all under 18 years of age, and above 55; foreigners in merchant-ſhips and privateers; landmen betaking themſelves to ſea for two years; ſeamen in the Greenland fiſhery, and harpooners, employed, during the interval of the fiſhing ſeaſon, in the coal-trade, and giving ſecurity to go to the fiſhing next ſeaſon.

IMPRESSION is applied to the ſpecies of objects which are ſuppoſed to make ſome mark or impreſſion on the ſenſes, the mind, and the memory. The Peripatetics aſſert, that bodies emit ſpecies reſembling them, which are conveyed to the common *ſenſorium*, and they are rendered intelligible by the active intellect; and, when thus ſpiritualized, are called *expreſſions*, or *expreſs ſpecies*, as being expreſſed from the others.

IMPRESSION alſo denotes the *edition* of a book, regarding the mechanical part only; whereas *edition*, beſides this, takes in the care of the editor, who corrected or augmented the copy, adding notes, &c. to render the work more uſeful.

IMPRISONMENT, the ſtate of a perſon reſtrained of his liberty, and detained under the cuſtody of another.

"No perſon is to be impriſoned but as the law directs, either by the command or order of a court of record, or by lawful warrant; or the king's proceſs, on which one may be lawfully detained. And at common law, a perſon could not be impriſoned unleſs he were guilty of ſome force and violence, for which his body was ſubject to impriſonment, as one of the higheſt executions. Where the law gives power to impriſon, in ſuch caſe it is juſtifiable, provided he that does it in purſuance of a ſtatute exactly purſues the ſtatute in the manner of doing it; for otherwiſe it will be deemed falſe impriſonment, and of conſequence it is unjuſtifiable. Every warrant of commitment for impriſoning a perſon, ought to run, "till delivered by due courſe of law," and not "until farther order;" which has been held ill: and thus it alſo is, where one is impriſoned on a warrant not mentioning any cauſe for which he is committed." See ARREST and COMMITMENT.

Falſe IMPRISONMENT. "Every confinement of the perſon is an impriſonment, whether it be in a common priſon, or in a private houſe, or in the ſtocks, or even by forcibly detaining one in the public ſtreets. Unlawful or *falſe impriſonment*, conſiſts in ſuch confinement or detention without ſufficient authority: which authority may ariſe either from ſome proceſs from the courts of juſtice; or from ſome warrant from a legal power to commit, under his hand and ſeal, and expreſſing the cauſe of ſuch commitment; or from ſome other ſpecial cauſe warranted, for the neceſſity of the thing, either by common law or act of parliament; ſuch as the arreſting of a felon by a private perſon without warrant, the impreſſing of mariners for the public ſervice, or the apprehending of waggoners for miſbehaviour in the public highways. Falſe impriſonment alſo may ariſe by executing a lawful warrant or proceſs at an unlawful time, as on a Sunday; or in a place privileged from arreſts, as in the verge of the king's court. This is the injury. The remedy is of two ſorts; the one *removing* the injury, the other *making ſatisfaction* for it.

"The means of *removing* the actual injury of falſe impriſonment are four-fold, 1. By writ of MAINPRIZE. 2. By writ *De* ODIO *et Atia*. 3. By writ *De* HOMINE *Replegiando*. 4. By writ of HABEAS *Corpus*. See thoſe articles.

"The *ſatisfactory* remedy for this injury of falſe impriſonment, is by an action of treſpaſs *vi et armis*, uſually called *an action of falſe impriſonment*; which is generally, and almoſt unavoidably, accompanied with a charge of aſſault and battery alſo: and therein the party ſhall recover damages for the injuries he has received; and alſo the defendant is, as for all other injuries committed with force, or *vi et armis*, liable to pay a fine to the king for the violation of the public peace."

IMPROMPTU, or INPROMPTU, a Latin word frequently uſed among the French, and ſometimes in Engliſh, to ſignify a piece made off-hand, or *extempore*, without any previous meditation, by mere force and vivacity of imagination.

IMPROBATION, in Scots law, the name of any action brought for ſetting any deed or writing aſide upon the head of forgery.

IMPROPRIATION, in eccleſiaſtical law. See APPROPRIATION.

IMPURITY, in the law of Moſes, is any legal defilement. Of theſe there were ſeveral ſorts. Some were voluntary, as the touching a dead body, or any animal that died of itſelf, or any creature that was eſteemed unclean; or the touching things holy, by one who was not clean, or was not a prieſt; the touching one who had a leproſy, one who had a gonorrhœa, or who was polluted by a dead carcaſe, &c. Sometimes theſe impurities were involuntary; as when any one inadvertently touched bones, or a ſepulchre, or any thing polluted; or fell into ſuch diſeaſes as pollute, as the leproſy, &c.

The beds, clothes, and moveables, which had touched any thing unclean, contracted alſo a kind of impurity, and in ſome caſes communicated it to others.

Theſe legal polutions were generally removed by bathing, and laſted no longer than the evening. The perſon polluted plunged over head in the water, and either had his clothes on when he did ſo, or waſhed himſelf and his clothes ſeparately. Other pollutions continued ſeven days, as that which was contracted by touching a dead body. That of women in their monthly courſes laſted till this was over with them. Other impurities laſted 40 or 50 days; as that of women who were lately delivered, who were unclean 40 days after the birth of a boy, and 50 after the birth of a girl. Others again laſted till the perſon was cured.

Many of theſe pollutions were expiated by ſacrifices; and others by a certain water or ley made with the aſhes of a red heifer, ſacrificed on the great day of expiation. When the leper was cured, he went to the temple, and offered a ſacrifice of two birds, one of which was killed and the other ſet at liberty. He who had touched a dead body, or had been preſent at a funeral, was to be purified with the water of expiation, and this upon pain of death. The woman who had been delivered, offered a turtle and a lamb for her expiation; or if ſhe was poor, two turtles or two young pigeons.

Theſe impurities, which the law of Moſes has expreſſed with the greateſt accuracy and care, were only figures of other more important impurities, ſuch as the ſins and iniquities committed againſt God, or faults committed againſt our neighbour. The ſaints and prophets of the Old Teſtament were ſenſible of this; and our Saviour, in the goſpel, has ſtrongly inculcated, that they are not outward and corporeal pollutions which render us unacceptable to God, but ſuch inward pollutions as infect the ſoul, and are violations of juſtice, truth, and charity.

IMPUTATION, in general, the charging ſome thing to the account of one which belonged to another: thus, the aſſertors of original ſin maintain, that Adam's ſin is imputed to all his poſterity.

In the ſame ſenſe, the righteouſneſs and merits of Chriſt are ſaid to be imputed to true believers.

INACCESSIBLE, ſomething that cannot be come at, or approached, by reaſon of intervening obſtacles, as a river, rock, &c. It is chiefly uſed in ſpeaking of heights and diſtances. See GEOMETRY.

INACHUS, founder of the kingdom of Argos, 1856 B. C. See ARGOS

INALIENABLE, that which cannot be legally alienated or made over to another: thus the dominions of a king, the revenues of the church, the eſtates of a minor, &c. are inalienable, otherwiſe than with a reſerve of the right of redemption.

INANIMATE, a body that has either loſt its ſoul, or that is not of a nature capable of having any.

INANITION, among phyſicians, denotes the ſtate of the ſtomach when empty, in oppoſition to repletion.

INANITY, the ſchool term for emptineſs or abſolute vacuity, and implies the abſence of all body and matter whatſoever, ſo that nothing remains but mere ſpace.

INARCHING, in gardening, is a method of grafting commonly called *grafting by approach*; and is uſed when the ſtock intended to graft on, and the tree from which the graft is to be taken, ſtand ſo near, or can be brought ſo near, that they may be joined together. The branch to be inarched is to be fitted to that part of the ſtock where it is to be joined; the rind and wood are to be pared away on one ſide for the length of three inches, and the ſtock or branch where the graft is to be united muſt be ſerved in the ſame manner, ſo that the two may join equally and the ſap meet. A little tongue is then to be cut upwards in the graft, and a notch made in the ſtock to admit it; ſo that when they are joined, the tongue will prevent their ſlipping, and the graft will more cloſely unite to the ſtock. Having thus brought them exactly together, they muſt be tied with ſome baſs, or worſted, or other ſoft tying; and then the place muſt be covered with ſome grafting clay, to prevent the air from drying the wound, and the wet from rotting the ſtock. A ſtake muſt be fixed in the ground, to which both the ſtock and the graft muſt be tied to prevent the winds from diſplacing them. When they have remained in this ſtate for four months, they will be ſufficiently united, and the graft may then be cut off from the mother-tree, obſerving to ſlope it cloſe to the ſtock; and at this time there ſhould be freſh clay laid all round the part. This operation ſhould be performed in April or May, that the graft may be perfectly united to the ſtock before the enſuing winter.

Inarching is chiefly practiſed upon oranges, myrtles, Jeſſamines, walnuts, firs, and ſome other trees which do not ſucceed well in the common way of grafting. But it is a wrong practice when orange-trees are deſigned to grow large, for theſe are ſeldom long-lived after the operation.

INAUGURATION, the coronation of an emperor or king, or the conſecration of a prelate: ſo called from the ceremonies uſed by the Romans, when they were received into the college of augurs.

INCA, or YNCA, a name given by the natives of Peru to their kings and the princes of the blood. Pedro de Cieca, in his Chronicles of Peru, gives the origin of the incas; and ſays, that that country was, for a long time, the theatre of all manner of crimes, of war, diſſenſion, and the moſt dreadful diſorders, till at laſt two brothers appeared, one of whom was called *Mangocapa*; of this perſon the Peruvians relate many wonderful ſtories. He built the city of Cuſco, made laws, eſtabliſhed order and harmony by his wiſe regulations; and he and his deſcendants took the name of *inca*, which ſignifies king or great lord. Theſe incas became ſo powerful, that they rendered themſelves maſters of all the country from Paſto to Chili, and from the river Maule on the ſouth to the river Augaſmago on the north; theſe two rivers forming the bounds of their empire, which extended above thirteen hundred leagues in length. This they enjoyed till the diviſions between Inca Gauſcar and Atabalipa; which the Spaniards laying hold of, made themſelves maſters of the country, and deſtroyed the empire of the incas. See PERU.

INCAMERATION, a term uſed in the chancery of Rome, for the uniting of lands, revenues, or other rights, to the pope's domain.

INCANTATION, denotes certain ceremonies, accompanied with a formula of words, and ſuppoſed to be capable of raiſing devils, ſpirits, &c. See CHARM, &c.

INCAPACITY, in the canon-law, is of two kinds: 1. The want of a diſpenſation for age in a minor, for legitimation in a baſtard, and the like: this renders the proviſion of a benefice void in its original. 2. Crimes and heinous offences, which annul proviſions at firſt valid.

INCARNATION, in theology, ſignifies the act whereby the Son of God aſſumed the human nature; or the myſtery by which Jeſus Chriſt, the eternal word, was made man, in order to accompliſh the work of our ſalvation. The era uſed among Chriſtians, whence they number their years, is the time of the incarnation, that is, of Chriſt's conception in the virgin's womb.

This era was firſt eſtabliſhed by Dionyſius Exiguus, about the beginning of the ſixth century, till which time the era of Diocleſian had been in uſe.

Some time after this, it was conſidered, that the years of a man's life were not numbered from the time of his conception, but from that of his birth: which occaſioned them to poſtpone the beginning of this era for the ſpace of one year, retaining the cycle of Dionyſius entire in every thing elſe.

At Rome they reckon their years from the incarnation or birth of Chriſt, that is, from the 25th of December, which cuſtom has obtained from the year 1431. In France, and ſeveral other countries, they alſo reckon from the incarnation: but then they differ from each other in the day of the incarnation, fixing it, after the primitive manner, not to the day of the birth but conception of our Saviour. Though the Florentines retain the day of the birth, and begin their year from Chriſtmas.

INCARNATION (formed from *in*, and *caro* "fleſh",) in ſurgery, ſignifies the healing and filling up ulcers and wounds with new fleſh. See SURGERY.

INCARNATIVES, in ſurgery, medicines which aſſiſt nature in filling up wounds or ulcers with fleſh; or rather remove the obſtructions thereto.

INCENDIARY, in law, is applied to one who is guilty of maliciouſly ſetting fire to another's dwelling-houſe, and all outhouſes that are parcel thereof, though not contiguous to it or under the ſame roof, as barns and ſtables. A bare intent or attempt to do this, by actually ſetting fire to a houſe, unleſs it abſolutely burns, does not fall within the deſcription of *incendit et combuſſit*. But the burning and conſuming of any part is ſufficient; though the fire be afterwards extinguiſhed. It muſt alſo be a malicious burning; oherwiſe it is only a treſpaſs. This offence is called *arſon* in our law.

Among the ancients, criminals of this kind were to be burnt. *Qui ædes, acervumque frumenti juxta domum poſitum ſciens, prudenſque dolo malo combuſſerit, vinctus igni necatur.*

The puniſhment of *arſon* was death by the ancient Saxon laws and by the Gothic conſtitutions: and in the reign of Edward I. incendiaries were burnt to death. The ſtat. 8 Hen. VI. c. 6. made the wilful burning of houſes, under ſpecial circumſtances, high treaſon; but it was reduced to felony by the general acts of Edward VI. and Queen Mary. This offence was denied the benefit of clergy by 21 Hen. VIII. c. 1. which Satute was repealed by 1 Edw. VI. c. 12; and arſon was held to be ouſted of clergy, with reſpect to the principal, by inference from the ſtat. 4 and 5 P. and M. c. 4. which expreſsly denied it to the acceſſory; though now it is expreſsly denied to the principal alſo, by 9 Geo. I. c. 22.

INCENSE, or FRANKINCENSE, in the materia medica, &c. a dry reſinous ſubſtance, known among authors by the names THUS and OLIBANUM.

Incenſe is a rich perfume, with which the Pagans, and the Roman-Catholics ſtill, perfume their temples, altars, &c.—The word comes from the Latin *incenſum*, q. d. *burnt;* as taking the effect from the thing itſelf.

The burning of incenſe made part of the daily ſervice of the ancient Jewiſh church. The prieſts drew lots to know who ſhould offer it: the deſtined perſon took a large ſilver diſh, in which was a cenſer full of incenſe; and being accompanied by another prieſt carrying ſome live coals from the altar, went into the temple. There, in order to give notice to the people, they ſtruck upon an inſtrument of braſs placed between the temple and the altar, and being returned to the altar, he who brought the fire left it there, and went away. Then the officer of incenſe having ſaid a prayer or two, waited the ſignal, which was the burning of the holocauſt; immediately upon which he ſet fire to the incenſe, the whole multitude continuing all the time in prayer. The quantity of incenſe offered each day was half a pound in the morning and as much at night.

One reaſon of this continual burning of incenſe might be, that the multitude of victims that were continually offered up, would have made the temple ſmell like a ſlaughter-houſe, and conſequently have inſpired the comers rather with diſguſt and averſion, than awe and reverence, had it not been overpowered by the agreeable fragrance of thoſe perfumes.

INCEPTIVE, a word uſed by Dr Wallis to expreſs ſuch moments, or firſt principles, which, though of no magnitude themſelves, are yet capable of producing ſuch as are. Thus a point has no magnitude itſelf, but is inceptive of a line which it produces by its motion. So a line, though it have no breadth, is yet inceptive of breadth; that is, it is capable, by its motion, of producing a ſurface which has breadth, &c.

INCEST, the crime of venereal commerce between perſons who are related in a degree wherein marriage is prohibited by the law of the country.

Some are of opinion, that marriage ought to be permitted between kinſfolks, to the end that the affection,

fection ſo neceſſary in marriage might be heightened by this double tie: yet the rules of the church have formerly extended this prohibition even to the ſeventh degree; but time has now brought it down to the third or fourth degree.

Moſt nations look on inceſt with horror, Perſia and Egypt alone excepted. In the hiſtory of the ancient kings of thoſe countries we meet with inſtances of the brother's marrying the ſiſter; the reaſon was, becauſe they thought it too mean to join in alliance with their own ſubjects, and ſtill more ſo to have married into any foreign family.

INCEST Spiritual, a crime committed in like manner between perſons who have a ſpiritual alliance by means of baptiſm or confirmation.

Spiritual inceſt is alſo underſtood of a vicar, or other beneficiary, who enjoys both the mother and daughter; that is, holds two benefices, the one whereof depends upon the collation of the other.

Such a ſpiritual inceſt renders both the one and the other of theſe benefices vacant.

INCH, a well-known meaſure of length; being the twelfth part of a foot, and equal to three barley-corns in length.

INCH of Candle, (ſale by). See CANDLE.

INCH (contracted from the Gaelic *innis* "an iſland"), a word prefixed to the names of different places in Scotland and Ireland.

INCH-Colm or *Columba*, the iſle of Columba, an iſland ſituated on the Frith of Forth in Scotland, and famous for its monaſtery. See FORTH.

This monaſtery was founded about 1123, by Alexander I. on the following occaſion. In paſſing the frith of Forth he was overtaken with a violent ſtorm, which drove him to this iſland, where he met with the moſt hoſpital reception from a poor hermit, then reſiding here in the chapel of St Columba, who for the three days that the king continued there tempeſt-bound, entertained him with the milk of his cow, and a few ſhell-fiſh. His majeſty, from the ſenſe of the danger he had eſcaped, and in gratitude to the ſaint to whom he attributed his ſafety, vowed ſome token of reſpect; and accordingly founded here a monaſtery of Auguſtines, and dedicated it to St Columba. Allan de Mortimer, lord of Aberdour, who attended Edward III. in his Scotch expedition, beſtowed half of thoſe lands on the monks of this iſland, for the privilege of a family burial-place in their church.-The buildings made in conſequence of the piety of Alexander were very conſiderable. There are ſtill to be ſeen a large ſquare tower belonging to the church, the ruins of the church, and of ſeveral other buildings. The wealth of this place in the time of Edward III. proved ſo ſtrong a temptation to his fleet, then lying in the Forth, as to ſuppreſs all the horror of ſacrilege and reſpect to the ſanctity of the inhabitants. The Engliſh landed, and ſpared not even the furniture more immediately conſecrated to divine worſhip. But due vengeance overtook them; for in a ſtorm which inſtantly followed, many of them periſhed; thoſe who eſcaped, ſtruck with the juſtice of the judgment, vowed to make ample recompence to the injured ſaint. The tempeſt ceaſed; and they made the promiſed atonement.—The Daniſh monument, figured by Sir Robert Sibbald, lies on the ſouth-eaſt ſide of the building on a riſing ground. It is of a rigid form, and the ſurface ornamented with ſcale-like figures. At each end is the repreſentation of a human head.

INCH-Keith, a ſmall iſland ſituated in the ſame frith, midway between the port of Leith and Kinghorn on the oppoſite ſhore. See FORTH.

This iſland is ſaid to derive its name from the gallant Keith who ſo greatly ſignalized himſelf by his valour in 1010, in the battle of Barry, in Angus, againſt the Danes; after which he received in reward the barony of Keith, in Lothian, and this little iſle. In 1549 the Engliſh fleet, ſent by Edward VI. to aſſiſt the lords of the congregation againſt the queen-dowager, landed, and began to fortify this iſland, of the importance of which they grew ſenſible after their neglect of ſecuring the port of Leith, ſo lately in their power. They left here five companies to cover the workmen under the command of Cotterel; but their operations were ſoon interrupted by M. Deſſe, general of the French auxiliaries, who took the place, after a gallant defence on the part of the Engliſh. The Scots kept poſſeſſion for ſome years; but at laſt the fortifications were deſtroyed by act of parliament, to prevent it from being of any uſe to the former. The French gave it the name of *L'iſle des chevaux*, from its property of ſoon fattening horſes. —In 1497, by order of council, all venereal patients in the neighbourhood of the capital were tranſported there, *ne quid detrimenti reſpublica caperet*.

INCH-Garvie, a ſmall iſland, alſo lying in the frith of Forth. See FORTH.

INCHANTMENT. See WITCHCRAFT.

INCHOATIVE, a term ſignifying the beginning of a thing or action; the ſame with what is otherwiſe called *inceptive*.

INCHOATIVE verbs, denote, according to Priſcian and other grammarians, verbs that are charactiſed by the termination *ſco* or *ſcor*, added to their primitives: as *augeſco* from *augeo*, *caleſco* from *caleo*, *dulceſco* from *dulcis*, *iraſcor* from *ira*, &c.

INCIDENCE, denotes the direction in which one body ſtrikes on another. See OPTICS and MECHANICS.

Angle of INCIDENCE. See ANGLE.

INCIDENT, in a general ſenſe, denotes an event, or a particular circumſtance of ſome event.

INCIDENT, in law, is a thing appertaining to, or following another, that is more worthy or principal. A court-baron is inſeparably incident to a manor; and a court of pie powders to a fair.

INCIDENT diligence, in Scots law, a warrant granted by a lord ordinary in the court of ſeſſion, for citing witneſſes for proving any point, or for production of any writing neceſſary for preparing the cauſe for a final determination, or before it goes to a general proof.

INCIDENT, in a poem, is an epiſode, or particular action, joined to the principal action, or depending on it.

A good comedy is to be full of agreeable incidents, which divert the ſpectators, and form the intrigue. The poet ought always to make choice of ſuch incidents as are ſuſceptible of ornament ſuitable to the nature of his poem. The variety of incidents well conducted makes the beauty of an heroic poem, which ought always to take in a certain number of incidents to ſuſpend the cataſtrophe, that would otherwiſe break out too ſoon.

INCINERATION, (derived from *in*, and *cinis*, "aſhes,") in Chemiſtry, the reduction of vegetables into aſhes, by burning them gently.

INCISIVE, an appellation given to whatever cuts or divides: thus, the foreteeth are called *dentes inciſivi*, or cutters; and medicines of an attenuating nature, incidents, or inciſive medicines.

INCLE, a kind of tape made of linen yarn.

INCLINATION, is a word frequently uſed by mathematicians, and ſignifies the mutual approach, tendency, or leaning of two lines or two planes towards each other, ſo as to make an angle.

INCLINATION in a moral ſenſe. See Appetite.

INCLINED Plane, in mechanics, one that makes an oblique angle with the horizon. See Mechanics.

INCOGNITO, or incog, is applied to a perſon who is in any place where he would not be known: but it is more particularly applied to princes, or great men, who enter towns, or walk the ſtreets, without their ordinary train or the uſual marks of their diſtinction and quality.

INCOMBUSTIBLE cloth. See Asbestos. On this Cronſtedt obſerves, that the natural ſtore of the aſbeſti is in proportion to their economical uſe, both being very inconſiderable. "It is an old tradition (ſays he), that in former ages they made clothes of the fibrous aſbeſti, which is ſaid to be compoſed by the word *byſſus*; but it is not very probable, ſince if one may conclude from ſome trifles now made of it, as bags, ribbons, and other things, ſuch a dreſs could neither have an agreeable appearance, nor be of any conveniency or advantage. It is more probable that the Scythians dreſſed their dead bodies, which were to be burned, in a cloth manufactured of this ſtone; and this perhaps has occaſioned the above fable." M. Magellan confirms this opinion of Cronſtedt's, and informs us that ſome of the Romans alſo incloſed dead bodies in cloth of this kind. In the year 1756 or 1757 he tells us, that he ſaw a large piece of aſbeſtos cloth found in a ſtone tomb, with the aſhes of a Roman, as appeared by the epitaph. It was kept, with the tomb alſo, if our author remembers rightly, in the right-hand wing of the Vatican library at Rome. The under-librarian, in order to ſhow that it was incombuſtible, lighted a candle, and let ſome drops of wax fall on the cloth, which he ſet on fire with a candle in his preſence without any detriment to the cloth. Its texture was coarſe, but much ſofter than he could have expected.

INCOMSUSTIBLE, ſomething that cannot be burnt or conſumed by fire. See Asbestos.

INCOMMENSURABLE, a term in geometry, uſed where two lines, when compared to each other, have no common meaſure, how ſmall ſoever, that will exactly meaſure them both. And in general, two quantities are ſaid to be incommenſurable, when no third quantity can be found that is an aliquot part of both.

Incommensurable Numbers, are ſuch as have no common diviſor that will divide them both equally.

INCOMPATIBLE, that which cannot ſubſiſt with another without deſtroying it: thus cold and heat are incompatible in the ſame ſubject, the ſtrongeſt overcoming and expelling the weakeſt.

INCONTINENCE, inordinacy of the ſexual appetite; luſt. It is the oppoſite of chaſtity. See Chastity and Continence.

Incontinence, in the eye of law, is of divers kinds; as in caſes of bigamy, rapes, ſodomy, or buggery, getting baſtards; all which are puniſhed by ſtatute. See 25 Hen. VIII. cap. 6. 18 Eliz. cap. 7. 1 Jac. I. cap. 11. Incontinency of prieſts is puniſhable by the ordinary, by impriſonment, &c. 1 Hen. VII. cap. 4.

Incontinence, in medicine, ſignifies an inability in any of the organs to retain what ſhould not be diſcharged without the concurrence of the will. But incontinence is moſt frequently uſed with regard to an involuntary diſcharge of urine otherwiſe called *diabetes* See Medicine-*Index*.

INCORPORATION, in pharmacy, is much the ſame as impaſtation, being a reduction of dry ſubſtances to the conſiſtence of a paſte, by the admixture of ſome fluid: thus pills, boles, troches, and plaſters, are made by incorporation. Another incorporation is when things of different conſiſtencies are by digeſtion reduced to one common conſiſtence.

Incorporation or *Body-Corporate*. See Corporation.

INCORPOREAL, ſpiritual; a thing, or ſubſtance, which has no body. Thus the ſoul of man is incorporeal, and may ſubſiſt independent of the body. See Metaphysics.

INCORRUPTIBLE, that which cannot be corrupted. Thus ſpiritual ſubſtances, as angels, human ſouls, &c. and thus alſo glaſs, gold, mercury, &c. may be called *incorruptible*.

INCORRUPTIBLES, Incorruptibiles, the name of a ſect which ſprang out of the Eutychians.—Their diſtinguiſhing tenet was, that the body of Jeſus Chriſt was incorruptible; by which they meant, that after and from the time wherein he was formed in the womb of his holy mother, he was not ſuſceptible of any change or alteration; not even of any natural and innocent paſſions, as of hunger, thirſt, &c. ſo that he eat without any occaſion, before his death, as well as after his reſurrection. And hence it was that they took their name.

INCRASSATING, in pharmacy, &c. the rendering of fluids thicker by the mixture of other ſubſtances leſs fluid, or by the evaporation of the thinner parts.

INCUBATION, the action of a hen, or other fowl, brooding on her eggs. See Hatching.

INCUBUS, Night-Mare, a diſeaſe conſiſting in an oppreſſion of the breaſt, ſo very violent, that the patient cannot ſpeak or even breathe. The word is derived from the Latin *incubare*, to "lie down" on any thing and preſs it: the Greeks call it εφιαλτης q. d. *ſaltator*, "leaper," or one that ruſheth on a perſon.

In this diſeaſe the ſenſes are not quite loſt, but drowned and aſtoniſhed, as is the underſtanding and imagination; ſo that the patient ſeems to think ſome huge weight thrown on him, ready to ſtrangle him. Children are very liable to this diſtemper; ſo are fat people, and men of much ſtudy and application of mind; by reaſon the ſtomach in all theſe finds ſome difficulty in digeſtion.

INCUMBENT, a clerk or miniſter who is reſident on his benefice; he is called *incumbent*, becauſe he does, or at leaſt ought to, bend his whole ſtudy to diſcharge the cure of his church.

INCURVATION of the Rays of Light, their bending out of a rectilinear ſtraight courſe, occaſioned by refraction. See Optics.

INCUS, in anatomy, a bone of the internal ear, ſomewhat reſembling one of the anterior dentes molares. See Anatomy, n° 141.

INDEFEASIBLE, a term in law for what cannot be defeated or made void; as an indefeaſible eſtate of inheritance, &c.

Indefeasible Right to the Throne. See *Hereditary Right.*

INDEFINITE, that which has no certain bounds, or to which the human mind cannot affix any.

Indefinite, in grammar, is underſtood of nouns, pronouns, verbs, participles, articles, &c. which are left in an uncertain indeterminate ſenſe, and not fixed to any particular time, thing, or other circumſtance.

INDELIBLE, ſomething that cannot be cancelled or effaced.

INDEMNITY, in law, the ſaving harmleſs; or a writing to ſecure one from all damage and danger that may enſue from any act.

INDENTED, in heraldry, is when the outline of an ordinary is notched like the teeth of a ſaw.

INDENTURE, in *Law*, a writing which compriſes ſome contract between two at leaſt; being indented at top, anſwerable to another part which has the ſame contents. See Deed.

1 Independents. INDEPENDENTS, a ſect of Proteſtants ſo called from their maintaining that each congregation of Chriſtians, which meets in one houſe for public worſhip, is a complete church, has ſufficient power to act and perform every thing relating to religious government within itſelf, and is in no reſpect ſubject or accountable to other churches.

2 Their origin. The Independents, like every other Chriſtian ſect, derive their own origin from the practice of the apoſtles in planting the firſt churches; but they were unknown in modern times till they aroſe in England during the reign of Elizabeth. The hierarchy eſtabliſhed by that princeſs in the churches of her dominions, the veſtments worn by the clergy in the celebration of divine worſhip, the book of common prayer, and above all the ſign of the croſs uſed in the adminiſtration of baptiſm, were very offenſive to many of her ſubjects, who during the perſecutions of the former reign, had taken refuge among the Proteſtants of Germany and Geneva. Thoſe men thought that the church of England reſembled, in too many particulars, the antichriſtian church of Rome; and they called perpetually for a more thorough reformation and a *purer* worſhip. From this circumſtance they were ſtigmatized by their adverſaries with the general name of *Puritans*, as the followers of Novatian (A) had been in the ancient church, Elizabeth was not diſpoſed to comply with their demands; and it is difficult to ſay what might have been the iſſue of the conteſt, had the Puritans been united among themſelves in ſentiments, views, and meaſures. But the caſe was quite otherwiſe. That large body, compoſed of perſons of different ranks, characters, opinions, and intentions, and unanimous in nothing but in their antipathy to the forms of doctrine and diſcipline that were eſtabliſhed by law, was all of a ſudden divided into a variety of ſects. Of theſe the moſt famous was that which was formed about the year 1581 by *Robert Brown*, a man inſinuating in his manners, but unſteady and inconſiſtent in his views and notions of men and things. See Brown.

This innovator differed not in point of doctrine either from the church of England or from the reſt of the Puritans; but he had formed notions then new and ſingular, concerning the nature of the church and the rules of eccleſiaſtical government. He was for dividing the whole body of the faithful into ſeparate ſocieties or congregations; and maintained, that ſuch a number of perſons as could be contained in an ordinary place of worſhip ought to be conſidered as a *church*, and enjoy all the rights and privileges that are competent to an eccleſiaſtical community. Theſe ſmall ſocieties he pronounced *independent, jure divino,* and entirely exempt from the juriſdiction of the biſhops, in whoſe hands the court had placed the reins of ſpiritual government; and alſo from that of preſbyteries and ſynods, which the Puritans regarded as the ſupreme viſible ſources of eccleſiaſtical authority. He alſo maintained, that the power of governing each congregation reſided in the people; and that each member had an equal ſhare in this government, and an equal right to order matters for the good of the whole ſociety. Hence all points both of doctrine and diſcipline were ſubmitted to the diſcuſſion of the whole congregation: and whatever was ſupported by a majority of voices paſſed into a law. It was the congregation alſo that elected certain of the brethren to the office of paſtors, to perform the duty of public inſtruction, and the ſeveral branches of divine worſhip; reſerving however to themſelves the power of diſmiſſing theſe miniſters, and reducing them to the condition of private members, whenever they ſhould think ſuch change conducive to the ſpiritual advantage of the community. It is likewiſe to be obſerved, that the right of the paſtors to preach was by no means of an excluſive nature, or peculiar to them alone; ſince any member that thought proper to exhort or inſtruct the brethren, was abundantly indulged in the liberty of *propheſying* to the whole aſſembly. Accordingly, when the ordinary teacher or paſtor had finiſhed his diſcourſe, all the other brethren were permitted to communicate in public their ſentiments and illuſtrations upon any uſeful or edifying ſubject.

(A) The followers of Novatian were called *Puritans*, becauſe they would not communicate with the Catholic church, under pretence that her communion was polluted by admitting thoſe to the ſacred myſteries who through infirmity had ſacrificed to idols in times of perſecution. Theſe unhappy men were not received by the church till after a long courſe of penance. The Novatians would not receive them at all, however long their penance, or however ſincere their ſorrow, for their ſin. In other reſpects, the ancient Puritans were, like the Engliſh, orthodox in the faith, and of irreproachable morals.

The zeal with which BROWN and his aſſociates maintained and propagated theſe notions was in a high degree intemperate and extravagant. He affirmed, that all communion was to be broken off with thoſe religious ſocieties that were founded upon a different plan from his; and treated, more eſpecially the church of England, as a ſpurious church, whoſe miniſters were unlawfully ordained, whoſe diſcipline was popiſh and antichriſtian, and whoſe ſacraments and inſtitutions were deſtitute of all efficacy and virtue. The ſect of this hot-headed innovator, not being able to endure the ſevere treatment which their own violence had brought upon them from an adminiſtration that was not diſtinguiſhed by its mildneſs and indulgence, retired into the Netherlands, and founded churches at Middlebourg in Zealand, and at Amſterdam and Leyden in the province of Holland; but their eſtabliſhments were neither ſolid nor laſting. Their founder returned into England; and having renounced his principles of ſeparation, took orders in the eſtabliſhed church, and obtained a benefice. The Puritan exiles, whom he thus abandoned, diſagreed among themſelves, were ſplit into parties, and their affairs declined from day to day. This engaged the wiſer part of them to mitigate the ſeverity of their founder's plan, and to ſoften the rigour of his uncharitable deciſions.

3
And progreſs.

The perſon who had the chief merit of bringing about this reformation was one of their paſtors called *John Robinſon*, a man who had much of the ſolemn piety of the times, and no inconſiderable portion of learning. This well-meaning reformer, perceiving the defects that reigned in the diſcipline of Brown, and in the ſpirit and temper of his followers, employed his zeal and diligence in correcting them, and in new-modelling the ſociety in ſuch a manner as to render it leſs odious to its adverſaries, and leſs liable to the juſt cenſure of thoſe true Chriſtians, who look upon charity as the end of the commandments. Hitherto the ſect had been called *Browniſts*; but Robinſon having, in his Apology, affirmed, *Cætum quemlibet particularem eſſe totam, integram, et perfectam eccleſiam ex ſuis partibus conſtantem immediate et* INDEPENDENTER *(quoad alias eccleſias) ſub ipſo Chriſto*,—the ſect was henceforth called *Independents*, of which the apologiſt was conſidered as the founder.

The Independents were much more commendable than the Browniſts. They ſurpaſſed them both in the moderation of their ſentiments and in the order of their diſcipline. They did not, like Brown, pour forth bitter and uncharitable invectives againſt the churches which were governed by rules entirely different from theirs, nor pronounce them on that account unworthy of the Chriſtian name. On the contrary, though they conſidered their own form of eccleſiaſtical government as of divine inſtitution, and as originally introduced by the authority of the apoſtles, nay by the apoſtles themſelves, they had yet candour and charity enough to acknowledge, that true religion and ſolid piety might flouriſh in thoſe communities which were under the juriſdiction of biſhops or the government of ſynods and preſbyteries. This is put beyond all doubt by Robinſon himſelf, who expreſſes his own private ſentiments and thoſe of his community in the following clear and preciſe words: "Profitemur coram Deo et hominibus, adeo nobis convenire cum eccleſiis reformatis Belgicis in re religionis, ut omnibus et ſingulis earundem eccleſiarum fidei articulis, prout habentur in harmonia confeſſionum fidei, parati ſimus ſubſcribere. Eccleſias reformatas pro veris et genuinis habemus, cum iiſdem in ſacris Dei communionem profitemur, et, quantum in nobis eſt, colimus." They were alſo much more attentive than the Browniſts, in keeping on foot a regular miniſtry in their communities; for while the latter allowed promiſcuouſly all ranks and orders of men to teach in public, the Independents had, and ſtill have, a certain number of miniſters, choſen reſpectively by the congregations where they are fixed; nor is any perſon among them permitted to ſpeak in public, before he has ſubmitted to a proper examination of his capacity and talents, and been approved of by the heads of the congregation.

This religious ſociety ſtill ſubſiſts, and has produced divines as eminent for learning, piety, and virtue, as any church in Chriſtendom. It is now diſtinguiſhed from the other Proteſtant communities chiefly by the two following circumſtances.

4
In what they are now diſtinguiſhed from other Proteſtants.

1. The independents reject the uſe of all creeds and confeſſions drawn up by fallible men, requiring of their teachers no other teſt of orthodoxy than a declaration of their belief in the goſpel of Jeſus, and their adherence to the Scriptures as the ſole ſtandard of faith and practice.

2. They attribute no virtue whatever to the rite of ordination upon which ſome other churches lay ſo much ſtreſs; for the Independents declare, that the qualifications which conſtitute a regular miniſter of the New Teſtament, are, a firm belief in the goſpel, a principle of ſincere and unaffected piety, a competent ſtock of knowledge, a capacity for leading devotion and communicating inſtruction, a ſerious inclination to engage in the important employment of promoting the everlaſting ſalvation of mankind, and ordinarily an invitation to the paſtoral office from ſome particular ſociety of Chriſtians. Where theſe things concur, they conſider a perſon as fitted and authoriſed for the diſcharge of every duty which belongs to the miniſterial function; and they believe that the impoſition of the hands of biſhops or preſbyters would convey to him no powers or prerogatives of which he was not before poſſeſſed.

5
Their arguments againſt the uſe of creeds.

When the reformers ſeparated from the church of Rome, they drew up public confeſſions of faith or articles of religion, to which they demanded ſubſcription from their reſpective followers. Their purpoſe in this was to guard againſt dangerous hereſies, to aſcertain the meaning of Scripture language, and, we doubt not, to promote the unity of the ſpirit in the bond of peace. Theſe were laudable ends; but of the means choſen for attaining them, the late Dr Taylor of Norwich, the glory of the Independent churches, and whoſe learning would have done honour to any church, expreſſes his opinion in the following indignant language: "How much ſoever the Chriſtian world valueth theſe creeds and confeſſions, I confeſs, for my own part, that I have no opinion of them. But we are told that they were generally drawn up by the ableſt divines. But what evidence is there of this? are divines in vogue and power commonly the moſt knowing

knowing and upright? But granting that the reformers were in thoſe days the ableſt divines; the ableſt divines educated in Popiſh ſchools, notwithſtanding any pretended learning, might comparatively be very weak and defective in ſcripture-knowledge, which was a thing in a manner new to them. In times of great ignorance they might be men of eminence; and yet far ſhort of being qualified to draw up and decide the true and preciſe rules of faith for all Chriſtians. Yea, their very attempting to draw up, decide, and eſtabliſh, ſuch rules of faith, is an inconteſtible evidence of their ſurpriſing ignorance and weakneſs. How could they be able divines, when they impoſed upon the conſciences of Chriſtians their own deciſions concerning goſpel-faith and doctrine? Was not this in fact to teach and conſtrain Chriſtians to depart from the moſt fundamental principle of their religion, *ſubjection and allegiance to Chriſt, the only teacher and lawgiver?* But if they were able men, were they infallible? No: they publickly affirmed their own fallibility; and yet they acted as if they had been infallible, and could not be miſtaken in preſcribing faith and doctrine.

"But even if they were infallible, who gave them commiſſion to do what the Spirit of God had done already? Could the firſt reformers hope to deliver the truths of religion more fully and more clearly than the Spirit of God? Had they found out more apt expreſſions than had occurred to the Holy Spirit? The Son of God 'ſpake not of himſelf; but as the Father ſaid unto him, ſo he ſpake' (John xii. 50.). 'The Spirit of truth ſpake not of himſelf; but whatſoever he heard, that he ſpake' (John xvi. 13.) 'The things of God the apoſtles ſpake, not in the words which man's wiſdom teacheth, but which the Holy Ghoſt teacheth' (1 Cor. ii. 13.). If the Chriſtian revelation was thus handed down to us from the Fountain of Light with ſo much care and exactneſs, both as to matter and words, by the *Son of God*, by the *Spirit*, and by the *apoſtles*, who were the ancient doctors and biſhops? or who were the firſt reformers? or who were any ſynods or aſſemblies of *divines* that they *dared* to model Chriſtian faith into their own invented forms, and impoſe it upon the minds of men in their own deviſed terms and expreſſions?

"Hath Chriſt given authority to all his miniſters, to the end of the world, to new-mould his doctrines by the rules of human learning, whenever they think fit? or hath he delegated his power to any particular perſons? Neither the one nor the other. His doctrines are not of ſuch a ductile nature; but ſtand fixed, both as to matter and words, in the Scripture. And it is at any man's *peril* who pretends to put them, *as they are rules of faith*, into any new dreſs or ſhape. I conclude, therefore, that the firſt reformers, and all councils, ſynods, and aſſemblies, who have met together to collect, determine, and decide, to preſcribe and impoſe matters pertaining to Chriſtian faith, have acted without any warrant from Chriſt, and therefore have invaded the prerogative of him who is the ſole Prophet and Lawgiver to the church. Peace and unity, I know is the pretended good deſign of thoſe creeds and confeſſions. But as God never ſanctified them for thoſe ends, ſo all the world knows they have produced the contrary effects; diſcord, diviſion, and the ſpilling of whole ſeas of Chriſtian blood, for 1400 years together."

Such ſentiments as theſe are now maintained by Chriſtians of various denominations; but they were firſt avowed by the Independents, to whom therefore the merit or demerit of bringing them to light properly belongs. Our readers will think differently of them according to their preconceived opinions; but it is not our province either to confirm or to confute them. They riſe almoſt neceſſarily out of the independent ſcheme of congregational churches; and we could not ſuppreſs them without deviating from our fixed reſolution of doing juſtice to all religious parties, as well thoſe from whom we differ as thoſe with whom we agree. It ought not, however, to be raſhly concluded, that the Independents of the preſent age, merely becauſe they reject the uſe of all creeds of human compoſition, doubt or diſbelieve the doctrnies deemed orthodox in other churches. Their predeceſſors in the laſt century were thought to be more rigid Calviniſts than the Preſbyterians themſelves; as many of thoſe may likewiſe be, who in the preſent century admit not the confeſſions and formulas of the Calviniſtic churches. They acknowledge as divine truth every doctrine contained in the Scriptures; but they think that Scripture-doctrines are moſt properly expreſſed in ſcripture language; and the ſame ſpirit of religious liberty, which makes them reject the authority of biſhops and ſynods in matter of diſcipline, makes them reject the ſame authority in matters of faith. In either caſe, to call any man or body of men their maſters, would, in their opinion, be a violation of the divine law, ſince "one is their maſter, even Chriſt, and they all are brethren."

6
Not therefore neceſſarily heterodox.

7
Their arguments for the independency of congregational churches.

In ſupport of their ſcheme of congregational churches, they obſerve, that the word ἐκκλησια, which we tranſlate *church*, is always uſed in Scripture to ſignify either a *ſingle congregation*, or the *place* where a ſingle congregation meets. Thus that unlawful aſſembly at Epheſus, brought together againſt Paul by the craftſmen, is called ἐκκλησια, *a church* (Acts xix. 32, 39, 41.). The word, however, is generally applied to a more ſacred uſe; but ſtill it ſignifies either the *body* aſſembling, or the *place* in which it aſſembles. The whole body of the diſciples at Corinth is called *the church*, and ſpoken of as coming together into *one place* (1 Cor. xiv. 23.) The place into which they came together we find likewiſe called *a church*; "when ye come together in the *church*,—when ye come together into one place" (1 Cor. xi. 18. 20.). Wherever there were more congregations than one, there were likewiſe more *churches* than one: Thus, "Let your women keep ſilence in the *churches*, ἐν ταις ἐκκλησιαις (1 Cor. xi. 18.). The whole nation of Iſrael is indeed called a *church*, but it was no more than a ſingle congregation; for it had but one place of public worſhip, *viz.* firſt the tabernacle, and afterwards the temple. The Catholic church of Chriſt, his holy nation and kingdom, is likewiſe a ſingle congregation having one place of worſhip, viz. *heaven*, where all the members aſſemble by faith and hold communion; and in which, when they ſhall all be fully gathered together, they will in fact be one glorious aſſembly. We find it called "the general aſſembly and church of the firſt-born, whoſe names are written in heaven."

Beſides theſe, the Independent can find no other deſcription of a church in the New Teſtament; not a trace of a dioceſe or preſbytery conſiſting of ſeveral congregations all ſubject to one juriſdiction. The number of diſciples in Jeruſalem was certainly great before they were diſperſed by the perſecution in which Paul bore ſo active a part; yet they are never mentioned as forming diſtinct aſſemblies, but as *one* aſſembly meeting with its elders in *one place;* ſometimes in the temple, ſometimes in Solomon's porch, and ſometimes in an upper room. After the diſperſion, the diſciples who fled from Jeruſalem, as they could no longer aſſemble in one place, are never called a church by themſelves, or *one* church, but the *churches* of Judea, Samaria, and Galilee, (Acts ix. 31. Gal. 1. 22.) Whence the Independent concludes, that in Jeruſalem the words *church* and *congregation* were of the ſame import; and if ſuch was the caſe there, where the goſpel was firſt preached, he thinks we may reaſonably expect to find it ſo in other places. Thus when Paul on his journey calls the elders of the church of Epheſus to Miletus, he ſpeaks to them as the joint overſeers of a ſingle congregation: "Take heed to yourſelves, and to all the flock, over which the Holy Ghoſt hath made you overſeers." (Acts xx. 28.) Had the church at Epheſus conſiſted of different congregations united under ſuch a juriſdiction as that of a modern preſbytery, it would have been natural to ſay, "Take heed to yourſelves, and to the *flocks* over which the Holy Ghoſt hath made you overſeers:" but this is a way of ſpeaking of which the independent finds not an inſtance in the whole New Teſtament. The ſacred writers, when ſpeaking of all the Chriſtians in a nation or province, never call them *the church* of ſuch a nation or province, but *the churches* of Galatia (Gal. i. 2.), *the churches* of Macedonia (2 Cor. viii. 1.), the *churches* of Aſia (1 Cor. xvi. 10.) On the other hand, when ſpeaking of the diſciples in a city or town, who might ordinarily aſſemble in one place, they uniformly call them *a church;* ſaying, the church of Antioch, the church at Corinth, the church of Epheſus, and the like.

8
In each congregation more than one elder or preſbyter, whoſe office is to teach as well as govern.

In each of theſe churches or congregations there were *elders* or *preſbyters* and *deacons;* and in every church there ſeems to have been more than one elder, in ſome a great many, who all "laboured in word and doctrine." Thus we read (Acts xiv. 23.) of Paul and Barnabas ordaining *elders* in every church; and (Acts xx. 17.) of a *company* of elders in the church of Epheſus, who were exhorted to "*feed* the flock, and to take heed to themſelves and to all the flock over which the Holy Ghoſt had made them overſeers:" but of ſuch elders as are to be found in modern preſbyterian churches, who neither teach, nor are apt to teach, the Independent finds no veſtige in the Scriptures, nor in the earlieſt uninſpired writers of the Chriſtian church. The rule or government of this preſbytery or elderſhip in a church is not their own but Chriſt's. They are not lords over God's heritage, nor can they pretend to more power over the diſciples than the apoſtles had. But when the adminiſtration of the apoſtles in the church of Jeruſalem, and other churches where they acted as elders, is inquired into by an Independent, it does not appear to him that they did any thing of common concern to the church, without the conſent of the multitude; nay, it ſeems they thought it neceſſary to judge and determine in diſcipline in preſence of the whole church (Acts vi. 1—6. xv. 22. 1 Cor. v. 3, 4, 5.)

9
Excommunication and abſolution in the power of each congregation.

Excommunication and abſolution were in the power of the *church* at Corinth, and not of the elders as diſtinguiſhed from the congregation (1 Cor. v. 2 Cor. ii.) The apoſtle indeed ſpeaks of delivering ſome unto Satan (1 Tim. i. 20.), but it is by no means clear that he did it by himſelf, and not after the manner pointed at 1 Cor. v. 4, 5; even as it does not appear, from his ſaying, in one epiſtle, that the gift was given unto Timothy by the putting on of *his* hands, that this was not done in the *preſbytery* of a church, as in the other epiſtle we find it actually was. The trying and judging of falſe apoſtles was a matter of the firſt importance: but it was done by the elders with the flock at Epheſus (Rev. ii. 2. Acts xx. 28,); and that whole flock did in the days of Ignatius all partake of the Lord's ſupper, and pray together in one (B) place. Even the power of binding and looſing, or the power of the *keys*, as it has been called, was by our Saviour conferred not upon a particular order of diſciples, but upon the *church;* "If thy brother ſhall treſpaſs againſt thee, go and tell him his fault between thee and him alone: if he ſhall hear thee, thou haſt gained thy brother. But if he will not hear thee, then take with thee one or two more, that in the mouth of one or two witneſſes every word may be eſtabliſhed. And if he ſhall neglect to hear them, tell it unto the church: but if he neglect to hear the *church*, let him be unto thee as an heathen man and a publican. Verily I ſay unto you, whatſoever ye ſhall bind on earth, ſhall be bound," &c. (St Mat. xviii. 15, 16, 17, 18.). It is not ſaid, if he ſhall neglect to hear the one or two, tell it to the *elders* of the church; far leſs can it be meant that the offended perſon ſhould tell the cauſe of his offence to *all* the diſciples in a preſbytery or dioceſe conſiſting of many congregations: but he is required to tell it to that particular *church* or *congregation* to which they both belong; and the ſentence of that aſſembly, pronounced by its elders, is in a very ſolemn manner declared to be final, from which there lies no appeal to any juriſdiction on earth.

10
Of which the ſentence is final.

11
What conſtitutes elders in a church.

With reſpect to the *conſtituting* of elders in any church or congregation, the Independent reaſons in the following

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(B) The evidence upon which this is ſaid by Mr Glas (for the whole of this reaſoning is extracted from his works), is probably the following paſſage in the epiſtle of Ignatius to the Epheſians: Ει γαρ ενος και δευτερου προσευχη, &c. "For if the prayer of one or two be of ſuch force as we are told, how much more prevalent muſt that be which is made by the biſhop and the whole church? He then that does not come together into the *ſame place* with it, is proud, and hath condemned himſelf; for it is written, God reſiſteth the proud. Let us not therefore reſiſt the biſhop, that we may be the ſervants of God." The ſentence, as it thus ſtands by itſelf, certainly countenances Mr Glas's ſcheme; but the reader who thinks any regard due to the teſtimony of Ignatius, will do well to peruſe the whole epiſtle as publiſhed by Voſſius.

lowing manner: The officers of Chriſt's appointment are either ordinary and permanent in the church, or they were extraordinary and peculiar to the planting of Chriſtianity. The extraordinary were thoſe who were employed in laying the plan of the goſpel churches, and in publiſhing the New Teſtament revelation. Such were the apoſtles, the choſen witneſſes of our Saviour's reſurrection; ſuch were the prophets inſpired by the Holy Ghoſt for explaining infallibly the Old Teſtament by the things written in the New; and ſuch were the evangeliſts, the apoſtles miniſters. Theſe can be ſucceeded by none in that which was peculiar to them, becauſe their work was completed by themſelves. But they are ſucceeded in all that was not peculiar to them by elders and deacons, the only two ordinary and permanent orders of miniſters in the church. We have already ſeen, that it belongs to the office of the elder to feed the flock of Chriſt; and the only queſtion to be ſettled is, how men are ordinarily called to that office? for about the office of the deacon there is little or no diſpute. No man now can pretend to be ſo called of God to the miniſtry of the word as the apoſtles and other inſpired elders were, whom he choſe to be the publiſhers of his revealed truth, and to whoſe miſſion he bore witneſs in an extraordinary manner. But what the apoſtles were to thoſe who had the divine oracles from their mouths, that their writings are to us: and therefore as no man can lawfully pretend a call from God to make any addition to thoſe writings, ſo neither can any man pretend to be lawfully called to the miniſtry of the word already written but in the manner which that word directs. Now there is nothing of which the New Teſtament ſpeaks more clearly than of the *characters* of thoſe who ſhould exerciſe the office of elders in the church, and of the actual exerciſe of that office. The former are graphically drawn in the epiſtles of Timothy and Titus; and the latter is minutely deſcribed in Paul's diſcourſe to the Epheſian elders, in Peter's exhortation to elders, and our Lord's commiſſion to thoſe miniſters, with whom he promiſed to be always preſent even unto the end of the world. It is not competent for any man or body of men to add to, or diminiſh from, the deſcription of a goſpel-miniſter given in theſe places, ſo as to inſiſt upon the neceſſity of any qualification which is not there mentioned, or to diſpenſe with any qualification as needleſs which is there required. Neither has Jeſus Chriſt, the only legiſlator to the church, given to any miniſters or people any power or right whatſoever to call, ſend, elect, or ordain, to that office any perſon who is not qualified according to the deſcription given in his law; nor has he given any power or right to reject the leaſt of them who are ſo qualified, and who deſire the office of a biſhop or elder. Let a man have hands laid upon him by ſuch as could prove an uninterrupted deſcent by impoſition of hands from the apoſtles; let him be ſet apart to that office by a company of miniſters themſelves, the moſt conformable to the ſcripture character, and let him be choſen by the moſt holy people on earth; yet if he anſwer not the New Teſtament deſcription of a miniſter, he is not called of God to that office, and is no miniſter of Chriſt, but is indeed running unſent. No form of ordination can pretend to ſuch a clear foundation in the New Teſtament as the deſcription of the perſons who ſhould be elders of the church; and the laying on of hands, whether by biſhops or preſbyters, is of no more importance in the miſſion of a miniſter of Chriſt, than the waving of one's hand in the air, or the putting of it into his boſom; for now when the power of miracles has ceaſed, it is obvious that ſuch a rite, by whomſoever performed, can convey no powers, whether ordinary or extraordinary. Indeed it appears to have been ſometimes uſed even in the apoſtolic age without any ſuch intention. When Paul and Barnabas were ſeparated to the particular employment of going out to the Gentiles, the prophets and teachers at Antioch "prayed and laid their hands on them:" But did this ceremony confer upon the two apoſtles' any new power or authority to act as miniſters of Chriſt? Did the impoſition of hands make thoſe ſhining lights of the goſpel one whit better qualified than they were before to convert and baptize the nations, to feed the flock of God, to teach, rebuke, or exhort, with all long ſuffering and doctrine? It cannot be pretended. Paul and Barnabas had undoubtedly received the Holy Ghoſt before they came to Antioch; and as they were apoſtles, they were of courſe authoriſed to diſcharge all the functions of the inferior and ordinary miniſters of the goſpel. In a word, whoever in his life and converſation is conformable to the character which the inſpired writers give of a biſhop or elder, and is likewiſe qualified by his "mightineſs in the ſcripture" to diſcharge the duties of that office, is fully authoriſed to adminiſter the ſacraments of baptiſm and the Lord's ſupper, to teach, exhort, and rebuke, with all long ſuffering and doctrine, and has all the call and miſſion which the Lord now gives to any man; whilſt he, who wants the qualifications mentioned, has not God's call, whatever he may have; nor any authority to preach the goſpel of Chriſt, or to diſpenſe the ordinances of his religion.

12
Arguments againſt the efficacy of every kind of miniſterial ordination.

13
And even againſt the neceſſity of a popular call.

From this view of the Independent principles, which is faithfully taken from their own writers, it appears, that, according to them, even the election of a congregation confers upon the man whom they may chooſe for their paſtor no new powers, but only creates a new relation between him and a particular flock, giving him an excluſive right, either by himſelf or in conjunction with other paſtors conſtituted in the ſame manner, to exerciſe among them that authority which he derives immediately from Chriſt, and which in a greater or leſs degree is poſſeſſed by every ſincere Chriſtian according to his gifts and abilities. Were the miniſters of the goſpel conſtituted in any other way than this; by impoſition of hands, for inſtance, in ſucceſſion from the apoſtles; the caſe of Chriſtians would, in the opinion of the Independents, be extremely hard, and the ways of God ſcarcely equal. We are ſtrictly commanded not to forſake the aſſembling of ourſelves together, but to continue ſtedfaſt in the apoſtles doctrine and fellowſhip, and in the breaking of bread, and in prayer: "but can any man (aſks one of their advocates) bring himſelf to believe, that what he is commanded to do in point of gratitude, what is made his own perſonal act, an act expreſſive of certain dutiful and pious affections, can poſſibly be reſtricted to the intermediate offices or inſtrumentality of others, who act by powers which he can neither give nor take away?

Indeterminate ‖ Index.

To ſuppoſe a thing neceſſary to my happineſs, which is not in my own power, or wholly depends upon the good pleaſure of another, over whom I have no authority, and concerning whoſe intentions and diſpoſitions I can have no ſecurity, is to ſuppoſe a conſtitution the moſt fooliſh and ill-natured, utterly inconſiſtent with our ideas of a wiſe and good Agent." Such are ſome of the principal arguments by which the Independents maintain the divine right of congregational churches, and the inefficacy of miniſterial ordination to conſtitute a miniſter of Chriſt. We mean not to remark upon them, as the reader will find different conſtitutions of the church pleaded for under the words PRESBYTERIANS and EPISCOPACY, to which we refer him for farther ſatisfaction. We ſhall only obſerve at preſent, what it would be affectation to paſs unnoticed, that the mode of reaſoning adopted by the laſt quoted advocate for the Independents, if puſhed as far as it will go, neceſſarily leads to conſequences which will not readily be admitted by a Chriſtian of any denomination, or indeed by a ſerious and conſiſtent Theiſt.

INDETERMINATE, in general, an appellation given to whatever is not certain, fixed, and limited; in which ſenſe it is the ſame with *indefinite*.

INDEX, in anatomy, denotes the fore-finger. It is thus called from *indico, I point* or *direct*; becauſe that finger is generally ſo uſed: whence alſo the extenſor indicis is called *indicator*.

INDEX, in arithmetic and algebra, ſhows to what power any quantity is involved, and is otherwiſe called its *exponent*. See ALGEBRA, p. 412.

INDEX of a Book, is that part annexed to a book, referring to the particular matters or paſſages therein contained.

INDEX of a Globe, is a little ſtyle fitted on to the north pole, and turning round with it, pointing to certain diviſions in the hour-circle. It is ſometimes alſo called *gnomon*. See GLOBE.

Expurgatory INDEX, a catalogue of prohibited books in the church of Rome.

The firſt catalogues of this kind were made by the inquiſitors; and theſe were afterwards approved of by the council of Trent, after ſome alteration was made in them by way of retrenchment or addition. Thus an index of heretical books being formed, it was confirmed by a bull of Clement VIII. in 1595, and printed with ſeveral introductory rules; by the fourth of which, the uſe of the ſcriptures in the vulgar tongue is forbidden to all perſons without a particular licence; and by the tenth rule it is ordained, that no book ſhall be printed at Rome without the approbation of the Pope's vicar, or ſome perſon delegated by the Pope; nor in any other places, unleſs allowed by the biſhop of the dioceſe, or ſome perſon deputed by him, or by the inquiſitor of heretical pravity.

The Trent Index being thus publiſhed, Philip II. of Spain ordered another to be printed at Antwerp, in 1571, with conſiderable enlargements. Another index was publiſhed in Spain in 1584; a copy of which was ſnatched out of the fire when the Engliſh plundered Cadiz. Afterwards there were ſeveral expurgatory indexes printed at Rome and Naples, and particularly in Spain.

India.

INDIA. See HINDOSTAN.—By the name of *India* the ancients underſtood only the weſtern peninſula, on this ſide the Ganges, and the peninſula beyond it, having little or no knowledge of the countries which lie farther to the eaſtward; though by the moderns all thoſe vaſt tracts from the eaſtern parts of the Perſian empire to the iſlands of Japan, are confounded under the general name of *Eaſt Indies*. Even the ancients, though originally they were acquainted only with the weſtern parts of Hindoſtan, gradually extended the name of *India* over the other countries they diſcovered to the eaſtward; ſo that probably they would have involved all the reſt in the ſame general deſignation, had they been as well acquainted with them as the moderns are. By whom theſe countries were originally peopled is a queſtion which in all probability will never be reſolved. Certain it is, that ſome works in theſe parts diſcover marks of aſtoniſhing ſkill and power in the inhabitants, ſuch as the images in the iſland of Elephanta; the rocking ſtones of immenſe weight, yet ſo nicely balanced that a man can move them with his hand; the obſervatory at Benares, &c. Theſe ſtupendous works are by Mr Bryant attributed to the Cuſhites or Babylonians, the firſt diſtinct nation in the world, and who of conſequence muſt for ſome time have poſſeſſed in a manner the ſovereignty of the whole earth; and it can by no means appear improbable, that the ſubjects of Nimrod, *the beginning* of whoſe kingdom was in Shinar, might extend themſelves eaſtward, and thus fill the fertile regions of the eaſt with inhabitants, without thinking it worth while for a long time to meddle with the leſs mild and rich countries to the eaſtward. Thus would be formed that great and for ſome time inſuperable diviſion betwixt the inhabitants of India and other countries; ſo that the weſtern nations knew not even of the exiſtence of the Indians but by obſcure report; while the latter, ignorant of their own origin, invented a thouſand idle tales concerning the antiquity of their nation, which ſome of the moderns have been credulous enough to believe and record as facts.

1 Conjecture concerning the peopling of India.

2 Why the Indians and Weſtern nations were ignorant of one another.

The firſt among the weſtern nations who diſtinguiſhed themſelves by their application to navigation and commerce, and who were of conſequence likely to diſcover theſe diſtant nations, were the Egyptians and Phenicians. The former, however, ſoon loſt their inclination for naval affairs, and held all ſea-faring people in deteſtation as profane perſons; though the extenſive conqueſts of Seſoſtris, if we can believe them, muſt have in a great meaſure ſupplied this defect. Without regard to the prejudice of his people againſt maritime affairs, he is ſaid to have fitted out a fleet of 400 ſail in the Arabian Gulph or Red Sea, which conquered all the countries lying along the *Erythrean Sea* (A) to India; while the army led by himſelf marched through Aſia, and ſubdued all the countries to the Ganges;

3 Account of the expedition of Seſoſtris to India.

(A) This muſt not be confounded with the *Red Sea*, notwithſtanding the ſimilarity of names. The *Erythrean* ſea was that part of the ocean which is interpoſed betwixt the ſtraits of Babelmandel and the Malabar coaſt, now called the *Indian* ſea or ocean.

Ganges; after which he croſſed that river, and advanced to the eaſtern ocean.

4 Dr Robertſon's reaſons for diſbelieving it.

Great diſputes have been carried on with reſpect to this conqueror, and the famous expedition juſt now related; but the learned Dr Robertſon, in his *Diſquiſition concerning ancient India*, declares himſelf in doubt whether any ſuch expedition ever was made, for the following reaſons. 1. Few hiſtorical facts ſeem to be better eſtabliſhed than that of the averſion the Egyptians entertained to ſeafaring people and naval affairs; and the Doctor conſiders it as impoſſible even for the moſt powerful monarch to change in a few years a national habit confirmed by time and ſanctified by religion. The very magnitude of the armaments is an argument againſt their exiſtence; for beſides the 400 ſhips of war, he had another fleet in the Mediterranean; and ſuch a mighty navy could not have been conſtructed in any nation unaccuſtomed to maritime affairs, in a few years. 2. Herodotus makes no mention of the conqueſts of India by Seſoſtris, though he relates his hiſtory at ſome length. Our author is of opinion that the ſtory was fabricated betwixt the time of Herodotus and that of Diodorus Siculus, from whom we have the firſt account of this expedition. Diodorus himſelf informs us that he had it from the Egyptian prieſts; and gives it as his opinion, that "many things they related flowed rather from a deſire to promote the honour of their country than from attention to trnth:" and he takes notice that both the Egyptian prieſts and Greek writers differ widely from one another in the accounts which they give of the actions of Seſoſtris. 3. Though Diodorus declares that he has ſelected the moſt probable parts of the Egyptian narrative, yet there are ſtill ſo many improbabilities, or rather impoſſibilities, contained in his relation, that we cannot by any means give credit to it. 4. For the reaſon juſt mentioned, the judicious geographer Strabo rejected the account altogether, and ranks the exploits of Seſoſtris in India with the fabulous ones of Bacchus and Hercules.

5 Intercourſe of the Tyrians with India.

But whatever may be determined with regard to the Egyptians, it is certain that the Tyrians kept up a conſtant intercourſe with ſome parts of India by navigating the Arabian Gulf, now the Red Sea. Of this navigation they became maſters by taking from the Idumeans ſome maritime places on the coaſt of the Red Sea: but as the diſtance betwixt the neareſt place of that Sea and Tyre was ſtill conſiderable, the land-carriage would have been very tedious and expenſive; for which reaſon it was neceſſary to become maſters of a port on the eaſtern part of the Mediterranean, nearer to the Red Sea than Tyre, that ſo the goods might be ſhipped from thence to Tyre itſelf. With this view they took poſſeſſion of Rhinvelura, the neareſt port on the Mediterranean to the Arabian Gulf; and to that port all the goods from India were conveyed by a much ſhorter and leſs expenſive route than over land.—This is the firſt authentic account of any intercourſe betwixt India and the weſtern part of the world; and to this we are without doubt in a great meaſure to aſcribe the vaſt wealth and power for which the city of Tyre was anciently renowned; for in other reſpects the whole territory of Phenicia was but of little conſequence. Notwithſtanding the frequency of theſe voyages, however, the ancients are able to give little or no account of them. The moſt particular deſcription we have of the wealth, power, and commerce of ancient Tyre, is in the propheſies of Ezekiel; ſo that if the Tyrians themſelves kept any journals of their voyages, it is probable that they were entirely loſt when the city was deſtroyed by Alexander the Great.

6 The Jews did not viſit India.

Though the Jews, under the reign of David and Solomon, carried on an extenſive and lucrative commerce, yet our author is of opinion that they did not trade to any part of India. There are only two places mentioned to which their ſhips ſailed, *viz.* Ophir and Tarſhiſh; both of which are now ſuppoſed to have been ſituated on the eaſtern coaſt of Africa: the ancient Tarſhiſh, according to Mr Bruce, was the preſent Mocha; and Ophir the kingdom of Soſala, ſo remarkable in former times for its mines, that it was called by Oriental writers the *golden* Soſala.*

7 Conqueſts of the Perſians in India.

Thus the Indians continued for a long time unknown to the weſtern nations, and undiſturbed by them; probably in ſubjection to the mighty empire of Babylon, from which the country was originally peopled, or in alliance with it; and the poſſeſſion of this vaſt region will eaſily account for the immenſe and otherwiſe almoſt incredible wealth and power of the ancient Babyloniſh monarchs. Soon after the deſtruction of that monarchy by the Perſians, however, we find their monarch Darius Hyſtaſpes undertaking an expedition againſt the Indians †. His conqueſts were not extenſive, as they did not reach beyond the territory watered by the Indus; nevertheleſs, ſuch as they were, the acquiſition ſeems to have been very important, as the revenue derived from the conquered territory, according to Herodotus, was near a third of that of the whole Perſian empire. According to his account, however, we muſt form a much more diminutive opinion of the riches of the Perſian monarchs than has commonly been done; ſince Herodotus tells us, that the empire was divided into 20 ſatrapies or governments; all of which yielded a revenue of 14,560 Euboic talents, amounting in the whole to 2,807,437l. ſterling. The amount of the revenue from the conquered provinces of India therefore muſt have been conſiderably ſhort of a million. Very little knowledge of the country was diffuſed by the expedition of Darius, or the voyage of Scylax whom he employed to explore the coaſts: for the Greeks paid no regard to the tranſactions of thoſe whom they called *Barbarians;* and as for Scylax himſelf, he told ſo many incredible ſtories in the account he gave of his voyage, that he had the misfortune to be diſbelieved in almoſt every thing, whether true or falſe.

8 Of Alexander the Great.

The expedition of Alexander is ſo fully taken notice of under the article Hindostan, that nothing more remains to be ſaid upon it in this place, than that he went no farther into the country than the preſent territory of the Panjab, all of which he did not traverſe. Its ſouth weſt boundary is formed by a river anciently called the *Hyſudrus*, now the *Setlege*. The breadth of this diſtrict from Ludhana on the Setlege, to Attock on the Indus, is computed to be 259 geographical miles in a ſtraight line; and Alexander's march, computed in the ſame manner, did not exceed 200; nevertheleſs, by ſpreading of his numerous army over the country; and the exact meaſurement and delineation

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* See *Ophir* and *Tarſhiſh*.

† See *Hindoſtan*, nº 2.

tion of all his movements by men of ſcience whom he employed, a very extenſive knowledge of the weſtern part of India was obtained. It is, however, ſurpriſing, that having marched through ſo many countries in the neighbourhood of India, where the people muſt have been well acquainted with the nature of the climate, the Macedonian conqueror did not receive any information concerning the difficulties he would meet with from the rains which fell periodically at a certain ſeaſon of the year. It was the extreme diſtreſs occaſioned by them which made his ſoldiers finally reſolve to proceed no farther; and no wonder indeed that they did adopt this reſolution, ſince Diodorus informs us, that it had rained inceſſantly for 70 days before their departure. Theſe rains, however, according to the teſtimony both of ancient and modern writers, fall only in the mountainous parts, little or none being ever ſeen in the plains. Ariſtobulus informs us, that in the country through which Alexander marched, though heavy rains fell among the mountains, not a ſhower was ſeen in the plains below. The diſtrict is now ſeldom viſited by Europeans; but major Rennel was informed by a perſon of credit, who had reſided in the Panjab, that during great part of the S. W. monſoon, or at leaſt in the months July, Auguſt, and part of September, which is the rainy ſeaſon in moſt other parts of India, very little rain falls in the Delta of the Indies, except very near the ſea, though the atmoſphere is generally clouded, and very few ſhowers fall throughout the whole ſeaſon. Captain Hamilton relates, that when he viſited Tatta, no rain had fallen there for three years before. We may have ſome idea of what the Macedonians ſuffered by what happened afterwards to Nadir Shah, who, though poſſeſſed of vaſt wealth and power, as well as great experience in military affairs, yet loſt a great part of his army in croſſing the mountains and rivers of the Panjab, and in battles with the ſavage inhabitants who inhabit the countries betwixt the Oxus and the frontiers of Perſia. He marched through the ſame countries, and nearly in the ſame direction, that Alexander did.

By his voyage down the river Indus, Alexander contributed much more to enlarge our geographical knowledge of India than by all his marches and conqueſts by land. According to Major Rennel, the ſpace of country through which he ſailed on the Indus, from the Hyphaſis to the ocean, was not leſs than 1000 miles: and as, during the whole of that navigation, he obliged the nations on both ſides the river to ſubmit to him, we may be very certain that the country on each ſide was explored to ſome diſtance. An exact account not only of his military operations, but of every thing worthy of notice relating to the countries through which he paſſed, was preſerved in the journals of his three officers, Lagus, Nearchus, and Ariſtobulus; and theſe journals, Arian informs us, he followed in the compoſition of his hiſtory. From theſe authors we learn, that in the time of Alexander, the weſtern part of that vaſt tract named *India* was poſſeſſed by ſeven very powerful monarchs. The territory of king Porus, which Alexander firſt conquered, and then reſtored to him, is ſaid to have contained no fewer than 2000 towns; and the king of the Praſii had aſſembled an army of 20,000 cavalry, 2000 armed chariots, and a great number of elephants, to oppoſe the Macedonian monarch on the banks of the Ganges. The navigable rivers with which the Panjab country abounds, afforded them, and ſtill continue to afford, an intercourſe from one part to another by water: and as at that time theſe rivers probably had many ſhips on them for the purpoſes of commerce, Alexander might eaſily collect all the number he is ſaid to have had, *viz.* 2000; ſince it is reported that Semiramis was oppoſed by double the number on the Indus when ſhe invaded India. When Mahmud Gazni alſo invaded this country, a fleet was collected upon the Indus to oppoſe him, conſiſting of the ſame number of veſſels. From the Ayeen Akbery, alſo, we learn that the inhabitants of this part of India ſtill continue to carry on all their communication with each other by water; and the inhabitants of the Circar of Tatta alone have 40,000 veſſels of various conſtructions.

9
State of India in the time of Alexander.

10
Why Alexander's hiſtorians take no notice of the voyage of Scylax.

Under the article **HINDOSTAN** we have mentioned Major Rennel's opinion concerning the ſilence of Alexander's hiſtorians about the expedition of Scylax; but Dr Robertſon accounts for it in another manner. "It is remarkable (ſays he), that neither Nearchus, nor Ptolemy, nor Ariſtobulus, nor even Arrian, once mention the voyage of Scylax. This could not proceed from their being unacquainted with it, for Herodotus was a favourite author in the hands of every Greek who had any pretenſions to literature. It was probably occaſioned by the reaſons they had to diſtruſt the veracity of Scylax, of which I have already taken notice. Accordingly, in a ſpeech which Arrian puts in the mouth of Alexander, he aſſerts, that, except Bacchus, he was the firſt who had paſſed the Indus; which implies that he diſbelieved what is related concerning Scylax, and was not acquainted with what Darius Hyſtaſpes is ſaid to have done in order to ſubject that part of India to the Perſian crown. This opinion is confirmed by Megaſthenes, who reſided a conſiderable time in India. He aſſerts, that, except Bacchus and Hercules (to whoſe fabulous expeditions Strabo is aſtoniſhed that he ſhould have given any credit,) Alexander was the firſt who had invaded India. Arrian informs us that the Aſſaceni, and other people who inhabited the country now called *Candahar*, had been tributary firſt to the Aſſyrians and then to the Medes and Perſians. As all the fertile provinces on the north-weſt of the Indus were anciently reckoned to be part of India, it is probable that what was levied from them is the ſum mentioned in the tribute rolls from which Herodotus drew his account of the annual revenue of the Perſian empire, and that none of the provinces to the ſouth of the Indus were ever ſubject to the kings of Perſia."—The Doctor differs from Mr Rennel with reſpect to the ſurpriſe which Alexander and his army expreſſed when they ſaw the high tides at the mouth of the Indus. This he thinks might very naturally have been the caſe, notwithſtanding what Herodotus had written concerning the flux and reflux obſervable in the Red Sea. All that has been mentioned by Herodotus concerning this phenomenon is, that "in the Red Sea there is a regular ebb and flow of the tide every day." No wonder therefore that the Macedonians ſhould be ſurpriſed and terrified at the very high tides which preſented themſelves in the Indian ocean, which the few words of Herodotus abovementioned had by no means led them to expect,

pect. In the like manner the Romans were ſurpriſed at the tides in the Atlantic, when they had conquered ſome of the countries bordering upon that ocean. Cæſar deſcribes the aſtoniſhment of his ſoldiers at a ſpring tide in Britain which greatly damaged his fleet; and indeed, conſidering the very little riſe of the tide in the Mediterranean, to which alone the Greeks and Romans had acceſs, we may reckon the account given us by Arrian highly probable.

11
Cities built by Alexander in India.

The country on each ſide the Indus was found, in the time of Alexander, to be in no degree inferior in population to the kingdom of Porus already mentioned. The climate, ſoil, and productions of India, as well as the manners and cuſtoms of the inhabitants, are exactly deſcribed, and the deſcriptions found to correſpond in a ſurpriſing manner with modern accounts. The ſtated change of ſeaſons, now known by the name of *monſoons*, the periodical rains, the ſwellings and inundations of the rivers, with the appearance of the country during the time they continue, are particularly deſcribed. The deſcriptions of the inhabitants are equally particular; their living entirely upon vegetable food, their diviſion into tribes or caſts, with many of the particularities related under the article HINDOO, are to be met with in the accounts of Alexander's expedition. His military operations, however, extended but a very little way into India properly ſo called; no farther indeed than the modern province of Lahor, and the countries on the banks of the Indus from Moultan to the ſea; though, had he lived to undertake another expedition as he intended, it is very probable that he would have ſubdued a vaſtly greater tract of country; nor indeed could any thing probably have ſet bounds to his conqueſts but death or revolts in diſtant provinces of his empire. In order to ſecure the obedience of thoſe countries he ſubdued, Alexander found it neceſſary to build a number of fortified cities; and the farther eaſtward he extended his conqueſts, the more neceſſary did he find this taſk. Three he built in India itſelf; two on the banks of the Hydaſpes, and a third on the Aceſines, both navigable rivers, falling into the Indus after they have united their ſtreams. By means of theſe cities he intended not only to keep the adjacent countries in awe, but to promote a commercial intercourſe betwixt different parts both by land and water. With this view alſo, on his return to Suſa, he ſurveyed in perſon the courſe of the Euphrates and Tigris, cauſing the cataracts or dams to be removed which the Perſian monarchs had built to obſtruct the navigation of theſe rivers, in conformity to a maxim of their ſuperſtition, that it was unlawful to defile any of the elements, which they imagined was done by navigators. After the navigation was opened in this manner, he propoſed that the valuable commodities of India ſhould be imported into the other parts of his dominions by means of the Perſian Gulf; while through the Red Sea they were conveyed to Alexandria in Egypt, and thence diſperſed all over Europe.

12
Expedition of Seleucus to India.

The death of Alexander having put an end to all his great ſchemes, the eaſtern part of his dominions devolved firſt on Pytho the ſon of Agenor, and afterwards on Seleucus. The latter was very ſenſible of the advantages to be derived from keeping India in ſubjection. With this view he undertook an expedition into that country, partly to eſtabliſh his authority more perfectly, and partly to defend the Macedonian territories againſt Sandracottus king of the Praſii, who threatened to attack them. The particulars of his expedition are very little known; Juſtin being the only author who mentions them, and his authority is but of little weight, unleſs corroborated by the teſtimony of other hiſtorians. Plutarch, who tells us that Seleucus carried his arms farther into India than Alexander, is ſubject to an imputation of the ſame kind; but Pliny, whoſe authority is of conſiderably greater weight, corroborates the teſtimony of Plutarch in this inſtance, tho' his words are ſo obſcure, that learned men differ in opinion concerning their meaning. Bayer thinks they imply that Seleucus marched from the Hyphaſis, the boundary of Alexander's conqueſts, to the Hyſudrus, from thence to Palibothra, and then to the mouth of the Ganges; the diſtances of the principal ſtations being marked, and amounting in all to 2244 Roman miles. Notwithſtanding this authority, however, Dr Robertſon thinks it very improbable that the expedition of Seleucus ſhould have continued ſo long, as in that caſe "the ancients would have had a more accurate knowledge of that part of the country than they ſeem ever to have poſſeſſed."

13
Conjectures concerning the ſituation of Palibothra.

The career of Seleucus in the eaſt was ſtopped by Antigonus, who prepared to invade the weſtern part of his dominions. The former was therefore obliged to conclude a treaty with Sandracottus, whom he allowed to remain in quiet poſſeſſion of his territories: but Dr Robertſon is of opinion, that during the lifetime of Seleucus, which continued 42 years after the death of Alexander, no diminution of the Macedonian territories took place. With a view of keeping up a friendly intercourſe with the Indian Prince, Seleucus ſent Megaſthenes, one of Alexander's officers, to Palibothra, capital of the kingdom of the Praſii, ſituated on the banks of the Ganges. This city is by Dr Robertſon ſuppoſed to be the modern Allahabad, ſeated at the conflux of the Juruna and Ganges, contrary to the opinion of Major Rennel, who ſuppoſes it to be Patna.* As Megaſthenes reſided in this city for a conſiderable ſpace of time, he had an opportunity of making many obſervations on the country of India in general; and theſe obſervations he was induced afterwards to publiſh. Unhappily, however, he mingled with his relations the moſt extravagant fables. To him may be traced the ridiculous accounts of men with ears ſo large that they could wrap themſelves up in them; of tribes with one eye, without mouths or noſes, &c. whence the extracts from his book given by Arrian, Diodorus, and other ancient writers, can ſcarcely be credited, unleſs confirmed by other evidence.

14
Expedition of Antiochus the Great into India.

After the embaſſy of Megaſthenes to Sandracottus, and that of his ſon Damaichus to Allitrochidas, the ſucceſſor of Sandracottus, we hear no more of the affairs of India with regard to the Macedonians, until the time of Antiochus the Great, who made a ſhort incurſion into India about 197 years after the death of Seleucus. All that we know of this expedition is, that the Syrian monarch, after finiſhing a war he carried on againſt the two revolted provinces of Parthia and Bactria, entered India, where he obliged Sopha-

* See *Hindoſtan*, n° 4.

gaſenus, king of the country which he invaded, to pay a ſum of money, and give him a number of elephants. It is probable that the ſucceſſors of Seleucus were obliged ſoon after his death to abandon all their Indian territories.

15
Account of the Grecian kingdom of Bactria.

After the loſs of India by the Syrians, an intercourſe was kept up for ſome time betwixt it and the Greek kingdom of Bactria. This laſt became an independent ſtate about 69 years after the death of Alexander; and, according to the few hints we have concerning it in ancient authors, carried on a great traffic with India. Nay, the Bactrian monarchs are ſaid to have conquered more extenſive tracts in that region than Alexander himſelf had done. Six princes reigned over this new kingdom in ſucceſſion; ſome of whom, elated with the conqueſts they had made and the power they had acquired, aſſumed the title of *Great King*, by which the Perſian monarchs were diſtinguiſhed in their higheſt ſplendor. Strabo informs us, that the Bactrian princes were deprived of their territories by the Scythian Nomades, who came from the country beyond the Iaxartes, and were known by the names of Aſii, Paſiani, Tachari, and Scarauli. This is confirmed by the teſtimony of ſome Chineſe hiſtorians quoted by M. de Guignes. According to them, about 126 years before the Chriſtian æra, a powerful horde of Tartars, puſhed from their native ſeats on the confines of China, and obliged to move farther to the weſt, paſſed the Iaxartes, and, pouring in upon Bactria like an irreſiſtible torrent, overwhelmed that kingdom, and put an end to the dominion of the Greeks after it had laſted near 130 years.

16
Intercourſe betwixt Egypt and India.

From this time to the cloſe of the 15th century, all thoughts of eſtabliſhing any dominion in India were totally abandoned by the Europeans. The only object now was to promote a commercial intercourſe with that country; and Egypt was the medium by which that intercourſe was to be promoted. Ptolemy the ſon of Lagus, and firſt king of Egypt, firſt raiſed the power and ſplendor of Alexandria, which he knew had been built by Alexander with a view to carry on a trade to India: and in order to make the navigation more ſecure, he built the celebrated light-houſe at Pharos; a work ſo magnificent as to be reckoned one of the wonders of the world. His ſon Ptolemy Philadelphus proſecuted the ſame plan very vigorouſly. In his time the Indian commerce once more began to centre in Tyre; but to remove it effectually from thence, he formed a canal between Arſinoe on the Red Sea, not far from the place where Suez now ſtands, and the Peluſiac or eaſtern branch of the Nile. This canal was 100 cubits broad and 30 deep; ſo that by means of it the productions of India might have been conveyed to Alexandria entirely by water. We know not whether this work was ever finiſhed, or whether it was found uſeleſs on account of the dangerous navigation towards the northern extremity of the Red Sea; but whatever was the cauſe, it is certain that no uſe was made of it, and a new city named Berenice, ſituated almoſt under the tropic upon the weſtern ſhore of the Red Sea, became the ſtaple of Indian commerce. From thence the goods were tranſported by land to Coptos, a city diſtant only three miles from the Nile, to which it was joined by a navigable canal. Thus, however, there was a very tedious land-carriage of no leſs than 258 Roman miles through the barren deſart of Thebais; but Ptolemy cauſed diligent ſearch to be made every where for ſprings, and wherever theſe were found, he built inns or caravanſeras for the accommodation of travellers, and thus the commerce with India was carried on till Egypt became ſubject to the Romans. The ſhips during this period ſet ſail from Berenice, and coaſting along the Arabian ſhore to the promontory of Syagrus, now Cape Raſalgate, held their courſe along the coaſt of Perſia till they arrived at the mouth of the weſtern branch of the river Indus. They either ſailed up this branch till they came to Pattala, now Tatta, ſituated at the upper part of the Delta, or continued their courſe to ſome other emporium on the weſtern part of the Indian coaſt. A more convenient courſe was afterwards found by ſailing directly to Zizenis, a place concerning which there is now ſome diſpute. Monteſquieu will have it to be the kingdom of Sigertis, on the coaſt adjacent to the Indus, and which was conquered by the Bactrian monarchs; but Major Rennel is of opinion that it was a port on the Malabar coaſt. Dr Robertſon does not pretend to decide this diſpute; but is of opinion, that during the time of the Ptolemies very little progreſs was made in the diſcovery of India. He conteſts the opinion of Major Rennel, that "under the Ptolemies the Egyptians extended their navigation to the extreme point of the Indian continent, and even ſailed up the Ganges to Palibothra, now Patna." In this caſe he thinks that the interior parts of India muſt have been much better known to the ancients than we have any reaſon to believe they were. He owns indeed that Strabo mentions the ſailing up the Ganges, but then it is only curſorily and in a ſingle ſentence; "whereas if ſuch a conſiderable inland voyage of above 400 miles, through a populous and rich country, had been cuſtomary, or even if it had been ever performed by the Roman, Greek, or Egyptian traders, it muſt have merited a particular deſcription, and muſt have been mentioned by Pliny and other writers, as there was nothing ſimilar to it in the practice of navigation among the ancients."—The extreme danger of navigating the Red Sea in ancient times (which even in the preſent improved ſtate of navigation is not entirely got over) ſeems to have been the principal reaſon which induced Ptolemy to remove the communication with India from Arſinoe to Berenice, as there were other harbours on the ſame coaſt conſiderably nearer the Nile than it. After the ruin of Coptos by the emperor Diocleſian, the Indian commodities were conveyed from the Red Sea to the Nile from Coſſeir, ſuppoſed by Dr Robertſon to be the *Philoteras Portus* of Ptolemy, to Cous, the *Vicus Apollinis*, a journey of four days. Hence Cous from a ſmall village became an opulent city; but in proceſs of time, the trade from India removed from Cous to Kene, farther down the river. In modern times ſuch Indian goods as are brought by the Red Sea come from Gidda to Suez, and are carried acroſs the Iſthmus on camels, or brought by the caravans returning from the pilgrimage to Mecca.

17
Why the Syrian monarchs did not attempt to rival the Egyptians.

It was to this monopoly of Indian commerce that Egypt owed its vaſt wealth and power during the time of its Macedonian monarchs; but it appears ſurpriſing that no attempt was made by the Syrian monarchs to rival them in it, eſpecially as the latter were in poſſeſſion of the Perſian gulf, from whence they might have imported the Indian commodities by a much ſhorter navigation than could be done by the Egyptians. For this neglect ſeveral reaſons are aſſigned by our learned author. 1. The Egyptians, under their Greek monarchs, applied themſelves to maritime affairs; and were in poſſeſſion of ſuch a powerful fleet as gave them a decided ſuperiority at ſea. 2. No intercourſe by ſea was ever kept up betwixt Perſia and India, on account of the averſion which the Perſians had to maritime affairs. All the Indian commodities were then conveyed in the moſt tedious and difficult manner over land, and diſperſed throughout the various provinces, partly by means of navigable rivers and partly by means of the Caſpian ſea. 3. Many of the ancients, by an unaccountable error in geography, imagined the Caſpian ſea to be a part of the great northern ocean; and thus the kings of Syria might hope to convey the Indian commodities to the European countries without attempting to navigate thoſe ſeas which the Egyptian monarchs deemed their own property. Seleucus Nicator, the firſt and greateſt of the Syro-Macedonian monarchs, formed a project of joining the Euxine and Caſpian ſeas by a navigable canal, which would have effectually anſwered the purpoſe, but was aſſaſſinated before he could put it in execution, and none of his ſucceſſors had abilities to execute ſuch an undertaking. Alexander the Great had given orders, a little before his death, to fit out a ſquadron on the Caſpian ſea, in order to diſcover whether it had any communication with the northern ocean, the Euxine ſea, or Indian ocean; but Dr Robertſon juſtly thinks it ſurpriſing that ſuch errors concerning this ſea ſhould have exiſted among the ancients, as Herodotus had long before deſcribed it properly in the following words: "The Caſpian is a ſea by itſelf, unconnected with any other. Its length is as much as a veſſel with oars can ſail in 15 days; and its greateſt breadth as much as it can ſail in eight days." Ariſtotle deſcribes it in like manner, and inſiſts that it ought to be called a great lake, and not a ſea.

11
Intercourſe of the Romans with India.

On the conqueſt of Egypt by the Romans the Indian commodities continued as uſual to be imported to Alexandria in Egypt, and from thence to Rome; but beſides this, the moſt ancient communication betwixt the eaſtern and weſtern parts of Aſia ſeems never to have been entirely given up. Syria and Paleſtine are ſeparated from Meſopotamia by a deſart; but the paſſage through it was much facilitated by its affording a ſtation which abounded in water. Hence the poſſeſſion of this ſtation became an object of ſuch conſequence, that Solomon built upon it the city called in Syria *Tadmor*, and in the Greek *Palmyra*. Both theſe names are expreſſive of its ſituation in a ſpot adorned with palm-trees. Though its ſituation for trade may to us ſeem very unfavourable (being 60 miles from the Euphrates, by which alone it could receive the Indian commodities, and 203 from the neareſt coaſt of the Mediterranean,) yet the value and ſmall bulk of the goods in queſtion rendered the conveyance of them by a long carriage over land not only practicable but lucrative and advantageous. Hence the inhabitants became opulent and powerful, and long maintained its independence even after the Syrian empire became ſubject to Rome. After the reduction of Palmyra by the emperor Aurelian, however, it did not any more recover its ſplendor; the trade gradually turned into other channels, and the city was reduced to ruins, which ſtill exiſt, and manifeſt its former grandeur. See PALMYRA.

19
New route to India diſcovered by Hippalus.

The exceſſive eagerneſs of the Romans for Aſiatic luxuries of all kinds kept up an unceaſing intercourſe with India during the whole time that the empire continued in its power; and even after the deſtruction of the weſtern part, it was kept up betwixt Conſtantinople and thoſe parts of India which had been viſited formerly by merchants from the weſtern empire. Long before this period, however, a much better method of ſailing to India had been diſcovered by one Hippalus the commander of an Indian ſhip, who lived about 80 years after Egypt had been annexed to the Roman empire. This man having obſerved the periodical ſhifting of the monſoons, and how ſteadily they blew from the eaſt or weſt during ſome months ventured to leave the coaſt and, and ſail boldly acroſs the Indian ocean from the mouth of the Arabian gulf to Muſiris, a port on the Malabar coaſt; which diſcovery was reckoned a matter of ſuch importance, that the name of Hippalus was given to the wind by which he performed the voyage. Pliny gives a very particular account of the manner in which the Indian traffic was now carried on, mentioning the particular ſtages, and the diſtances between them, which are as follow. From Alexandria to Juliopolis was two miles; and there the cargo deſtined for India was ſhipped on the Nile, and carried to Coptos, diſtant 303 miles, the voyage being uſually performed in twelve days. From Coptos they were conveyed by land to Berenice, diſtant 258 miles, and halting at different ſtations as occaſion required. The journey was finiſhed on the 12th day: but by reaſon of the heat the caravan travelled only in the night. The ſhips left Berenice about midſummer, and in 30 days reached Ocelis, now *Gella*, at the mouth of the Arabian gulf, or Cane (now cape *Fartaque*) on the coaſt of Arabia Felix; from whence they ſailed in 40 days to Muſiris already mentioned. Their homeward voyage began early in the month of December; when ſetting ſail with a north-eaſt wind, and meeting with a ſouth or ſouth-weſt one when they entered the Arabian gulf, the voyage was completed in leſs than a year. With regard to the ſituation of Muſiris, as well as of Barace, another Indian port to which the ancients traded, Major Rennel is of opinion, and Dr Robertſon agrees with him, that they ſtood ſomewhere between Goa and Tellicherry; and that probably the modern Meerzaw or Merjee is the Muſiris, and Barcelore the Barace of the ancients.

22
Ptolemy's account of India.

Ptolemy, who flouriſhed about 200 years after the commencement of the Chriſtian æra, having the advantage of ſo many previous diſcoveries, gives a more particular deſcription of India than what is to be met with in any of the ancient writers; notwithſtanding which his accounts are frequently inconſiſtent not only with modern diſcoveries, but with thoſe of more ancient geographers than himſelf. A moſt capital error in his geography is, that he makes the peninſula of India ſtretch from the Sinus Barygazenus, or gulf of Cambay, from weſt to eaſt, inſtead of extending, according to its real direction, from north to ſouth; and this error muſt appear the more extraordinary, when we conſider that Megaſthenes had publiſhed a meaſurement of this peninſula nearly conſonant to truth, which had been adopted with ſome variations by Eratoſthenes, Srabo, Diodorus Siculus and Pliny. His information concerning the ſituation of places, however, was much more accurate. With reſpect to ſome diſtricts on the eaſtern part of the peninſula, as far as the Ganges, he comes nearer the truth than in his deſcription of any of the reſt. Theſe are particularly pointed out by M. D'Anville, who has determined the modern names of many of Ptolemy's ſtations, as Kilkare, Negapatam, the mouth of the river Cauveri, Maſulipatam, &c. The river Cauveri is the *Chabaris* of Ptolemy; the kingdom of Arcot, *Arcati Regio;* and probably, ſays Dr Robertſon, the whole coaſt has received its preſent name of Coromandel from *Sor Mandulam*, or the kingdom of Soræ, which is ſituated upon it. Ptolemy had likewiſe acquired ſo much knowledge concerning the river Ganges, that he deſcribes ſix of its mouths, though his delineation of that part of India which lies beyond the Ganges is hardly leſs erroneous than that of the nearer peninſula. M. D' Anville, however, has been at great pains to elucidate theſe matters, and to illuſtrate thoſe parts of the writings of Ptolemy which appear to be beſt founded. According to him, the golden Cherſoneſus of Ptolemy is the peninſula of Malacca; he ſuppoſes the gulf of Siam to be the great bay of Ptolemy; and the Sinæ Metropolis of the ſame writer he looks upon to be Sin-hoa in the weſtern part of the kingdom of Cochin-China, though Ptolemy has erred in its ſituation no leſs than 50 degrees of longitude and 20 of latitude. M. Goſſelin, however, differs from his countryman M. D'Anville, in a late work entitled "The Geography of the Greeks analyſed; or the ſyſtems of Eratoſthenes, Strabo, and Ptolemy, compared with each other, and with the knowledge which the moderns have acquired." In the opinion of M. Goſſelin, the Magnum Promontorium of Ptolemy is not Cape Romania at the ſouthern extremity of the peninſula of Malacca, as M. D' Anville ſuppoſes, but the point Bragu, at the mouth of the river Ava. The great bay of Ptolemy he ſuppoſes not to be the gulf of Siam, but of Martaban. He endeavours to prove that the poſition of Cattipnara, as laid down by Ptolemy, correſponds with that of Mergui, a ſea-port on the weſt of Siam; and that *Thinæ*, or *Sinæ Metropolis*, is not Sin-hoa, but Tana-ſerim, a city on the ſame river with Mergui; and he contends, that the Ibbadii inſula of Ptolemy is not Sumatra, as D' Anville would have it, but one of the ſmall iſles which lie in a cluſter off this coaſt. M. Goſſelin is of opinion that the ancients never ſailed through the ſtraits of Malacca, nor had any knowledge of the iſland of Sumatra, or of the eaſtern ocean.

The errors of Ptolemy have given occaſion to a miſtake of more modern date, viz. that the ancients were acquainted with China. This aroſe from the reſemblance betwixt the name of the empire and the *Sinæ* of the ancients. The Ayeen Akbery informs us, that *Cheen* was an ancient name of Pegu; whence, ſays Dr Robertſon, "as that country borders upon Ava, where M. Goſſelin places the great promontory, this near reſemblance of names may appear perhaps to confirm his opinion that Sinæ Metropolis was ſituated on this coaſt, and not ſo far eaſt as M. D'Anville has placed it."

21
Boundary of the navigation of the ancients.

Thus we ſee that the peninſula of Malacca was in all probability the boundary of the ancient diſcoveries by ſea; but by land they had correſpondence with countries ſtill farther diſtant. While the Seleucidæ continued to enjoy the empire of Syria, the trade with India continued to be caried on by land in the way already mentioned. The Romans having extended their dominions as far as the river Euphrates, found this method of conveyance ſtill eſtabliſhed, and the trade was by them encouraged and protected. The progreſs of the caravans being frequently interrupted by the Parthians, particularly when they travelled towards thoſe countries where ſilk and other of the moſt valuable manufactures were procured, it thence became an object to the Romans to conciliate the friendſhip of the ſovereigns of thoſe diſtant countries. That ſuch an attempt was actually made, we know from the Chineſe hiſtorians, who tell us, that *Antoun*, by whom they mean the Emperor Marcus Antoninus, the king of the people of the weſtern ocean, ſent an embaſſy to Ounti, who reigned in China in the 166th year of the Chriſtian era; but though the fact is mentioned, we are left entirely in the dark as to the iſſue of the negociations. It is certain, however, that during the times of the Romans ſuch a trade was carried on; and as we cannot ſuppoſe all thoſe who viſited that diſtant region to be entirely deſtitute of ſcience, we may reaſonably enough conclude, that by means of ſome of theſe adventurers, Ptolemy was enabled to determine the ſituation of many places which he has laid down in his geography, and which correſpond very nearly with the obſervations of modern times

22
Few Indian iſlands diſcovered by the ancients.

With regard to the Indian iſlands, conſidering the little way they extended their navigation, they could not be acquainted with many of them. The principal one was that of Ceylon, called by the ancients *Taprobane.* The name was entirely unknown in Europe before the time of Alexander the Great: but that conqueror, though he did not viſit, had ſome how or other heard of it; with regard to any particulars, however, he ſeems to have been very ſlenderly informed; and the accounts of ancient geographers concerning it are confuſed and contradictory. Strabo ſays, it is as large as Britain, and ſituated at the diſtance of ſeven days according to ſome reports, or 20 days ſailing according to others, from the ſouthern extremity of the peninſula. Pomponius Mela, is uncertain whether to conſider Taprobane as an iſland, or the beginning of another world; but inclines to the latter opinion, as nobody had ever ſailed round it. The account of Pliny is ſtill more obſcure; and by his deſcription he would make us believe, that it was ſeated in the ſouthern hemiſphere beyond the tropic of Capricorn. Ptolemy places it oppoſite to Cape Comorin, at no great diſtance from the continent; but errs greatly with regard to its magnitude, making it no leſs than 15 degrees in length from north to ſouth. And Agathemarus, who wrote after Ptolemy, makes Taprobane the largeſt iſland in the world, aſſigning the ſecond place to Britain. From theſe diſcordant accounts, ſome learned men have ſuppoſed that the Taprobane of the ancients is not Ceylon, as is generally believed, but the iſland of Sumatra; though the deſcription of it by Ptolemy, with the figure delineated in his maps, ſeems to put it beyond a doubt, that Ceylon, and not

Sumatra, is the iſland to which Ptolemy applies the deſignation of Taprobane. The other iſlands deſcribed by that geographer to the eaſtward of Taprobane, are, according to Dr Robertſon, thoſe called *Andaman* and *Nicobar* in the gulf of Bengal.

23
Voyages of Coſmas to India.

24
Silk worms introduced into Europe.

From the time of Ptolemy to that of the Emperor Juſtinian, we have no account of any intercourſe of the Europeans with India, or of any progreſs made in the geographical knowledge of the country. Under that emperor one Coſmas, an Egyptian merchant, made ſome voyages to India, whence he acquired the ſurname of *Indicopleuſtes*. Having afterwards turned monk, he publiſhed ſeveral works; one of which, named *Chriſtian Topography*, has reached us. In this, though mixed with many ſtrange reveries, he relates with great ſimplicity and appearance of truth what he had ſeen in his travels or had learned from others. He deſcribes ſeveral places on the weſtern coaſt of the hither peninſula, which he calls the chief ſeat of the pepper-trade; and from one of the ports on that coaſt named *Male*, Dr Robertſon thinks that the name *Malabar* may probably be derived, as well as that of *Maldives* given to a cluſter of iſlands lying at no great diſtance. Coſmas informs us alſo, that in his time the iſland of Taprobane had become a great ſtaple of trade. He ſuppoſed it to lie about half way betwixt the Perſian Gulf and the country of the Sinæ; in conſequence of which commodious ſituation it received the ſilk of the Sinæ, and the precious ſpices of the remote regions of the eaſt, which were from thence conveyed to all parts of India, Perſia, and the Arabian Gulf. He calls it not *Taprobane*, but *Sieldibia*, derived from *Selendib*, or *Serendib*, the ſame by which it is ſtill known all over the eaſt. From him alſo we learn, that the Perſians having overthrown the empire of the Parthians, applied themſelves with great diligence and ſucceſs to maritime affairs; in conſequence of which they became formidable rivals to the Romans in the India trade. The latter finding themſelves thus in danger of loſing entirely that lucrative branch, partly by reaſon of the rivalſhip juſt mentioned, and partly by reaſon of the frequent hoſtilities which took place betwixt the two empires, formed a ſcheme of preſerving ſome ſhare of the trade by means of their ally the emperor of Abyſſinia. In this they were diſappointed, though afterwards they obtained their end in a way entirely unexpected. This was by means of two monks who had been employed as miſſionaries in different parts of the eaſt, and had penetrated as far as the country of the Seres or China. From thence induced by the liberal promiſes of Juſtinian, they brought a quantity of the eggs of the ſilkworms in an hollow cane. They were then hatched by the heat of a dunghill; and being fed with the leaves of the mulberry, worked and multiplied as well as in thoſe countries of which they are natives. Vaſt numbers were ſoon reared in Greece; from whence they were exported to Sicily, and from thence to Italy; in all which countries ſilk-manufactures have ſince been eſtabliſhed.

25
Intercourſe of the Saracens with India.

26
Chineſe ignorant of the uſe of the mariner's compaſs.

On the conqueſt of Egypt by the Saracens in the year 640, the India trade was of courſe transferred to them; and they ſoon began to purſue it with much more vigour than the Romans had done. The city of Baſſora was built by the Khalif Omar upon the weſtern banks of the great river formed by the union of the Euphrates with the Tigris. Thus the command of both rivers was ſecured, and the new city ſoon became a place of ſuch conſequence as ſcarce to yield to Alexandria itſelf. Here Dr Robertſon takes notice, that from the evidence of an Arabian merchant who wrote in the year 851, it appears, that not only the Saracens, but the Chineſe alſo, were deſtitute of the mariner's compaſs; contrary to the general opinion, that this inſtrument was known in the eaſt long before it made its appearance in Europe. From this relation, as well as much concurring evidence, ſays our author, "it is manifeſt, that not only the Arabians but the Chineſe were deſtitute of this faithful guide, and that their mode of navigation was not more adventurous than that of the Greeks and Romans. They ſteered ſervilely along the coaſt, ſeldom ſtretching out to ſea ſo far as to loſe ſight of land; and as they ſhaped their courſe in this timid manner, their mode of reckoning was defective, and liable to the ſame errors with that of the Greeks and Romans." Notwithſtanding this diſadvantage, however, they penetrated far beyond Siam, which had ſet bounds to the navigation of the Europeans. They became acquainted with Sumatra and other India iſlands; extending their navigation as far as the city of Canton in China. A regular commerce was now carried on from the Perſian Gulf to all the countries lying betwixt it and China, and even with China itſelf. Many Saracens ſettled in India properly ſo called, and in the countries beyond it. In the city of Canton particularly, they were ſo numerous, that the emperor permitted them to have a cadi or judge of their own religion; the Arabian language was underſtood and ſpoken in every place of conſequence; and ſhips from China are even ſaid to have viſited the Perſian Gulf.

27
State of India when viſited by the Arabians.

According to the Arabian accounts of thoſe days, the peninſula of India was at that time divided into four kingdoms. The firſt was compoſed of the provinces ſituated on the Indus and its branches, the capital of which was Moultan. The ſecond had the city of Canoge, which, from the ruins of it remaining at this day, appears to have been a very large place. The Indian hiſtorians relate, that it contained 30,000 ſhops, in which betel-nut was ſold, and 60,000 ſets of muſicians and ſingers who paid a tax to government. The third kingdom was that of Cachemire, firſt mentioned by Maſſoudi, who gives a ſhort deſcription of it. The fourth kingdom, Guzerat, repreſented by the ſame author as the moſt powerful of the whole. Another Arab writer, who flouriſhed about the middle of the 14th century, divides India into three parts; the northern, comprehending all the provinces on the Indus; the middle extending from Guzerat to the Ganges; and the ſouthern, which he denominates Comar, from Cape Comorin.

From the relation of the Arabian merchant abovementioned, explained by the commentary of another Arabian who had likewiſe viſited the eaſtern parts of Aſia, we learn many particulars concerning the inhabitants of theſe diſtant regions at that time, which correſpond with what is obſerved among them at this day. They take notice of the general uſe of ſilk among the Chineſe; and the manufacture of porcelain, which they compare to glaſs. They alſo deſcribe the tea plant, with the manner of uſing its leaves; whence it appears, that in the ninth century the uſe of this plant in China was as common as it is at preſent. They mention likewiſe the great progreſs which the Indians had made in aſtronomy; a circumſtance which ſeems to have been unknown to the Greeks and Romans: they aſſert that in this branch of ſcience the Indians were far ſuperior to the moſt enlightened nations of the weſt, on which account their ſovereign was called the "King of wiſdom." The ſuperſtitions, extravagant penances, &c. known to exiſt at this day among the Indians, are alſo mentioned by thoſe writers; all which particulars manifeſt that the Arabians had a knowledge of India far ſuperior to that of the Greeks or Romans. The zeal and induſtry of the Mohammedans in exploring the moſt diſtant regions of the eaſt was rivalled by the Chriſtians of Perſia, who ſent miſſionaries all over India and the countries adjoining, as far as China itſelf. But while the weſtern Aſiatics thus kept up a conſtant intercourſe with theſe parts, the Europeans had in a manner loſt all knowledge of them. The port of Alexandria, from which they had formerly been ſupplied with the Indian goods was now ſhut againſt them; and the Arabs, ſatiſfied with ſupplying the demands of their own ſubjects, neglected to ſend any by the uſual channels to the towns on the Mediterranean. The inhabitants of Conſtantinople and ſome other great towns were ſupplied with Chineſe commodities by the moſt tedious and difficult paſſage imaginable. The ſilk of that country was purchaſed in the moſt weſterly province named Chenſi; from thence it was conveyed by a caravan, which marched 80 or 100 days, to the banks of the Oxus. Here it was embarked, and carried down the river to the Caſpian ſea; whence, after a dangerous voyage acroſs that ſea, it was carried up the river Cyrus as far as that river is navigable; after which it was conducted by a land-carriage of five days to the river Phaſis, then down that ſtream into the Euxine, and thence to Conſtantinople. The paſſage of goods from Hindoſtan was leſs tedious; they being carried either directly to the Caſpian or to the river Oxus, but by a paſſage much ſhorter than that from China; after which they were conveyed down the Phaſis to the Euxine, and thus to Conſtantinople.

28
Tedious paſſage of Indian goods to Europe.

It is evident that a commerce thus carried on muſt have been liable to a thouſand diſadvantages. The goods conveyed over ſuch vaſt tracts of land could not be ſold but at a very high price, even ſuppoſing the journey had been attended with no danger; but as the caravans were continually expoſed to the aſſaults of barbarians, it is evident that the price muſt on that account have been greatly enhanced. In ſpite of every difficulty, however, even this commerce flouriſhed, and Conſtantinople became a conſiderable mart for Eaſt Indian commodities; and from it all the reſt of Europe was chiefly ſupplied with them for more than two centuries. The perpetual courſe of hoſtilities in which the Chriſtians and Mohammedans were during this period engaged, contributed ſtill to increaſe the difficulty; and it is remarkable, that the more this difficulty increaſed, the more deſirous the Europeans ſeemed to be of poſſeſſing the luxuries of Aſia.

About this time the cities of Amalphi and Venice, with ſome others in Italy, having acquired a greater degree of independence than they formerly poſſeſſed, began firſt to exert themſelves in promoting domeſtic manufactures, and then to import the productions of India in much larger quantities than formerly. Some traces of this revival of a commercial ſpirit, according to Dr Robertſon, may be obſerved from the end of the ſeventh century. The circumſtances which led to this revival, however, are entirely unnoticed by hiſtorians: but during the ſeventh and eighth centuries, it is very probable that no commercial intercourſe whatever took place betwixt Italy and Alexandria; for, prior to the period we ſpeak of, all the public deeds of the Italian and other cities of Europe had been written upon paper made of the Egyptian papyrus, but after that upon parchment.

29
Effect of the Cruſades on the Indian commerce.

The mutual antipathy which the Chriſtians and Mohammedans bore againſt each other, would no doubt for a long time retard the progreſs of commerce between them; but at laſt the khaliffs, perceiving the advantage which ſuch a traffic would be of to their ſubjects, were induced to allow it, while the eagerneſs with which the Chriſtians coveted the Indian products and manufactures, prompted them to carry it on. But ſcarce was the traffic begun, when it ſeemed in danger of being totally interrupted by the cruſades. Notwithſtanding the enthuſiaſtical zeal of theſe adventurers, however, there were many to whom commerce was a greater object than religion. This had always been the caſe with numbers of the pilgrims who viſited the holy places at Jeruſalem even before the commencement of the cruſades: but theſe, after they took place, inſtead of retarding the progreſs of this kind of commerce, proved the means of promoting it to a great degree. "Various circumſtances (ſays Dr Robertſon) concurred towards this. Great armies, conducted by the moſt illuſtrious nobles of Europe, and compoſed of men of the moſt enterpriſing ſpirit in all the kingdoms of it, marched towards Paleſtine, through countries far advanced beyond thoſe which they left in every ſpecies of improvement. They beheld the dawn of proſperity in the republics of Italy, which had begun to vie with each other in the arts of induſtry, and in their efforts to engroſs the lucrative commerce with the eaſt. They next admired the more advanced ſtate of opulence and ſplendor in Conſtantinople, raiſed to a pre-eminence above all cities then known by its extenſive trade, particularly that which it carried on with India and the countries beyond it. They afterwards ſerved in thoſe provinces of Aſia through which the commodities of the eaſt were uſually conveyed, and became maſters of ſeveral cities which had been ſtaples of that trade. They eſtabliſhed the kingdom of Jeruſalem, which ſubſiſted near 200 years. They took poſſeſſion of the throne of the Greek empire, and governed it above half a century. Amidſt ſuch a variety of events and operations, the ideas of the fierce warriors of Europe gradually opened and improved; they became acquainted with the policy and arts of the people whom they ſubdued; they obſerved the ſources of their wealth, and availed themſelves of all this knowledge. Antioch and Tyre, when conquered by the cruſaders, were flouriſhing cities inhabited by opulent merchants, who ſupplied all the nations trading in the Mediterranean with the productions of the eaſt; and, as far as can be gathered from incidental occurrences mentioned by the hiſtorians of the holy war, who being moſtly prieſts and monks, had their attention directed to objects very different from thoſe relating to commerce, there is reaſon to believe, that both in Conſtantinople while ſubject to the Franks, and in the ports of Syria acquired by the Chriſtians, the long-eſtabliſhed trade with the eaſt continued to be protected and encouraged."

Our author next goes on to ſhow in what manner the commerce of the Italian ſtates was promoted by the Cruſades, until at laſt, having entirely engroſſed the Eaſt India trade, they ſtrove with ſuch eagerneſs to find new markets for their commodities, that they extended a taſte for them to many parts of Europe where they had formerly been little known. The rivalſhip of the Italian ſtates terminated at laſt in a treaty with the ſultan of Egypt in 1425, by which the port of Alexandria and others in Egypt were opened to the Florentines as well as the Venetians; and ſoon after, that people began to obtain a ſhare in the trade to India,

30
How the Indian trade was carried on in the 14th century.

The following account of the manner in which the India trade was carried on in the beginning of the 14th century, is given by Marino Sanudo a Venetian nobleman. The merchants of that republic were ſupplied with the commodities they wanted in two different ways. Thoſe of ſmall bulk and great value, ſuch as cloves, nutmegs, gems, pearls, &c. were carried up the Perſian gulf to Baſſora, from thence to Bagdad, and afterwards to ſome port on the Mediterranean. The more bulky goods, ſuch as pepper, cinnamon, and other ſpiceries, were brought in the uſual manner to the Red Sea, and from thence to Alexandria. The goods brought by land, however, were always liable to be ſeized by barbarians; and therefore the ſupply that way was ſcanty, and the price extravagantly dear, while, on the other hand, the Sultan of Egypt, by impoſing duties upon the Eaſt India cargoes to the amount of a full third of the value, ſeemed to render it impoſſible that the owners ſhould find purchaſers for their goods. This, however, was far from being the caſe; the demand for India goods continually increaſed; and thus a communication, formerly unknown, betwixt all the nations of Europe, was begun and kept up. All this time, however, there had been no direct communication betwixt Europe and India, as the Mohammedans would never allow any Chriſtian to paſs through their dominions into that country. The dreadful incurſions and conqueſts the Tartars under Jenghiz-khan, however, had ſo broken the power of the Mohammedans in the northern parts of Aſia, that a way was now opened to India through the dominions of theſe barbarians.

31
Journey of Marco Polo into the Eaſt.

About the middle of the 13th century, therefore Marco Polo, a Venetian, by getting acceſs to the khan of the Tartars, explored many parts of the Eaſt which had long been unknown even by name to the Europeans. He travelled through China from Peking on its northern frontier to ſome of its moſt ſoutherly provinces. He viſited alſo different parts of Hindoſtan, and firſt mentions Bengal and Guzerat by their modern names as great and flouriſhing kingdoms. He obtained alſo ſome account of an iſland which he called *Zipangri*, and was probably no other than Japan; he viſited Java with ſeveral of the iſlands in its neighbourhood, the iſland of Ceylon, and the coaſt of Malabar as far as the gulf of Cambay; to all which he gave the names they have at this day.

32
Genoeſe trade to India ruined by the taking of Conſtantinople.

The diſcovery of ſuch immenſe regions unknown before in Europe, furniſhed vaſt room for ſpeculation and conjecture; and while the public attention was yet engaged by theſe diſcoveries, the deſtruction of Conſtantinople by the Turks gave a very conſiderable turn to the Eaſt India commerce, by throwing it almoſt entirely into the hands of the Venetians. Hitherto the Genoeſe had rivalled that ſtate in the commerce we ſpeak of, and they had poſſeſſed themſelves of many important places on the coaſt of Greece, as well as of the port of Caffa on the Black Sea. Nay, they had even eſtabliſhed themſelves at Conſtantinople, in the ſuburb of Pera, in ſuch a manner as almoſt entirely to exclude the Greeks themſelves from any ſhare in this commerce: but by the deſtruction of Conſtantinople they were at once driven out of all theſe poſſeſſions, and ſo thoroughly humbled, that they could no longer contend with the Venetians as before; ſo that, during the latter part of the 15th century, that republic ſupplied the greater part of Europe with the productions of the eaſt, and carried on trade to an extent far beyond what had been known in former times. The mode in which they now carried on this trade was ſomewhat different from what had been practiſed by ancient nations. The Tyrians, Greeks, and Romans, had ſailed directly to India in queſt of the commodities they wanted; and their example has been imitated by the navigators of modern Europe. In both periods the Indian commodities have been paid for in gold and ſilver; and great complaints have been made on account of the drain of thoſe precious metals, which were thus buried as it were in India, never to return again.

33
Immenſe wealth of the Venetians ariſing from their Indian commerce.

The Venecians, however, were exempted from this loſs; for having no direct intercourſe with India, they ſupplied themſelves from the warehouſes they found in Egypt and Syria, ready filled with the precious commodities they wanted: and theſe they purchaſed more frequently by barter than with ready money. Thus not only the republic of Venice, but all the cities which had the good fortune to become emporia for the India goods imported by it, were raiſed to ſuch a pitch of power and ſplendor as ſcarce ever belonged to any European ſtate. The citizens of Bruges, from which place the other European nations were for a long time ſupplied with theſe goods, diſplayed ſuch magnificence in their dreſs, buildings, and manner of living, as excited even the envy of their queen Joan of Navarre who came to pay them a viſit. On the removal of the ſtaple from Bruges to Antwerp, the latter ſoon diſplayed the ſame opulence: and in ſome cities of Germany, particularly Augſburg, the great mart for Indian commodities in the internal parts of that country, there are examples of merchants acquiring ſuch large fortunes as intitled them to high rank and conſideration in the empire.

34
High intereſt of money in the 15th century.

The moſt accurate method, however, of attaining ſome knowledge of the profits the Venetians had on their trade, is by conſidering the rate of intereſt on money borrowed at that time. This, from the cloſe of the 11th century to the commencement of the 16th, we are told, was no leſs than 20 *per. cent.* and ſometimes more. Even as late as 1500, it was 10 or 12 in every part of Europe. Hence we are to conclude that the profits of ſuch money as was then applied in trade muſt have been extremely high; and the condition of the inhabitants of Venice at that time warrants us to make the concluſion. "In the magnificence of their houſes (ſays Dr Robertſon), in richneſs of furniture, in profuſion of plate, and in every thing which contributed either towards elegance or parade in their mode of living, the nobles of Venice ſurpaſſed the ſtate of the greateſt monarch beyond the Alps. Nor was all this diſplay the effect of an oſtentatious and inconſiderate diſſipation; it was the natural conſequence of ſucceſsful induſtry, which, having accumulated wealth with eaſe, is intitled to enjoy it in ſplendor."

This exceſſive ſuperiority of wealth diſplayed by the Venetians could not fail to excite the envy of the other ſtates of Europe. They were at no loſs to diſcover that the Eaſt India trade was the principal ſource from whence their wealth was derived. Some of them endeavoured to obtain a ſhare by applying to the ſultans of Egypt and Syria to gain admiſſion into their ports upon the ſame terms with the Venetians; but either by the ſuperior intereſt of the latter with thoſe princes, or from the advantages they had of being long eſtabliſhed in the trade, the Venetians always prevailed. So intent indeed were the other European powers in obtaining ſome ſhare of this lucrative commerce, that application was made to the ſovereign of Ruſſia to open an intercourſe by land with China, though the capitals of the two empires are upwards of 6000 miles diſtant from each other. This, however, was beyond the power of the Ruſſian prince at that time; and the Venetians imagined that their power and wealth were fully eſtabliſhed on the moſt permanent baſis, when two events, altogether unforeſeen and unexpected, gave it a mortal blow, from which it never has recovered, or can recover itſelf. Theſe were the diſcovery of America and that of the paſſage to the Eaſt Indies by the Cape of Good Hope. The former put Spain in poſſeſſion of immenſe treaſures; which being gradually diffuſed all over Europe, ſoon called forth the induſtry of other nations, and made them exert themſelves in ſuch a manner as of itſelf muſt have ſoon leſſened the demand for Indian productions. The diſcovery of the paſſage to India by the Cape of Good Hope, however, was the moſt effectual and ſpeedy in humbling the Venetians. After a tedious courſe of voyages along the weſtern coaſt of Africa, continued for near half a century, Vaſco de Gama, an active and enterpriſing Portugueſe officer, doubled the Cape of Good Hope, and, coaſting along the eaſtern ſhore of the continent, ſailed next acroſs the Indian ocean, and landed at Calecut on the coaſt of Malabar, on the 22d of May 1498, ten months, and two days after leaving the port of Liſbon. On his arrival in India he was at firſt received with great kindneſs by the ſovereign of that country, ſtyled the *Samorin;* but afterwards, from what cauſes we cannot now well determine, the Indian prince ſuddenly changed his kindneſs into mortal enmity, and attempted to cut off Gama with his whole party. The Portugueſe general, however, found means to eſcape every plot that was laid againſt him; and loaded his ſhips not only with the products of that part of the country, but with many of the valuable products of the more remote regions.

35
The Venetian trade ruined by the diſcovery of the Cape of Good Hope.

36
Exploits of the Portugueſe in India.

On his return to Portugal, De Gama was received with all imaginable demonſtrations of kindneſs. The Portugueſe nation, nay all the nations in Europe, the Venetians alone excepted, rejoiced at the diſcovery which had been made. The latter beheld in it the certain and unavoidable downfal of their own power; while the Portugueſe, preſuming upon their right of prior diſcovery, which they took care to have confirmed by a papal grant, plumed themſelves on the thoughts of having the whole Indian commerce centre in their nation. The expectations of the one, and the apprehenſions of the other, ſeemed at firſt to be well-founded. A ſucceſſion of gallant officers ſent into the eaſt from Portugal accompliſhed the greateſt and moſt arduous undertakings. In 24 years after the voyage of De Gama, they had made themſelves maſters of many important places in India; and among the reſt of the city of Malacca, where the great ſtaple of trade throughout the whole Eaſt Indies was eſtabliſhed. As this city ſtands nearly at an equal diſtance from the eaſtern and weſtern extremities of all the countries comprehended under the name of *Indies*, it was frequented by the merchants of China, Japan, of all the kingdoms on the continent, the Moluccas and other iſlands in that quarter, as well as by thoſe of Malabar, Ceylon, Coromandel, and Bengal. Thus the Portugueſe acquired a moſt extenſive influence over the internal commerce of India; while, by the ſettlements they had formed at Goa and Diu, they were enabled to engroſs the trade on the Malabar coaſt, and greatly to obſtruct the long eſtabliſhed intercourſe of Egypt with India by the way of the Red Sea. Their ſhips now frequented every port in the eaſt where any valuable commodities were to be had, from the cape of Good Hope to the river of Canton in China; and all along this immenſe extent of more than 4000 leagues, they had a chain of forts and factories eſtabliſhed for the convenience of protecting their trade. They had likewiſe made themſelves maſters of ſeveral ſtations favourable to commerce along the ſouthern coaſt of Africa, and in many iſlands lying between Madagaſcar and the Moluccas. In all places where they came, their arms had ſtruck ſuch terror, that they not only carried on their trade without any rival or control, but even preſcribed to the natives the terms of their mutual intercourſe; nay, ſometimes they ſet what price they pleaſed upon the commodities they purchaſed, and thus were enabled to import into Europe the Indian commodities in greater abundance and at a lower rate than had ever been done before. Not ſatisfied with this, they formed a ſcheme of excluding all other nations from any ſhare of the trade they enjoyed: and for that purpoſe determined to make themſelves maſters of ſuch ſtations on the Red Sea and Perſian Gulf as might put them in poſſeſſion of the navigation of both theſe ſeas, and enable them not only to obſtruct the ancient commerce between Egypt and India, but to command the mouths of the great rivers which we have formerly mentioned as the means of conveying the Indian goods through the internal parts of Aſia. The conduct of theſe enterpriſes was committed to Alphonſo Albuquerque, the moſt diſtinguiſhed officer at that time in the Portugueſe ſervice. By reaſon of the vaſt number of the enemies he had to contend with, however, and the ſcanty ſupplies which could be derived from Portugal, he could not fully accompliſh what was expected from him. However, he took from the petty princes who were tributaries to the kings of Perſia the ſmall Iſland of Ormus, which commanded the mouth of the Perſian Gulf; and thus ſecured to Portugal the poſſeſſion of that extenſive trade with the eaſt which the Perſians had carried on for ſeveral centuries. On this barren iſland, almoſt entirely covered with ſalt, and ſo hot that the climate can ſcarcely be borne, deſtitute of a drop of freſh water, except what was brought from the continent, a city was erected by the Portugueſe, which ſoon became one of the chief ſeats of opulence, ſplendor, and luxury, in the eaſtern world. In the Red Sea the Arabian princes made a much more formidable reſiſtance; and this, together with the damage his fleet ſuſtained in that ſea, the navigation of which is always difficult and dangerous, obliged Albuquerque to retire without effecting any thing of importance. Thus the ancient channel of conveyance ſtill remained open to the Egyptians; but their commerce was greatly circumſcribed and obſtructed by the powerful intereſt of the Portugueſe in every port to which they had been accuſtomed to reſort.

37
Ineffectual ſtruggles of the Venetians to retrieve their affairs.

The Venetians now began to feel thoſe effects of De Gama's diſcovery which they had dreaded from the beginning. To preſerve the remains of their commerce, they applied to the ſultan of the Mameluks in Egypt, who was no leſs alarmed than themſelves at the loſs of ſuch a capital branch of his revenue as he had been accuſtomed to derive from the India trade. By them this fierce and barbarous prince was eaſily perſuaded to ſend a furious manifeſto to Pope Julius II. and Emmanuel king of Portugal. In this, after ſtating his excluſive right to the Indian trade, he informed them, that if the Portugueſe did not relinquiſh that new courſe of navigation by which they had penetrated into the Indian ocean, and ceaſe from encroaching on that commerce which from time immemorial had been carried on between the eaſt of Aſia and his dominions, he would put to death all the Chriſtians at Egypt, Syria, and Paleſtine, and demoliſh the holy ſepulchre itſelf. To this threat which ſome centuries before would have alarmed all Chriſtendom, no regard was paid; ſo that the Venetians, as their laſt reſource, were obliged to have recourſe to a different expedient. This was to excite the ſultan to fit out a fleet in the Red Sea to attack the Portugueſe, and drive them from all their ſettlements in the eaſt; nay, in order to aſſiſt him in the enterpriſe, he was allowed to cut down their foreſts in Dalmatia, to ſupply the deficiency of Egypt in timber for ſhip-building. The timber was conveyed from Dalmatia to Alexandria; and from thence, partly by water and partly by land, to Suez; where twelve men of war were built, on board which a body of Mameluks were ordered to ſerve under the command of an experienced officer. Thus the Portugueſe were aſſaulted by a new enemy far more formidable than any they had yet encountered; yet ſuch was the valour and conduct of the admiral, that after ſeveral ſevere engagements, the fleet of the infidels was entirely ruined, and the Portugueſe became abſolute maſters of the Indian ocean.

This diſaſter was followed in no long time by the total overthrow of the dominion of the Mameluks in Egypt by Selim the Turkiſh ſultan; who thus alſo became maſter of Syria and Paleſtine. As his intereſt was now the ſame with that of the Venetians, a league was quickly formed betwixt them for the ruin of the power of the Portugueſe in India. With this view Selim confirmed to the Venetians the extenſive commercial privileges they enjoyed under the government of the Mameluks; publiſhing at the ſame time an edict, by which he permitted the free entry of all the productions of the eaſt imported directly from Alexandria into any part of his dominions, but impoſed heavy taxes upon ſuch as were imported from Liſbon. All this, however, was inſufficient to counteract the great advantages which the Portugueſe had obtained by the new paſſage to India, and the ſettlements they had eſtabliſhed in that country; at the ſame time that the power of the Venetians being entirely broken by the league of Cambray, they were no longer able to contribute any aſſiſtance. They were therefore reduced to the neceſſity of making an offer to the king of Portugal to purchaſe all the ſpices imported into Liſbon, over and above what might be requiſite for the conſumption of his own ſubjects. This offer being rejected, the Portugueſe for ſome time remained uncontrolled maſters of the Indian trade, and all Europe was ſupplied by them, excepting ſome very inconſiderable quantity which was imported by the Venetians through the uſual channels.

38
Why the Portugueſe trade was not interrupted by other European powers.

The Portugueſe continued to enjoy this valuable branch of commerce undiſturbed almoſt for a whole century; for which, however, they were indebted more to the political ſituation of the different European nations than to their own prowefs. After the acceſſion of Charles V. to the throne of Spain, that kingdom was either ſo much engaged in a multiplicity of operations, owing to the ambition of that monarch and his ſon Philip II. or ſo intent on proſecuting the diſcoveries and conqueſts in the new world, that no effort was made to interfere with the Eaſt India trade of the Portugueſe, even though an opportunity offered by the diſcovery of a ſecond paſſage by ſea to the Eaſt Indies through the ſtraits of Magellan. By the acquiſition of the crown of Portugal in 1580, Spain, inſtead of becoming the rival, became the protector and guardian of the Portugueſe trade. The reſources of France all this time were ſo much exhauſted by a continuance of long and deſolating wars, that it could beſtow neither much attention on objects at ſuch a diſtance, nor engage in any expenſive ſcheme. England was deſolated by the ruinous wars between the houſes of York and Lancaſter; and afterwards its enterpriſing ſpirit was reſtrained by the cautious and covetous Henry VII. His ſon Henry VIII. in the former part of his reign, by engaging in the continental quarrels of the European princes, and in the latter part by his quarrel with the pope and conteſts about religion, left no time for commercial ſchemes. It was not therefore till the reign of Queen Elizabeth that any attention was paid to the affairs of the Eaſt by that kingdom. The firſt who ſhook the power of the Portugueſe in India were the Dutch; and in this they were gladly ſeconded by the natives, whom the Portugueſe had moſt grievouſly oppreſſed. The Engliſh ſoon followed their example; and in a few years the Portugueſe were expelled from their moſt valuable ſettlements, while the moſt lucrative branches of their trade have continued ever ſince in the hands of thoſe two nations.

39 Rivalſhip of the French and Engliſh in the Eaſt Indies.

40 Engliſh ſettlements in India.

It is not to be ſuppoſed that the other European nations would ſit ſtill and quietly ſee theſe two engroſs the whole of this lucrative commerce without attempting to put in for a ſhare. Eaſt India companies were therefore ſet up in different countries: but it was only between France and Britain that the great rivalſhip commenced; nor did this fully diſplay itſelf till after the peace of Aix la Chapelle. Both nations had by this time made themſelves maſters of conſiderable ſettlements in India. The principal of thoſe belonging to Britain were, 1. Surat, ſituated on the weſtern ſide of the peninſula within the Ganges, between the 21ſt and 22d degrees of N. Lat. This peninſula comprehended the kingdoms of Malabar, Decan, Golconda, and Biſnagar, with the principalities of Gingi, Tanjour, and Madura; the weſtern coaſt being diſtinguiſhed by the name of Malabar, and the eaſtern by that of Coromandel. 2. Bombay, a ſmall iſland in the kingdom of Decan, about 45 leagues to the ſouth of Surat. 3. Dubal, about 40 leagues farther to the ſouth, in the province of Cuncan. 4. Carwar, in N. Lat. 15°, where there was a ſmall fort and factory. 5. Tillicherry, to which place the Engliſh trade was removed from Calecut, a large town 15 leagues to the ſouthward. 6. Anjengo, between eight and nine degrees of latitude, the moſt ſoutherly ſettlement on the weſtern coaſt of the peninſula. 7. On the Coromandel coaſt they poſſeſſed Fort St David's, formerly called Tegapatan, ſituated in the kingdom of Gingi, in 11° 40′ N. Lat. 8. Madras, the principal ſettlement on this coaſt, between 13° and 14° N. Lat. not far from the diamond mines of Golconda. 9. Viſigapatam, farther to the north. 10. Balaſore, in latitude 22°, a factory of ſmall conſequence. 11. Calcutta the capital of all the Britiſh ſettlements in the Eaſt Indies. Theſe were the principal places belonging to Britain which we ſhall have occaſion to mention in the account of the conteſts which now took place; thoſe of the French were chiefly Pondicherry and Chandernagore.

41 Origin of the Eaſt Indian war betwixt the French and Engliſh in 1747.

The war is ſaid to have been firſt occaſioned by the intrigues of the French commandant M. Dupleix; who, immediately after the peace of Aix-la-Chapelle, began to ſow diſſenſion among the nabobs, who had by this time uſurped the ſovereignty of the country. Nizam Almuluk, viceroy of Decan, and nabob of Arcot, had, as officer for the Mogul, nominated Anaverdy Khan to be governor of the Carnatic, in the year 1745. On the death of Nizam, his ſecond ſon Nazir-zing was appointed to ſucceed him in his viceroyalty, and his nomination was confirmed by the Mogul. He was oppoſed by his couſin Muzaphier-zing, who applied to Dupleix for aſſiſtance. By him he was ſupplied with a body of Europeans and ſome artillery; after which, being alſo joined by Chunda Saib, an active Indian prince, he took the field againſt Nazir-zing. The latter was ſupported by a body of Britiſh troops under Colonel Laurence; and the French, dreading the event of an engagement, retired in the night; ſo that their ally was obliged to throw himſelf on the clemency of Nazir-zing. His life was ſpared, though he himſelf was detained as a ſtate priſoner: but the traitor, forgetting the kindneſs ſhowed him on this occaſion, entered into a conſpiracy againſt the life of Nazir-zing, and murdered him in his camp; in which infamous tranſaction he was encouraged by Dupleix and Chunda Saib, who had retired to Pondicherry. Immenſe riches were found in the tents of Nazir-zing, great part of which fell to the ſhare of Dupleix, whom Muzapher-zing now aſſociated with himſelf in the government. By virtue of this aſſociation the Frenchman aſſumed the ſtate and formalities of an eaſtern prince; and he and his colleague Muzapher-zing appointed Chunda Saib nabob of Arcot. In 1749, Anaverdy Khan had been defeated and killed by Muzapher-zing and Chunda Saib, aſſiſted by the French; after which his ſon Mohammed Ali Khan had put himſelf under the protection of the Engliſh at Madras, and was confirmed by Nazir-zing as his father's ſucceſſor in the nabobſhip or government of Arcot. This government therefore was diſputed betwixt Mohammed Ali Khan, appointed by the legal viceroy Nazir-zing, and ſupported by the Engliſh company, and Chunda Saib nominated by the uſurper Muzapher-zing, and protected by Dupleix, who commanded at Pondicherry. Muzapher-zing, however, did not long enjoy his ill-got authority; for in the year 1751, the nabobs who had been the means of raiſing him to the power he enjoyed, thinking themſelves ill rewarded for their ſervices, fell upon him ſuddenly, defeated his forces, and put him to death; proclaiming Salabat-zing next day viceroy of the Decan. On the other hand, the Mogul appointed Gauzedy Khan, the elder brother of Salabat-zing; who was confirmed by Mohammed Ali Khan in the government of Arcot: but the affairs of the Mogul were at that time in ſuch diſorder that he could not with an army ſupport the nomination he had made. Chunda Saib in the mean time determined to recover by force the nabobſhip of Arcot, from which he had been depoſed by the Mogul, who had placed Anaverdy Khan in his room. With this view he had recourſe to Dupleix at Pondicherry, who reinforced him with 2000 Sepoys, 60 *Caffrees*, and 420 French; upon condition that if he ſucceeded, he ſhould cede to the French the town of Velur in the neighbourhood of Pondicherry, with its dependencies, conſiſting of 45 villages. Thus reinforced, he defeated Anaverdy Khan who loſt his life in the engagement, reaſſumed the government of Arcot, and punctually performed the engagements he had come under to his French allies.

42 Mr Clive's firſt appearance in a military capacity.

All this time Mohammed Ali Khan had been ſupported by the Engliſh, to whom he fled after his father's death. By them he was ſupplied with a reinforcement of men, money, and ammunition, under the conduct of Major Laurence, a brave and experienced officer. By means of this ſupply he gained ſome advantages over the enemy; and repairing afterwards to Fort St David's, he obtained a farther reinforcement. With all this aſſiſtance, however, he accompliſhed nothing of any moment; and the Engliſh auxiliaries having retired, he was defeated by his enemies. Thus he was obliged to enter into a more cloſe alliance with the Engliſh, and cede to them ſome commercial points which had been long in diſpute; after which, Captain Cope was diſpatched to put Trinchinopoli in a ſtate of defence, while captain de Gingis, a Swiſs officer, marched at the head of 400 Europeans to the aſſiſtance of the nabob. On this occaſion Mr Clive firſt offered his ſervice in a military capacity. He had been employed before as a writer, but appeared very little qualified for that or any other department in civil life. He now marched toward Arcot at the head of 210 Europeans and 500 ſepoys. In his firſt expedition he diſplayed at once the qualities of a great commander. His movements were conducted with ſuch ſecrecy and diſpatch, that he made himſelf maſter of the enemies capital before they knew of his march; and gained the affections of the people by his generoſity, in affording protection without ranſom.

43 His bravery and ſucceſs.

In a ſhort time, however, he found himſelf inveſted in Fort St David's by Rajah Saib, ſon to Chunda Saib, an Indian Chief, pretender to the nabobſhip of Arcot, at the head of a numerous army; the operations of the ſiege being conducted by European engineers. Thus in ſpite of his utmoſt efforts two practicable breaches were made, and a general aſſault given; but Mr Clive having got intelligence of the intended attack, defended himſelf with ſuch vigour, that the aſſailants were every where repulſed with loſs, and obliged to raiſe the ſiege with the greateſt precipitation. Not contented with this advantage, Mr Clive, being reinforced by a detachment from Trinchinopoli, marched in queſt of the enemy; and having overtaken them in the plains of Arani, attacked and entirely defeated them on the 3d of December 1751.

This victory was followed by the ſurrender of the forts of Timery, Conjaveram, and Arani; after which Mr Clive returned in triumph to Fort St David's. In the beginning of the year 1752 he marched towards Madras, where he was reinforced by a ſmall body of troops from Bengal. Though the whole did not exceed 300 Europeans, with as many natives as were ſufficient to give the appearance of an army, he boldly proceeded to a place called *Koveripauk*, about 15 miles from Arcot, where the enemy lay to the number of 1500 Sepoys, 1700 horſe, with 150 Europeans, and eight pieces of cannon. Victory was long doubtful, until Mr Clive having ſent round a detachment to fall upon the rear of the enemy while the Engliſh attacked the entrenchments in front with their bayonets, a general confuſion enſued, the enemy were routed with conſiderable ſlaughter, and only ſaved from total deſtruction by the darkneſs of the night. The French to a man threw down their arms, and ſurrendered themſelves priſoners of war; all the baggage and cannon falling at the ſame time into the hands of the victors.

44 His exploits under Major Lauren

On the return of Mr Clive to Fort St David's, he was ſuperſeded in the command by Major Lawrence. By him he was detached with 400 Europeans, a few Mahratta ſoldiers, and a body of Sepoys, to cut off the enemy's retreat to Pondicherry. In this enterpriſe he was attended with his uſual good ſucceſs, took ſeveral forts, vanquiſhed the French commander M. d'Anteuil, and obliged him with all his party to ſurrender priſoners of war.

45 Death of Chunda Saib.

Chunda Saib, in the mean time, lay encamped with an army of 30,000 men at Syringham, an iſland in the neighbourhood of Trinchinopoli; but Major Lawrence having found means to intercept his proviſions, he was obliged to fly. Being obliged to paſs through the camp of the Tanjore general, he obtained a paſs for the purpoſe; but was nevertheleſs detained by the nabob; who was an ally of the Engliſh, and his head was ſtruck off, in order to prevent any diſputes that might ariſe concerning him.

46 M. Dupleix pretends commiſſions from the Mogul, and affects the ſtate of an Indian prince.

After the flight of Chunda Saib, his army was attacked and routed by Major Lawrence; and the iſland of Syringham ſurrendered, with about 1000 French ſoldiers under the command of Mr Law, brother to him who ſchemed the Miſſiſippi company. M. Dupliex, exceedingly mortified at this bad ſucceſs, proclaimed Rajah Saib, ſon to Chunda Saib, Nabob of Arcot; and afterwards produced forged commiſſions from the Great Mogul, appointing him governor of all the Carnatic from the river Kirſtnah to the ſea. The better to carry on this deception, a meſſenger pretended to come from Delhi, and was received with all the pomp of an ambaſſador from the Great Mogul. Dupleix, mounted on an elephant, and preceded by muſic and dancing women, after the oriential faſhion, received his commiſſion from the hands of this impoſtor; after which he affected the ſtate of an eaſtern prince, kept his *durbar* or court, appeared ſitting croſs legged on a ſopha, and received preſents, as ſovereign of the country, from his own council as well as from the natives.

Thus the forces of the Engliſh and French Eaſt India companies were engaged in a courſe of hoſtilities at a time when no war exiſted between the two nations; and while they thus continued to make war upon each other under the title of auxiliaries to the contending parties, Gauzedy Khan took poſſeſſion of the dignity appointed him by the Mogul; but had not been in poſſeſſion of it above 14 days when he was poiſoned by his own ſiſter. His ſon Scah Abadin Khan was appointed to ſucceed him by the Mogul; but the latter being unable to give him proper aſſiſtance, Salabat-zing remained without any rival, and made a preſent to the French commander of all the Engliſh poſſeſſions to the northward.

47 Reinforcements arrive from England and France.

48 Proviſional treaty betwixt the two nations concluded.

Thus concluded the campaign of 1752. Next year both parties received conſiderable reinforcements; the Engliſh by the arrival of Admiral Watſon with a ſquadron of ſhips of war, having on board a regiment commanded by Colonel Aldercroon; and the French by M. Gadeheu, commiſſary and governor-general of all their ſettlements, on whoſe arrival M. Dupleix departed for Europe. The new governor made the moſt friendly propoſals; and deſired a ceſſation of arms until the diſputes could be adjuſted in Europe. Theſe propoſals being readily liſtened to on the part of the Engliſh, deputies were ſent to Pondicherry, and a proviſional treaty and truce were concluded, on condition that neither of the two companies ſhould for the future interfere in any of the differences that might take place in the country. The other articles related to the places or ſettlements that ſhould be retained or poſſeſſed by the reſpective companies, until freſh orders ſhould arrive from the courts of London and Verſailles; and till then it was ſtipulated, that neither of the two nations ſhould be allowed to procure any new grant or ceſſion, or to build forts in defence of any new eſtabliſhment; nor ſhould they proceed to any ceſſion, retroceſſion, or evacuation, of what they then poſſeſſed; but every thing ſhould remain on the ſame footing as formerly.

The treaty was publiſhed on the 11th of January

49
Expedition of the Engliſh into the country of the Polygars.

1755; at the end of which month admiral Watſon returned with his ſquadron from Bombay, and M. Godeheu returned to France in the beginning of February, leaving M. Leyrit his ſucceſſor at Pondicherry. M. Buſſy, with the Soubahdar Salabat-zing, commanded in the north; and M. de Sauſſay was left to command the troops at Siringham. Matters, however, did not long continue in a ſtate of tranquillity. Early in the year it appeared that the French were endeavouring to get poſſeſſion of all the provinces of the Deccan. M. Buſſy demanded the fortreſs of Golconda from Salabat-zing: and M. Leyrit encouraged the phouſder or governor who rented Velu to take up arms againſt the nabob. He even ſent 300 French and as many ſepoys from Pondicherry to ſupport this rebel, and oppoſe the Engliſh employed by the nabob to collect his revenues from the tributary princes. In this office they had been employed ever ſince the ceſſation of hoſtilities; one half of the revenue being paid to the nabob, and the other to the company, which now involved them in a kind of military expedition into the country of the Polygars, who had been previouſly ſummoned to ſend agents to ſettle accounts with the nabob. Four of them obeyed the ſummons; but one *Lachenaig* refuſed, and it was therefore reſolved to attack him. The country was very ſtrong, being almoſt entirely fortified by nature or art; for it was ſurrounded by craggy hills detached from one another, and covered with buſhes ſo as to be impaſſable for any but the natives, who had thrown up works from hill to hill. Theſe works were indeed very rude, being formed of large ſtones laid upon one another without any cement, and flanked at proper diſtances by round earthen towers; before the wall was a deep and broad ditch, with a large hedge of bamboes in front, ſo thick that it could not be penetrated but by the hatchet or by the fire. This was forced, though not without ſome loſs; after which another work of the ſame kind, but ſtronger, made its appearance; but this being likewiſe forced, Lachenaig was obliged to ſubmit and pay his tribute.

50
Madura reduced.

The Engliſh army now marched to Madura, a ſtrong Indian town about 60 miles ſouth of Trinchinopoli. On their approach it ſubmitted without any oppoſition, and the inhabitants ſeemed pleaſed with their change of government. Here a deputation was received from a neighbouring polygar, deſiring an alliance, and as a proof of his ſincerity making an offer of two ſettlements on the ſea coaſt of his country oppoſite to the iſland of Ceylon, which would greatly facilitate their future commerce with Tinivelly. Before this time they could not have reached that city but by a circuitous march of 400 or 500 miles; but from the new ſettlements the diſtance to Tinivelly was no more than 50 miles, and reinforcements or ſupplies of any kind might be ſent them from Madras or fort St David in four or five days. This offer being accepted, Colonel Heron, the Engliſh commander, marched to attack the governor of Madura, who had fled to a place called *Coilgoody:* on the approach of the Engliſh he fled from this place alſo, leaving the greateſt part of his troops to defend the place. The road was ſo rugged, that the carriages of the cannon broke down; and as the troops were not furniſhed with ſcaling ladders, there ſeemed to be little hope of gaining the place, which was very ſtrong. The colonel, however, determined to make an aſſault after the Indian manner, by burning down the gates with bundles of ſtraw; and to encourage his men in this new method of attack, he himſelf carried the firſt torch, being followed by Mohammed Iſſouf, who bore the ſecond. The place was taken and plundered, not ſparing even the temples; which inſpired the inhabitants with the utmoſt abhorrence of the victors on account of their contempt of their religion.

51
Two new ſettlements obtained by the Engliſh.

52
Exploits of Colonel Heron.

53
His imprudence in plundering the Indian temples.

After this exploit the army returned to Madura; and a garriſon being left in the place, they proceeded to Tinivelly, which ſubmitted without oppoſition, and owned the Juriſdiction of the nabob; though ſome of the Polygars ſtill evaded payment, and therefore hoſtilities were commenced againſt them.

54
Cruel maſſacre at Nellecotah.

The new expedition was marked by an act of the moſt diſgraceful cruelty at a fort named *Nellecotah*, 40 miles ſouth of Tinivelly. It was fortified by a mud-wall with round towers. The aſſault was made with great reſolution, and the troops gained poſſeſſion of the parapet without being repulſed. On this the garriſon called out for quarter, but it was barbarouſly refuſed; a general maſſacre of men, women, and children enſued, only ſix perſons out of 400 being ſuffered to eſcape with life.

It now appeared that the revenues collected in this expedition had not been ſufficient to defray the expences of the army; and a report being ſpread that Salabat-zing was advancing into the Carnatic at the head of his army, along with M. Buſſy the French commander, to demand the Mogul's tribute, it was thought proper to recal Colonel Heron to Trinchinopoli. Before this, he had been prevailed on by the Indian chief who accompanied him, to convey to him (Mazuphe Cawn) an inveſtiture of the countries of Madura and Tinivelly for an annual rent of 187,500l. ſterling. In this way he was likewiſe induced by the ſame chief to make an attempt on a ſtrong fort named *Nellytangaville*, ſituated about 30 miles weſt of Tinivelly, and belonging to a refractory Polygar. This attempt, however, proving unſucceſsful for want of battering cannon, the colonel returned with Mazuphe Cawn to Trinchinopoli, where he arrived on the 22d of May 1755.

55
Unfortunate expedition and diſgrace of Colonel Heron.

The laſt expedition of this commander was againſt a mud fort named *Volſynatam*, ſituated near the entrance of the woods belonging to the Colleries. Theſe people were highly incenſed at the plundering of Coilgoody, and particularly at the loſs of their ſacred images which the rapacious conquerors had caried off. In conſequence of this they had already ſlaughtered a party of ſepoys whom the commanding officer at Madura had ſent out to collect cattle. In their march the Engliſh army had to go through the paſs of Natam, one of the moſt dangerous in the peninſula. It begins about 20 miles north of Trinchinopoli, and continues for ſix miles through a wood impaſſable for Europeans. The road which lay through it was barely ſufficient to admit a ſingle carriage at a time, at the ſame time that a bank running along each ſide rendered it impoſſible to widen it. In moſt places the wood was quite contiguous to the road: and even where part of it had been felled, the eye could not penetrate above 20 yards.—A detachment of Europeans, pioneers, and ſepoys, were ſent to ſcour the woods before the main body ventured to paſs through ſuch a dangerous defile. The former met with no oppoſition, nor did any enemy appear againſt the latter for a long time. At laſt the march was ſtopped by one of the heavieſt tumbrils ſticking in a ſlough, out of which the oxen were not able to draw it. The officers of artillery ſuffered the troops marching before to proceed; and the officer who commanded in the rear of the battalion, not ſuſpecting what had happened, continued his march, while moſt of the ſepoys who marched behind the rear diviſion of the artillery were likewiſe ſuffered to paſs the carriage in the ſlough, which choaked up the road, and prevented the other tumbrils from moving forward, as well as three field pieces that formed the rear diviſion of artillery, and the whole line of baggage that followed. In this divided and defenceleſs ſtate the rear diviſion of the baggage was attacked by the Indians; and the whole would certainly have been deſtroyed, had it not been for the courage and activity of Capt. Smith, who here commanded 40 Caffres and 200 ſepoys, with one ſix-pounder. Conſiderable damage, however, was done, and the Indians recovered their *gods;* which certainly were not worth the carrying off, being only made of braſs, and of a diminutive ſize.—Colonel Heron was tried by a court-martial for miſconduct in this expedition; and being found guilty, was declared incapable of ſerving the company any longer: ſoon after which he returned to Europe, and died in Holland.

56
Scheme formed by the Engliſh againſt the French.

57
The expedition laid aſide.

In the mean time Nanderauze, an Indian prince, formed a ſcheme to get poſſeſſion of Trinchinopoli; and in order to compaſs his end with greater facility, communicated his deſign to M. de Sauſſay the commander of the French troops. But this gentleman having communicated intelligence to the Engliſh commander, the enterprize miſcarried, and no difference betwixt theſe two rival nations as yet took place. It does not however appear that the Engliſh were in the leaſt more ſolicitous to avoid hoſtilities than the French; for as ſoon as the company were informed of the acquiſitions made by M. Buſſy in the Deccan, it was determined to encourage the Mahrattas to attack Salabat-zing, in order to oblige him to diſmiſs the French auxiliaries from his ſervice.—In order to ſucceed in this enterpriſe, it was neceſſary to have a commander well experienced in the political ſyſtems of the country, as well as in military affairs; and for this purpoſe Mr Clive, now governor of Fort St David's, and inveſted with a lieutenant-colonel's commiſſion in the king's troops, offered his ſervice. Three companies of the king's artillery, conſiſting of 100 men each, and 300 recruits, were ſent from England on this expedition, who arrived at Bombay on the 27th of November; when on a ſudden the preſidency of Madras took it into conſideration that this expedition could not be proſecuted without infringing the convention made with the French commander. "This (ſays Mr Groſe) was acting with too much caution; for every thing relating to Salabat-zing and the French troops in his ſervice ſeemed to have been ſtudiouſly avoided. The court of directors had explained their whole plan to the preſidency of Madras; but the ſhip which had the letters on board was unfortunately wrecked on a rock about 800 miles eaſt of the Cape of Good Hope." The whole expedition was therefore laid aſide, and the preſidency of Madras directed all their force for the preſent againſt Tulagee Angria, who had long been a formidable enemy to the Engliſh commerce in thoſe parts.

58
Account of the pirate Tulagee Angria.

59
Deſcription of his fleet.

The dominions of this pirate conſiſted of ſeveral iſlands near Bombay, and an extent of land on the continent about 180 miles in length and from 30 to 60 in breadth. He poſſeſſed alſo ſeveral forts that had been taken from the Europeans by his anceſtors; the trade of piracy having, it ſeems, been hereditary in the family, and indeed followed by moſt of the inhabitants of this coaſt. This was the more dangerous for trading veſſels, as the land breezes do not here extend more than 40 miles out at ſea, ſo that the ſhips are obliged to keep within ſight of land; and there was not a creek, harbour, bay, or mouth of a river along the whole coaſt of his dominions, where Angria had not erected fortifications, both as ſtations of diſcovery, and places of refuge to his veſſels. His fleet conſiſted of two kinds of veſſels peculiar to this country, named *grabs* and *gallivats*. The former have generally two maſts, though ſome have three: the latter being about 300 tons burthen, and the former 150. They are built to draw little water, being very broad in proportion to their length; but narrowing from the middle to the end, where, inſtead of bows, they have a prow projecting like a Mediterranean galley, and covered with a ſtrong deck level with the main deck of the veſſel, from which it is ſeparated by a bulk-head that terminates the fore caſtle. As this conſtruction ſubjects the grab to pitch violently when ſailing againſt a head ſea, the deck of the prow is not incloſed with ſides as the reſt of the veſſel, but remains bare, that the water which comes upon it may paſs off without interruption. Two pieces of cannon are mounted on the main deck under the forecaſtle, carrying balls of nine or twelve pounds, which point forwards through port-holes cut in the bulk-head, and fire over the prow; thoſe of the broad-ſide are from ſix to nine pounders. The *gallivats* are large row-boats built like the grab, but ſmaller; the largeſt ſcarce exceeding 70 tons burden. They have two maſts, the mizen ſlightly made, and the main-maſt bearing one large and triangular ſail. In general they are covered with a ſpar-deck made of ſplit bamboes, and carry only paterreroes fixed on ſwivels in the gunnel of the veſſel; but thoſe of a larger ſize have a fixed deck, on which they mount ſix or eight pieces of cannon from two to four pounders. They have 40 or 50 ſtout oars, by which they may be moved at the rate of four miles an hour.

60
Their manner of attacking ſhips.

Angria had commonly a fleet of eight or ten grabs, with 40 or 50 gallivats; which ſlipped their cables and put out to ſea as ſoon as any veſſel had the misfortune to come within ſight of the port or bay where they lay. If the wind blew with any ſtrength, their conſtruction enabled them to ſail very ſwiftly: but if it was calm, the gallivats rowed, and towed the grabs. As ſoon as they came within gunſhot of the enemy, they aſſembled aſtern, and the grabs began the attack, firing at firſt only at the maſts, and chooſing the moſt advantageous poſitions for this purpoſe. If the veſſel happened to be diſmaſted, they then drew nearer, and battered her on all ſides till ſhe ſtruck; but if the defence was obſtinate, they ſent a number of gallivats with two or three hundred ſoldiers in each, who boarded from all quarters ſword in hand.

This piratical ſtate had for more than 50 years been

61 Unſucceſsful attempts to reduce this pirate.

formidable to all the nations in Europe; the Engliſh Eaſt-India company had kept up a naval force for the protection of their trade at the rate of more than 50,000l. annually, and after all found it ſcarcely adequate to the purpoſe. An unſucceſsful attempt had been made in 1717, by the preſidency of Bombay, againſt the forts Geriah and Kennary, the principal ſtrong holds of Angria.—Another was made in 1722, under Admiral Matthews, againſt a fort named Coilabley, about 15 leagues ſouth of Bombay: but this alſo miſcarried through the cowardice and treachery of the Portugueſe, who pretended to aſſiſt the Engliſh. In 1735 fort Geriah was unſucceſsfully attacked by a Dutch armament of ſeven ſhips, two bomb-ketches, and a numerous body of land forces? while all this time the piracies of Angria went on ſucceſsfully, and not only trading veſſels, but even men of war belonging to different nations, were captured by him, particularly in the month of February 1754, when three Dutch ſhips of 50, 36, and 18 guns, were burnt or taken by the piratical fleet.

62 Succeſs of commodore James againſt his forts.

This laſt ſucceſs encouraged Angria ſo much, that he began to build veſſels of a large ſize, boaſting that he ſhould be maſter of the Indian ſeas. The Mahrattas having implored the aſſiſtance of the Engliſh againſt this common enemy, Commodore William James was ſent from Bombay on the 22d of March 1755, with the Protector of 44, the Swallow of 16 guns, and two bomb-ketches; but with inſtructions not to hazard the fleet by attacking any of the pirate's forts, only to blockade the harbours, while the Mahratta army carried on their operations by land. He had ſcarce begun his voyage when he fell in with a conſiderable fleet of the pirates, which he would certainly have taken, had it not been for the timidity and dilatory behaviour of his allies, who could not by any means be induced to follow him. They had, however, inveſted three of the forts, but after a very ſtrange manner; for they durſt not approach nearer than two miles, and even there entrenched themſelves up to the chin, to be ſecure againſt the fire of the fort, which they returned only with one four pounder. The commodore, provoked at this puſillanimous behaviour, determined, for the honour of the Britiſh arms, to exceed the orders he had got. Running within 100 yards of a fort named Severndroog, he in a few hours ruined the walls, and ſet it on fire; a powder magazine alſo blowing up, the people, to the number of about 1000, abandoning the place, and embarking on board of eight large boats, attempted to make their eſcape to another fort name Goa, but were all intercepted and made priſoners by the Engliſh. The whole force of the attack being then turned upon Goa, a white flag was ſoon hung out as a ſignal to ſurrender. The governor, however, did not think proper to wait the event of a capitulation, but without delay paſſed over to Severndroog, where he hoped to be able to maintain his ground notwithſtanding the ruinous ſtate of the fortifications. The fire was now renewed againſt this fortreſs; and the ſeamen having cut a paſſage through one of the gates with their axes, the garriſon ſoon ſurrendered, at the ſame time that two other forts beſieged by the Mahrattas hung out flags of truce and capitulated: and thus were four of Angria's forts, for ſo many years deemed impregnable, ſubdued in one day.

63 The pirate finally ſubdued by Admiral Watſon.

These ſucceſſes were followed by the ſurrender of Bancoote, a ſtrong fortified iſland now called *Fort Victoria*, and which the Engliſh retained in poſſeſſion; but the other forts were delivered up to the Mahrattas. On the arrival of Admiral Watſon in the beginning of November 1755, it was determined to root out the pirate at once, by attacking Geriah the capital of his dominions; but it was ſo long ſince any Engliſhmen had ſeen this place, and the reports of its ſtrength had been ſo much exaggerated, that it was thought proper to reconnoitre it before any attack was made. This was done by Commodore James; who having reported that the fort, though ſtrong, was far from being inacceſſible or impregnable, it was reſolved to proſecute the enterprize with the utmoſt expedition and vigour. It was therefore attacked by ſuch a formidable fleet, that Angria, loſing courage at their approach, fled to the Mahrattas, leaving Geriah to be defended by his brother. The fort, however, was ſoon obliged to ſurrender, with no more loſs on the part of the Engliſh than 19 men killed and wounded: but it was afterwards acknowledged, that this ſucceſs was owing principally to the terror of the garriſon occaſioned by ſuch a violent cannonade; for their fortifications appeared to have been proof againſt the utmoſt efforts of an enemy. All the ramparts of this fort were either cut out of the ſolid rock, or built of ſtones at leaſt ten feet long laid edgeways.

In this fortreſs were found 200 pieces of braſs cannon, with ſix braſs mortars, and a great quantity of ammunition and military ſtores, beſides money and effects to the value of 125,000l. Angria's fleet was entirely deſtroyed, one of the ſhips having been ſet on fire by a ſhell from the Engliſh fleet, and the flames having ſpread from thence to all the reſt. About 2000 people were made priſoners; among whom were the wife, children, mother, brother, and admiral of the pirate; but they were treated with the greateſt clemency: and his family, at their own requeſt, continued under the protection of the Engliſh at Geriah. All the other forts belonging to Angria ſoon ſubmitted? ſo that his power on the coaſt of Malabar was entirely annihilated.

64 M. Buſſy diſmiſſed by Salaba zing.

While the affairs of the Engliſh went on thus ſucceſsfully ,M. Buſſy had been conſtantly employed near the perſon of Salabat-zing, whom he had ſerved in much the ſame manner that the Engliſh had Mahomed Ali Cawn. As he made uſe of his influence with that prince, however, to enlarge the poſſeſſions of the French, and was continually making exorbitant demands upon him, the prime miniſter of Salabat-zing at length repreſented to him the danger and ſhame of allowing a ſmall body of foreigners thus to give law to a great prince; and having formed a powerful combination againſt the French, at laſt obtained an order for their diſmiſſion. M. Buſſy took his leave without any marks of diſguſt, having under his command about 600 Europeans, with 5000 ſepoys, and a fine train of artillery. His enemies, however, had no mind to allow him to depart in ſafety; and therefore ſent orders to all the Polygars to oppoſe their paſſage, ſending 6000 Mahrattas after them to haraſs them on their march.

Notwithſtanding this oppoſition, M. Buſſy reached Hydrabad with very little loſs. Here he took poſſeſſion

ſeſſion of a garden formerly belonging to the kings of Golconda, where he reſolved to keep his poſt until ſuccours ſhould arrive from Pondicherry and Maſulipatam. Here Salabat-zing propoſed to attack him; and the better to attain his purpoſe, applied to the Engliſh preſidency at Madras for a body of troops to aſſiſt him in this ſervice. Nothing could be more agreeable to thoſe who had the power at that place than ſuch an invitation; and a detachment of 400 Europeans and 1500 ſepoys was on the point of being ordered to the aſſiſtance of Salabat-zing, when expreſſes from Bengal informed them of the greateſt danger that had ever threatened the Engliſh ſettlements in Indoſtan.

65 A detachment of Engliſh troops ordered againſt M. Buſſy, but countermanded.

This danger aroſe from the diſpleaſure of Surajah Dowla the new nabob of Bengal. His grandfather Aliverdy Khan having died in April or May 1756, Surajah ſucceeded to the nabobſhip of Bengal, Bahar and Orixa. He was congratulated an his acceſſion by Mr Drake the Engliſh preſident at Calcutta, who requeſted his favour and protection in behalf of his countrymen. This was readily promiſed, even to a greater degree than what had been ſhown by his grandfather; but in a ſhort time his reſentment was incurred by the impriſonment, as it is ſaid, of Omichund, an eminent Gentoo merchant, who had lived ſeveral years under the protection of the Engliſh government at Calcutta. Of this, however, Surajah Dowla did not directly complain; but founded his pretence of war upon the conduct of the Engliſh in repairing the fortifications of Calcutta; which indeed was abſolutely neceſſary on account of the great likelihood of a war with the French. On this account, however, the nabob ſignified his diſpleaſure, and threatened an attack if the works were not inſtantly demoliſhed. With this requiſition the preſident and council pretended to comply; but nevertheleſs went on with their works, applying firſt to the French and then to the Dutch for aſſiſtance; but as neither of theſe nations thought proper to interfere, the Engliſh were obliged to ſtand alone in the quarrel.

66 Surajah Dowla, nabob of Bengal, an enemy to the Engliſh.

67 His expedition againſt Calcutta.

Surajah Dowla took the field on the 30th of May 1756, with an army of 40,000 foot, 30,000 horſe, and 400 elephants; and on the 2d of June detached 20,000 men to inveſt the Engliſh fort at Caſſumbazar, a large town ſituated on an iſland formed by the weſtern branch of the Ganges. The fort was regularly built, with 60 cannon, and defended by 300 men, but principally ſepoys. The nabob pretending a deſire to treat, Mr Watts the chief of the factory was perſuaded to put himſelf in his power; which he had no ſooner done, than he was made a cloſe priſoner, along with Mr Batſon a ſurgeon who accompanied him. The two priſoners were treated with great indignity, and threatened with death; but two of the council who had been ſent for by the tyrant's command were ſent back again, with orders to perſuade the people of the factory to ſurrender it at diſcretion. This propoſal met with great oppoſition in the council; but was at laſt complied with, though very little to the advantage of the priſoners; for they were not only deprived of every thing they poſſeſſed, but ſtripped almoſt naked, and ſent to Huquely, where they were cloſely confined.

The nabob, encouraged by this ſucceſs, marched directly to Calcutta, which he inveſted on the 15th. Though he now threatened to drive the Engliſh entirely out of his dominions, yet he propoſed an accommodation with Mr Drake, provided he would pay him his duty upon the trade for 15 years, defray the expences of his army, and deliver up the Indian merchants who were in the fort. This being refuſed, a ſiege commenced, and the place was taken in three days through the treachery of the Dutch guard * who had the charge of a gate. The nabob promiſed on the word of a ſoldier, that no harm ſhould be done the Engliſh; nevertheleſs they were ſhut up in a priſon ſo ſtrait; that out of 146 all periſhed in a ſingle night for want of air but 22. It was not, however, ſuppoſed that any maſſacre at this time was intended; and it is probable that he only gave orders to confine the priſoners cloſely for the night, without taking into conſideration whether the place they were confined in was large or ſmall.

68 Calcutta taken, and a number of priſoners ſuffocated.

The news of this diſaſter put an end to the expedition projected againſt M. Buſſy; and Colonel Clive was inſtantly diſpatched to Bengal with 400 Europeans and 1000 ſepoys, on board of the fleet commanded by Admiral Watſon. They did not arrive till the 15th of December, at a village called *Fulta*, ſituated on a branch of the Ganges, where the inhabitants of Calcutta had taken refuge after their misfortune. Their firſt operations were againſt the forts Buſbudgia, Tanna, Fort-William, and Calcutta now in the hands of the enemy. All theſe were reduced almoſt as ſoon as they could approach them. An expedition was then propoſed againſt Hughley, a large town about 60 miles above Calcutta, and the place of rendezvous for all nations who traded to Bengal; its warehouſes and ſhops being always filled with the richeſt merchandiſe of the country. This was likewiſe eaſily reduced; and the city was deſtroyed, with the granaries and ſtorehouſes of ſalt ſeated on each ſide the river; which proved very detrimental to the nabob, as depriving him of the means of ſubſiſtence for his army.

69 Expedition of admiral Watſon and colonel Clive againſt the nabob.

Surajah Dowla, enraged at this ſucceſs of the Engliſh, now ſeemed determined to cruſh them at once by a general engagement. From this, however, he was intimidated by a ſucceſsful attack on his camp, which ſoon induced him to conclude a treaty. This took place on the 9th of February 1757, on the following conditions. 1. That the privileges and immunities granted to the Engliſh by the king (Mogul) ſhould not be diſputed. 2. That all goods with Engliſh orders ſhould paſs, by land or water, free of any tax, fee, or impoſition. 3. All the Company's factories which had been ſeized by the nabob ſhould be reſtored; and the goods, money, and effects which had been plundered, ſhould be accounted for. 4. That the Engliſh ſhould have permiſſion to fortify Calcutta as they thought proper. 5. They ſhould alſo have liberty to coin their own imports of bullion and gold.

70 Treaty concluded with him.

71 War with the French.

As certain intelligence was now received of a war between France and England, the firſt object that naturally occurred, after the concluſion of this treaty, was the reduction of the French power in the eaſt; in conſequence of which it was repreſented to Admiral Watſon, by a committee of the council of Bengal, that this was the only opportunity he perhaps might ever have of acting offenſively againſt them. An attack would therefore immediately have been made on Chandernagore, had not a deputation arrived from that place, requeſting a neutrality in this part of the world until matters ſhould be finally decided in Europe. The negociation, however, was broken off on a ſuggeſtion that the government of Chandernagore, being ſubordinate to that of Pondicherry, could not render any tranſaction of this kind valid. It remained therefore only to obtain the conſent of the nabob to make an attack upon this place: but this ſeemed not likely to be got; for in ten days after the concluſion of the treaty, he ſent a letter to the admiral, complaining of his intention. "It appears (ſays he) that you have a deſign to beſiege the French factory near Houghley, and to commence hoſtilities againſt that nation. This is contrary to all rule and cuſtom, that you ſhould bring your animoſities and differences into my country; for it has never been known, ſince the days of Timur, that the Europeans made war upon one another in the king's dominions. If you are determined to beſiege the French factories, I ſhall be neceſſitated, in honour and duty to my king, to aſſiſt them with my troops. You are certainly bound to abide by your part of the treaty ſtrictly, and never to attempt or be the occaſion of any troubles or diſturbances in future within the provinces under my juriſdiction, &c." To this Admiral Watſon replied, that "he was ready to deſiſt from his intended enterprize if the French would agree to a ſolid treaty of neutrality; or if the nabob, as *ſoubahdar* (viceroy) of Bengal, would, under his hand, guarantee this treaty, and promiſe to protect the Engliſh from any attempts made by the French againſt their ſettlements in his abſence." This letter did not prove ſatisfactory; the nabob having been informed by the French agent, that the Engliſh deſigned to turn their arms againſt him as ſoon as they had made themſelves maſters of Chandernagore. This was ſtrenuouſly denied by the admiral; and a number of letters paſſed between him and the nabob, in one of which the latter made uſe of the following expreſſions, which were ſuppoſed to imply a tacit conſent that Chandernagore ſhould be attacked. "My forbidding war on my borders was becauſe the French were my tenants, and upon this affair deſired my protection: on this I wrote to you to make peace, and no intention had I of favouring or aſſiſting them. You have underſtanding and generoſity: if your enemy with an upright heart claims your protection, you will give him his life; but then you muſt be *well* ſatisfied of the innocence of his intentions; if not, then whatſoever you think right, that do.".

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* See *Calcutta*.

72
The nabob complains of the Engliſh,

73
Chandernagore taken by the Engliſh.

Having thus, as was ſuppoſed, obtained the conſent of the nabob, an attack was made on Chandernagore, which was ſoon reduced to the neceſſity of capitulating; though the French made a gallant defence, and, as Mr Ives informs us, "ſtood to their guns as long as they had any to fire." A meſſenger was diſpatched with the news to Surajah Dowla three days after the place had ſurrendered, intimating alſo that the French had been purſued ſome way up the country. This intelligence, however, ſeemed to be by no means agreeable, as he could ſcarce be induced to return an anſwer. At laſt he pretended diſpleaſure on account of the deſign of the Engliſh to infringe the treaties, and complained that they had ravaged ſome parts of his dominions. This was denied on the part of the admiral; who in his turn accuſed the nabob of breach of promiſe, and neglect in fulfilling his engagements. The laſt letter ſent by Admiral Watſon to the nabob, of date 19th April 1757, concludes in this manner. "Let me again repeat to you, that I have no other views than that of peace. The gathering together of riches is what I deſpiſe: and I call on God, who ſees and knows the ſpring of all our actions, and to whom you and I muſt one day anſwer, to witneſs to the truth of what I now write: therefore, if you would have me believe that you wiſh for peace as much as I do, no longer let it be the ſubject of our correſpondence for me to aſk the fulfilment of our treaty, and you to promiſe and not perform it; but immediately fulfil all your engagements: thus let peace flouriſh and ſpread throughout all your country, and make your people happy in the re-eſtabliſhment of their trade, which has ſuffered by a ruinous and deſtructive war." From this time both parties made preparations for war. The nabob returned no anſwer till the 13th of June, when he ſent the following declaration of war. "According to my promiſes, and the agreement made between us, I have duly rendered every thing to Mr Watts, except a very ſmall remainder: Notwithſtanding this, Mr Watts, and the reſt of the council of the factory at Caſſembuzar, under the pretence of going to take the air in their gardens, fled away in the night. This is an evident mark of deceit, and of an intention to break the treaty. I am convinced it could not have happened without your knowledge, nor without your advice. I all along expected ſomething of this kind, and for that reaſon I would not recal my forces from Plaſſey, expecting ſome treachery. I praiſe God, that the breach of the treaty has not been on my part," &c.

74
The depoſition of the nabob reſolved on.

Nothing leſs was now reſolved on in the Engliſh council at Calcutta than the depoſition of the nabob; which at this time appared practicable, by ſupporting the pretenſions of Meer Jaffier Ali Cawn, who had with other noblemen entered into a conſpiracy againſt him. Meer Jaffier had married the ſiſter of Aliverdy Cawn, the predeceſſor of Surajah Dowla; and was now ſupported in his pretenſions by the general of the horſe, and by Jugget Seet the nabob's banker, who was reckoned the richeſt merchant in all India. By theſe three leading men the deſign was communicated to Mr Watts the Engliſh reſident at the nabob's court, and by him to Colonel Clive and the ſecret committee at Calcutta. The management of the affair being left to Mr Watts and Mr Clive, it was thought proper to communicate the ſecret to Omichund, through whom the neceſſary correſpondence might be carried on with Meer Jaffier. This agent proved ſo avaricious, that it was reſolved to ſerve him in his own way; and by a piece of treachery to him alſo, to gain their point with both parties. Two treaties were therefore written out; in one of which it was promiſed to comply with Omichund's demand, but in the other his name was not even mentioned; and both theſe treaties were ſigned by all the principal perſons concerned, Admiral Watſon alone excepted, whom no political motives could influence to ſign an agreement which he did not mean to keep. Theſe treaties, the ſame in every reſpect excepting as to Omichund's affair, were to the following

75
Avaricious and treacherous behaviour of Omichund and the Engliſh.

79 Treaty concluded with Meer Jaffier.

following purpoſe: 1. All the effects and factories belonging to the province of Bengal, Bahar, and Orixa, ſhall remain in poſſeſſion of the Engliſh, nor ſhould any more French ever be allowed to ſettle in theſe provinces. 2. In conſideration of the loſſes ſuſtained by the Engliſh company by the capture and plunder of Calcutta, he agreed to pay one crore of rupees, or L. 1,250,000 ſterling. 3. For the effects plundered from the Engliſh at Calcutta, he engaged to pay 50 lack of rupees, or L.625,000. 4. For the effects plundered from the Gentoos, Moors, and other inhabitants of Calcutta, 20 lack, or L.250,000. 7. For the effects plundered from the Armenian merchants, inhabitants of Calcutta, ſeven lack, or L.87,500. 8. The diſtribution of all theſe ſums to be left to Admiral Watſon, Colonel Clive, Roger Drake, William Watts, James Kilpatrick, and Richard Becher, Eſquires, to be diſpoſed of by them to whom they think proper.

77 Surajah Dowla defeated and put to death.

All things being now in readineſs, Colonel Clive began his march againſt Surajah Dowla on the 13th of June, the very day on which Surajah Dowla ſent off his laſt letter for Admiral Watſon. Before any act of hoſtility was committed, however, Colonel Clive wrote the nabob a letter, upbraiding him with his conduct, and telling him at laſt, that "the rains being ſo near, and it requiring many days to receive an anſwer, he had found it neceſſary to wait on him immediately." This was followed by the deciſive action at Plaſſey; in which the treachery of Meer Jaffier, who commanded part of the nabob's troops, and ſtood neuter during the engagement, undoubtedly rendered the victory more eaſily acquired than it would otherwiſe have been. The unfortunate nabob fled to his capital with a few that continued faithful to him. He reached the city in a few hours; but not thinking himſelf ſafe there, left it the following evening, diſguiſed like a Faquir, with only two attendants. By theſe he appears to have been abandoned and even robbed; for on the 3d of July he was found wandering forſaken and almoſt naked on the road to Patna. Next day he was brought back to Muxadabad: and a few hours after privately beheaded by Meer Jaffier's eldeſt ſon, to whoſe care he had been committed. The uſurper took poſſeſſion of the capital in triumph; and on the 29th of June Colonel Clive went to the palace, and in preſence of the rajahs and grandees of the court ſolemnly handed him to the muſnud or carpet and throne of ſtate, where he was unanimouſly ſaluted ſoubahdar or nabob, and received the ſubmiſſion of all preſent.

78 Meer Jaffier proclaimed nabob of Bengal.

73 Colonel Coote's expedition in queſt of Mr Law.

While theſe tranſactions were going forward with the nabob, the utmoſt efforts were uſed to expel the French entirely from Bengal. By the articles of capitulation at Chandernagore, the whole of that garriſon were to continue priſoners of war; but about the time of ſigning the treaty, Mr Law with a ſmall body of troops made his eſcape out of Caſſembuzar, and bent his march towards Patna. There he had been protected by the late nabob; and on the commencement of freſh hoſtilities, had collected about 200 French, the only remains of that nation in Bengal to make an attempt to ſuccour him. With theſe he was within two hours march of Surajah Dowla's camp when the battle of Plaſſey was fought: on hearing the news of which he ſtopped; but afterwards being informed of the nabob's eſcape, he marched again to his aſſiſtance, and was within a few hours of joining him when he was taken. Three days after he was purſued by Major Eyre Coote at the head of 223 Europeans, three companies of Sepoys, 50 Laſcars or Indian ſailors, and 10 Marmutty men or pioneers to clear the roads, together with two pieces of cannon, ſix pounders. On this expedition the major exerted his utmoſt diligence to overtake his antagoniſt, and ſpent a very conſiderable ſpace of time in the purſuit; for though he ſet out on the 6th of July, he did not return to Muxadabad till the 1ſt of September. Mr Law, however, had the good fortune to eſcape; but though the major did not ſucceed in what was propoſed as the principal end of his expedition, he was nevertheleſs, ſays Mr Ives, of conſiderable ſervice to the company and to his country in general. He had obliged Ramnarain, the moſt powerful rajah in the country, to ſwear allegiance to Meer Jaffier; he laid open the interior ſtate of the northern provinces; and, in conjunction with Mr Johnſtone, gave the company ſome inſight into the ſaltpetre buſineſs, from which ſuch advantages have ſince been derived to the public.

80 Death of admiral Watſon.

Before the return of Major Coote, Admiral Pocock had ſucceeded to the command of the fleet, in conſequence of the deceaſe of Admiral Watſon, who died on the 16th of Auguſt. The joy of the Britiſh was conſiderably damped by the loſs of this gentleman, who had gained a great and deſerved reputation both in the military line and every other. News were alſo received, that the French had been very ſucceſsful on the coaſt of Coromandel. Salabat-zing, as has already been obſerved, had applied to the Engliſh for aſſiſtance againſt the French; but as they were prevented from performing their agreement by the diſaſter at Calcutta, he found himſelf under a neceſſity of accommodating the differences with his former friends, and to admit them again into his ſervice. M. Buſſy was now reinforced by the troops under M. Law; who had collected as many Europeans in his journey as made up 500 with thoſe he had at firſt. With theſe he undertook to reduce the Engliſh factories of Ingeram, Bandermalanka, and Vizagapatnam. As none of the two former places were in any ſtate of defence, the greateſt part of the company's effects were put on ſhipboard on the firſt alarm; but as Vizagapatnam was garriſoned by 140 Europeans and 420 Sepoys, it was ſuppoſed that it would make ſome defence. If any was made, however, it appears to have been very trifling; and by the conqueſt of this the French became maſters of all the coaſts from Ganjam to Maſſulipatnam. In the ſouthern provinces the like bad ſucceſs attended the Britiſh cauſe. The rebel Polygars having united their forces againſt Mazuphe Cawn, obtained a complete victory over him; after which the Engliſh ſepoys, being prevailed upon to quit Madura, the conqueror ſeized upon that city for himſelf.

81 Succeſs of the French on the Coromandel coaſt.

In the beginning of 1758, the French made an attempt on Trinchinopoli. The command was given to M. d'Autreuil, who inveſted the place with 900 men in battalion, with 4000 ſepoys, 100 huſſars, and a great body of Indian horſe. Trinchinopoli was then in no condition to withſtand ſuch a formidable power, as moſt of the garriſon had gone to beſiege Madura under Captain Caillaud; but this commander having received intelligence of the danger, marched back with all his forces, and entered the town by a difficult road which the enemy had neglected to guard; and the French general, diſconcerted by this ſucceſsful manœuvre, drew off his forces, and returned to Pondicherry.

This fortunate tranſaction was ſucceeded by the ſiege of Madura in which the Engliſh were ſo vigorouſly repulſed, that Captain Caillaud was obliged to turn the ſiege into a blockade in order to reduce the place by famine. But before any progreſs could be made in this way, Mazuphe Cawn was prevailed upon to give it up for the ſum of 170,000 rupees. A large garriſon of ſepoys was again put into the place, and Captain Caillaud returned to Trinchinopoli.

An unſucceſsful attempt was now made by Colonel Ford on Nellore, a large town ſurrounded by a thick mud-wall, with a dry ditch on all ſides but one, where there is the bed of a river always dry but in the rainy ſeaſon. The enterpriſe is ſaid to have proved unſucceſsful through the unheard of cowardice of a body of ſepoys, who having ſheltered themſelves in a ditch, abſolutely refuſed to ſtir a ſtep farther, and rather choſe to allow the reſt of the army to march over them to the aſſault, than to expoſe themſelves to danger. Several other enterpriſes of no great moment were undertaken; but the event was on the whole unfavourable to the Engliſh, whoſe force by the end of the campaign was reduced to 1718 men, while that of the French amounted to 3400 Europeans, of whom 1000 were ſent to Pondicherry.

82
French defeated at ſea by admiral Pocock.

Both parties now received conſiderable reinforcements from Europe; Admiral Pocock being joined on the 24th of March by Commodore Stevens with a ſquadron of five men of war, and the French by nine men of war and two frigates, having on board General Lally with a large body of troops. The Engliſh admiral no ſooner found himſelf in a condition to cope with the enemy than he went in queſt of them; and an engagement took place, in which the French were defeated with the loſs of 600 killed and a great many wounded, while the Engliſh had only 29 killed and 89 wounded. The former returned to Pondicherry, where they landed their men, money, and troops. After the battle three of the Britiſh Captains were tried for miſbehaviour, and two of them diſmiſſed from the command of their ſhips. As ſoon as his veſſels were refitted, the admiral ſailed again in queſt of the enemy, but could not bring them to an action before the third of Auguſt, when the French were defeated a ſecond time, with the loſs of 251 killed and 602 wounded.

83
They are defeated a ſecond time.

84
Take fort St David.

Notwithſtanding this ſucceſs at ſea, the Engliſh were greatly deficient in land forces; the re-eſtabliſhment of their affairs in Bengal having almoſt entirely drained the ſettlements on the coaſt of Coromandel of the troops neceſſary for their defence. The conſequence of this was the loſs of Fort St David, which General Lally reduced, deſtroying the fortifications, demoliſhing alſo the adjacent villages, and ravaging the country in ſuch a manner as filled the natives with indignation, and in the end proved very prejudicial to his affairs. He proved ſucceſsful, however, in the reduction of Devicottah, but was obliged to retreat with loſs from before Tanjore, his army being greatly diſtreſſed for want of proviſions; and money in particular being ſo deficient, that on the 7th of Auguſt the French ſeized and carried into Pondicherry a large Dutch ſhip from Batavia, bound to Negapatnam, and took out of her about L. 5000 in ſpecie.

From this time the affairs of the French daily declined. On their retreat from Tanjore, they abandoned the iſland of Seringham; however, they took Tripaſſore, but were defeated in their deſigns on the important poſt of Chinglapet, ſituated about 45 miles ſouth-weſt of Madras. Their next enterpriſes on Fort St George and Madras were equally unſucceſsful. The latter was beſieged from the 12 of December 1758 to the 17th of February 1759, when they were obliged to abandon it with great loſs; which diſaſter greatly contributed to depreſs their ſpirits, and abate thoſe ſanguine hopes they had entertained of becoming maſters in this part of the world.

85
French defeated a third time by admiral Pocock.

The remainder of the year 1759 proved entirely favourable to the Britiſh arms. M. d'Ache the French Admiral, who had been very roughly handled by Admiral Pocock on the 3d of Auguſt 1758, having refitted his fleet, and being reinforced by three men of war at the iſlands of Mauritius and Bourbon, now ventured once more to face his antagoniſt, who on his part did not at all decline the combat. A third battle enſued on the 10th of September 1759, when the French, notwithſtanding their ſuperiority both in number of ſhips and weight of metal, were obliged to retreat with conſiderable loſs; having 1500 men killed and wounded, while thoſe on board the Engliſh fleet did not exceed 569. By the 17th of October the Engliſh fleet was completely refitted; and Admiral Pocock having been joined by a reinforcement of four men of war, ſoon after returned to England.

86
General Lally defeated at Wandewaſh.

All this time the unfortunate General Lally had been employed in unſucceſsful endeavours to retrieve the affairs of his countrymen: ſtill, however, he attempted to act on the offenſive; but his fate was at laſt decided by laying ſiege to Wandewaſh, which had lately been taken by Colonel Coote. The advantage in numbers was entirely in favour of the French general; the Engliſh army conſiſting only of 1700 Europeans including artillery and cavalry, while the French amounted to 2200 Europeans. The auxiliaries on the Engliſh ſide were 3000 black troops, while thoſe of the French amounted to 10,000 black troops and 300 Caffres; nor was the odds leſs in proportion in the artillery, the Engliſh bringing into the field only 14 pieces of cannon and one howitzer, while the French had 25 pieces in the field and five on their batteries againſt the fort. The battle began about eleven o'clock on the 22d of January 1760, and in three hours the whole French army gave way and fled towards their camp; but quitted it on finding themſelves purſued by the Engliſh, who took all their cannon except three ſmall pieces. They collected themſelves under the walls of Cheltaput, about 18 miles from the field of battle, and ſoon after retired to Pondicherry. Colonel Coote cauſed the country to be waſted to the very gates of this fortreſs by way of retaliation for what the French had done in the neighbourhood of Madras. He then ſet about the ſiege of

Cheltaput, which ſurrendered in one day; a conſiderable detachment of the enemy was intercepted by Captain Smith; the Fort of Timmery was reduced by Major Monſon, and the city of Arcot by Captain Wood. This laſt conqueſt enabled the Engliſh to reſtore the nabob to his dominions, of which he had been deprived by the French; and it greatly weakened both the French force and intereſt in India. M. Lally, in the mean time, had recalled his forces from Seringham, by which means he augmented his army with 500 Europeans. All theſe were now ſhut up in Pondicherry, which was become the laſt hope of the French in India. To complete their misfortunes. Admiral Corniſh arrived at Madras with ſix men of war; and as the French had now no fleet in theſe parts, the admiral readily engaged to co-operate with the land forces. The conſequence was the reduction of Carical, Chellambrum, and Verdachellum, by a ſtrong detachment under Major Monſon; while Colonel Coote reduced Permucoil, Alamperva, and Waldour. Thus he was at laſt enabled to lay ſiege to Pondicherry itſelf. Previous to this, however, it had been blockaded by ſea and land, which reduced the place to great ſtraits for want of proviſions, and induced a mutinous diſpoſition among the garriſon. The batteries were not opened till the beginning of December 1760; and the place capitulated on the 15th of January 1761, by which an end was put to the power of the French in this part of the world.

87
All the French forts in India, and Pondicherry their capital, taken.

88
Diſagreeable ſituation of the nabob of Bengal.

While the Engliſh were thus employed in effectually reducing the power of their rivals in every part of India, Meer Jaffier, the nabob of Bengal, who had been raiſed to that dignity by the ruin of Surajah Dowla, found himſelf in a very diſagreeable ſituation. The treaſure of the late nabob had been valued at no leſs than 64 crore of rupees, about 80 millions ſterling; and in expectation of ſuch a vaſt ſum, Meer Jaffier had no doubt thoughtleſsly ſubmitted to the enormous exactions of the Engliſh, already mentioned. On his acceſſion to the government, however, the treaſure of which he became maſter fell ſo much ſhort of expectation, that he could by no means fulfil his engagements to them and ſupply the expences of government at the ſame time. This ſoon reduced him to the neceſſity of mortgaging his revenues to ſupply preſent demands; and by this ruinous expedient he put it out of his own power ever to extricate himſelf. In this dilemma his grandees became factious and diſcontented, his army mutinous for want of pay, and he rendered himſelf odious to his ſubjects by the exactions he was neceſſitated to lay upon them. The Engliſh, who for their own intereſt had raiſed him to the ſupreme power, no ſooner found that he was incapable of anſwering their purpoſe any longer, than they began to ſcheme againſt him; and in order to have ſome colour of reaſon for pulling down the man whom they had juſt ſet up, they either invented or gave ear to the moſt malicious calumnies againſt him. The charges brought againſt him were ſhortly theſe: 1. That ſoon after his advancement he had reſolved to reduce that power which raiſed him to the dignity. 2. That, to effect this, he aſſaſſinated or baniſhed every perſon of importance whom he ſuſpected of being in the Engliſh intereſt. 3. That he negociated with the Dutch to introduce an armament for the expulſion of the Engliſh. 4. That he had in different inſtances been guilty of the deepeſt deceit and treachery towards the Engliſh, his beſt benefactors and allies. 5. That at three different periods the Engliſh commander in chief had been baſely deſerted both by the nabob and his ſon, when he and the troops were hazarding their lives for them. 6. That he meditated a ſecret and ſeperate treaty with Shah-Zaddah, the Mogul's ſon, and had intended to betray the Engliſh to him. 7. That the whole term of his government had been one uninterrupted chain of cruelty, tyranny, and oppreſſion. 8. That he meditated, and was near carrying into execution, an infamous ſecret treaty with the Mahrattas, which would have proved the total deſtruction of the country if it had taken place. 9. That he threw every poſſible obſtruction in the way of the collection of the Engliſh *tunkas* or aſſignments upon lands. 10. That he encouraged the obſtructions given to the free currency of the Engliſh ſiccas; by which the company ſuffered heavy loſſes. 11. That by his cruelties he had rendered it ſcandalous for the Engliſh to ſupport his government any longer; and, 12. That by his miſconduct, he had brought the affairs of the company as well as his own into the utmoſt danger of ruin.

89
Shameful behaviour of the Engliſh towards him.

In what manner theſe charges were ſupported it is difficult to know, nor perhaps were the accuſers very ſolicitous about the ſtrength of their evidence. This ſeems the more probable, as the accuſations of cruelty were, in ſome inſtances at leaſt, void of foundation. On the 13th of June 1760, Mr Holwel wrote from Calcutta to Mr Warren Haſtings, that by expreſs he had received intelligence of the murder of the princeſſes of Aliverdy Khan and Shah Amet, in a moſt inhuman manner, by Meer Jaffier's orders. He was ſaid to have ſent a Jemmatdaar wiith 100 horſe to Jeſſeraut Khan to carry this bloody ſcheme into execution; with ſeparate orders to the Jemmatdaur to put an end to their lives. He refuſed acting any part in the tragedy, and left it to the other; who carried them out by night in a boat, tied weights to their legs, and threw them overboard. They ſtruggled for ſome time, and held by the gunwale of the boat; but by ſtrokes on their heads, and cutting off their hands, they were at laſt forced off and drowned. In like manner we were told that many other, of Surajah Dowla's relations had periſhed; yet when it was thought proper to replace Meer Jaffier in 1761, all theſe dead perſons were found *alive* excepting two. It muſt alſo be remembered, in behalf of the unfortunate nabob, that beſides the ſums exacted of him by the Engliſh at his acceſſion, he had ceded to them a large extent of territory, and granted them ſo many immunities in trade, that he had in a manner deprived himſelf of all his reſources; and it was impoſſible for him to defray the neceſſary expences without either extorting money from his ſubjects, or infringing the privileges he had ſo inconſiderately granted.

90
Different accounts of his depoſition.

There were two accounts of this remarkable revolution publiſhed, materially differing from one another. The firſt was given in a memorial drawn up at a conſultation at Fort William. November 10. 1760, where were preſent Henry Vanſittart, Eſq; preſident; William Ellis, B. Sumner, William M'Guire, Henry Vereſt, and Henry Smyth, Eſqs. "We reſolved (ſays the governor) to give the nabob the next day (October 19. 1760) to reflect upon the letters I had delivered him, propoſing ſome meaſures for regulating theſe abuſes. I heard nothing from him all that day; but found by my intelligence that he had been in council at his old adviſers, whoſe advice, I was ſure, would be contrary to the welfare of the country and of the company. I therefore determined to act immediately on the nabob's fear. There could not be a better opportunity than the night of the 19th offered, it being the concluſion of the Gentoo feaſt, when all the principal people of that caſt would be pretty well fatigued with their ceremonies. Accordingly I agreed with Colonel Caillaud, that he ſhould croſs the river with the detachment between three and four in the morning; and having joined Coſſim Ali Khan and his people, march to the nabob's palace, and ſurround it juſt at day-break. Being extremely deſirous to prevent diſturbance or bloodſhed, I wrote a letter to the nabob, telling him, I had been waiting all the day in expectation that he would have ſettled the urgent affairs upon which I conferred with him yeſterday; but his having favoured me with no anſwer, plainly ſhowed that all I could repreſent to him for the good of his country would have no effect, as long as his evil counſellors were about his perſon, who would in the end deprive him of his government and ruin the company's affairs. For this reaſon I had ſent Colonel Cailland with forces to wait upon him, and to expel thoſe bad counſellors, and place his affairs in a proper ſtate, and I would ſhortly follow. This letter I gave to the colonel, to ſend to the nabob at ſuch a time as he ſhould think moſt expedient. Meaſures were taken at the ſame time for ſeizing his three unworthy miniſters, and to place Coſſim Ali Khan in the full management of all the affairs, in quality of deputy and ſucceſſor to the nabob.

"The neceſſary preparations being made with all care and ſecrecy poſſible, the colonel embarked with the troops, joined Coſſim Ali Khan without the leaſt alarm, and marched into the court-yard of the palace juſt at the proper inſtant. The gates of the inner court being ſhut, the colonel formed his men without, and ſent the letter to the nabob, who was at firſt in a great rage, and long threatened that he would make what reſiſtance he could, and take his fate. The colonel forbore all hoſtilities, and ſeveral meſſages paſſed between him and the nabob. The affair remained in this doubtful ſtate for two hours, when the nabob, finding his perſiſting was to no purpoſe, ſent a meſſage to Coſſim Ali Khan, informing him that he was ready to ſend the ſeals and all the enſigns of dignity, provided he would agree to take the whole charge of the government upon him, to diſcharge all arrears due to the troops, to pay the uſual revenue to the king, to ſave his life and honour, and to give him an allowance ſufficient for his maintenance. All theſe conditions being agreed to, Coſſim Ali was proclaimed; and the old nabob came out to the colonel, declaring that he depended on him for his life. The troops then took poſſeſſion of all the gates; and the old nabob was told, that not only his perſon was ſafe, but his government too if he pleaſed, of which it was never intended to deprive him. He anſwered, that he had now no more buſineſs in the city, where he ſhould be in continual danger from Coſſim Ali Khan: and if he was permitted to go and live at Calcutta, he ſhould be contented. Coſſim Ali Khan was now placed on the muſnud, and the people in general ſeemed much pleaſed with the revolution. The old nabob did not think himſelf ſafe even for one night in the city. Coſſim Ali Khan ſupplied him with boats, and permitted him to take away about 60 of his family, with a reaſonable quantity of jewels. He begged that he might ſleep in his boat that night; which he accordingly did, and on the morning of the 22d of October he ſet out for Calcutta, and arrived there on the 29th. He was met by a deputation from the council, and treated with every mark of reſpect due to his former dignity."

The ſecond account of this affair was not publiſhed till the 11th of March 1762, and was ſigned Eyre Coote, P. Amyatt, John Cavnac, W. Ellis. S. Batſon, H. Verelſt. "In September 1760 (ſay they), when there was not the leaſt appearance of a rupture or diſguſt between us and the nabob, but friendſhip and harmony ſubſiſting, Meer Coſſim Khan his ſon-in-law came down to Calcutta, and having ſtaid a ſhort time returned to Moorſhebad. A few days after, Mr Vanſittart went up to that city on the pretence of a viſit to the nabob Meer Jaffier. Colonel Caillaud, with 200 Europeans and ſome ſepoys, attended him; who, it was pretended, were going to join the army at Patna. When Mr Vanſittart arrived at Moradbaug, the nabob paid him two viſits; at the laſt of which Mr Vanſittart gave him three letters, propoſing the reformation of the abuſes in his government, inſiſted on his naming ſome perſon among his relations to take charge of the ſubahſhip, and particularly recommended Coſſim Ali Khan, who was ſent for, and the nabob deſired to ſtay till he came: But the nabob, being greatly fatigued, was ſuffered to depart to his palace. The night and following day paſſed in concerting meaſures with Coſſim Ali how to put in execution the plan before agreed on in Calcutta, where a treaty was ſigned for this purpoſe. In conſequence of theſe deliberations, our troops croſſed the river next night, and being joined by Coſſim and his party, ſurrounded the nabob's palace. A letter from Mr Vanſittart was ſent in to the nabob, demanding his compliance with what had been propoſed to him. To this the nabob returned for anſwer, 'that he never expected ſuch uſage from the Engliſh; that while a force was at his gates, he would enter into no terms.' A meſſage was ſent in, that if he did not directly comply, they ſhould be obliged to ſtorm the palace. Aſtoniſhed and terrified at this menace, he opened the gates, exclaiming, that 'he was betrayed; that the Engliſh were guilty of perjury and breach of faith; that he perceived their deſigns againſt his government; that he had friends enough to hazard at leaſt one battle in his defence: but although no oaths were ſacred enough to bind the Engliſh, yet as he had ſworn to be their faithful friend, he would never ſwerve from his engagement, and rather ſuffer death than draw his ſword againſt them.' So ſuſpicious was he of being ſold, that he deſired to know what ſum of money Coſſim Ali Khan was to give for the ſubahſhip, and he would give half as much more to be continued. He hoped, however, if they in-

intended to dethrone him, that they would not leave him to the mercy of his ſon-in-law, from whom he feared the worſt; but wiſhed they would carry him from the city, and give him a place of ſafety in Calcutta. "This laſt requeſt of the nabob was conſtrued in the light of a voluntary reſignation. Our troops took poſſeſſion of the palace; Meer Coſſim was raiſed to the muſnud; and the old nabob hurried into a boat with a few of his domeſtics and neceſſaries, and ſent away to Calcutta in a manner wholly unworthy of the high rank he ſo lately held, as was alſo the ſcanty ſubſiſtence allowed him for his maintenance at Calcutta by his ſon-in-law. Thus was Jaffier Ali Khan depoſed, in breach of a treaty founded on the moſt ſolemn oaths, and in violation of the national faith."

According to this account, the ſervants of the Company, who were the projectors of the revolution, made no ſecret that there was a preſent promiſed them of 20 lacks of rupees from Coſſim, who was deſirous of making the firſt act of his power the aſſaſſination of Jaffier, and was very much diſpleaſed when he found that the Engliſh intended giving him protection at Calcutta.

91
Meer Coſſim ſchemes againſt the Engliſh.

It could ſcarce be ſuppoſed that Meer Coſſim, raiſed to the nabobſhip in the manner we have related, could be more faithful to the Engliſh than Meer Jaffier had been. Nothing advantageous to the intereſts of the company could indeed be reaſonably expected from ſuch a revolution. No ſucceſſor of Meer Jaffier could be more entirely in ſubjection than the late nabob, from his natural imbecility, had been. This laſt conſideration had induced many of the council at firſt to oppoſe the revolution; and indeed the only plauſible pretence for it was, that the adminiſtration of Meer Jaffier was ſo very weak, that, unleſs he was aided and even controuled by ſome perſons of ability, he himſelf muſt ſoon be ruined, and very probably the intereſts of the company along with him. Meer Coſſim, however, was a man of a very different diſpoſition from his father-in-law. As he knew that he had not been ſerved by the Engliſh out of friendſhip, ſo he did not think of making any return of gratitude; but inſtead of this, conſidered only how he could moſt eaſily get rid of ſuch troubleſome allies. For a while, however, it was neceſſary for him to diſſemble, and to take all the advantage he could of the power of his allies whilſt it could be ſerviceable to him. By their aſſiſtance he cleared his dominions of invaders, and ſtrengthened his frontiers againſt them; he reduced, by means of the ſame aſſiſtance, the rajahs or independent Indian chiefs who had rebelled in the time of his predeceſſor, obliging them to pay the uſual tribute; by which means he repaired his finances, and thereby ſecured the diſcipline and fidelity of his troops. Having thus, by the aſſiſtance of the Engliſh forces, brought his government into ſubjection, he took the moſt effectual means of ſecuring himſelf againſt their power. As the vicinity of his capital, Muxadabad, to Calcutta, gave the Engliſh factory there an opportunity of inſpecting his actions, and interrupting his deſigns when they thought proper, he took up his reſidence at Mongheer, a place 200 miles farther up the Ganges, which he fortified in the beſt and moſt expeditious manner he could. Being very ſenſible of the advantages of the European diſcipline, he reſolved to form his army on a new model. For this purpoſe he collected all the Armenian, Perſian, Tartar, and other ſoldiers of fortune, whoſe military characters he ſuppoſed might ſerve to raiſe the ſpirits of his Indian forces, and abate their natural timidity. He alſo carefully collected every wandering European who had borne arms, all the Sepoys who had been diſmiſſed from the Engliſh ſervice, diſtributing them among his troops, in order to teach them the Engliſh exerciſe. He changed the faſhion of the Indian muſkets from matchlocks to firelocks; and as their cannon were almoſt as deficient as their ſmall arms, he procured a pattern of one from the Engliſh, by which he ſoon formed a train of artillery: and having thus done every thing in his power to enable himſelf to withſtand the Engliſh by force of arms, he reſolved alſo to free his court from their emiſſaries, by impriſoning or putting to death every perſon of any conſequence in his dominions who had ſhown any attachment to their intereſt.

92
He lays duties on the Engliſh traders.

His next ſtep was to free himſelf from ſome of thoſe reſtraints which his predeceſſor Meer Jaffier, and even he himſelf, had been obliged to lay upon the trade of the country, in order to gratify the avarice of his European allies. At his acceſſion indeed he had ceded to the company a tract of land worth no leſs than 700,000 l. annually, beſides 70,000 l. a-year on other accounts. All this, however, was not ſufficient; the immunities granted them in trade were of ſtill worſe conſequence than even thoſe vaſt conceſſions. He knew by experience the diſtreſs which theſe immunities had brought upon his predeceſſor, and therefore determined to put an end to them. In purſuance of this reſolution, he began, in the year 1762, every where to ſubject the Engliſh traders to the payment of certain duties throughout his dominions, and required that their diſputes, if beyond the limits of their own juriſdiction, ſhould be decided by his magiſtrates. This gave ſuch an alarm at Calcutta, that, in November 1762, the governor Mr Vanſittart waited on him in perſon at Mongheer, in order to expoſtulate with him upon the ſubject. The nabob anſwered his remonſtrances in the following manner. "If (ſaid he) the ſervants of the Engliſh company were permitted to trade in all parts, and in all commodities, cuſtom free, as many of them now pretend, they muſt of courſe draw all the trade into their own hands, and my cuſtoms would be of ſo little value, that it would be much more to my intereſt to lay trade entirely open, and collect no cuſtoms from any perſon whatever upon any kind of merchandize. This would draw a number of merchants into the country, and increaſe my revenues by encouraging the cultivation and manufacture of a large quantity of goods for ſale, at the ſame time that it would effectually cut off the principal ſubject of diſputes which had diſturbed the good underſtanding between us, an object which I have more than any other at heart."

By theſe intimations Mr Vanſittart was very much diſconcerted; nor indeed was it in any perſon's power to deviſe a plauſible anſwer. What the nabob had threatened was evidently in his power; and though he had laid the trade entirely open, no reaſonable fault could have been found with him. The proceeding, however, tended evidently to deſtroy the private trade carried on by the gentlemen of the factory; and even to prejudice, as they ſaid, that of the company itſelf. Mr Vanſittart therefore thought proper to ſubmit to certain regulations, by which the trade of the Engliſh was put under certain reſtrictions.

93
A new agreement concluded with Mr Vanſittart, and diſowned by the council.

This new agreement being inſtantly put in execution on the part of the nabob, excited the utmoſt indignation at Calcutta. On the 17th of January 1763, the council paſſed a reſolution, diſavowing the treaty made by the governor, and affirmed that he aſſumed a right to which he was by no means authoriſed; that the regulations propoſed were diſhonourable to them as Engliſhmen, and tended to the ruin of all public and private trade; and that the preſident's iſſuing out regulations independent of the council was an abſolute breach of their privileges. They ſent orders therefore to all the factories, that no part of the agreement between the governor and nabob ſhould be ſubmitted to. Application was again made to Meer Coſſim to perſuade him to a third agreement; but before the ſucceſs of this negociation could be known, hoſtilities commenced on the part of the Engliſh.

94
The city of Patna taken by the Engliſh, but immediately after retaken.

There was at that time in the city of Patna (ſituated on the Ganges, about 300 miles above Calcutta), a fortified factory belonging to the Eaſt India company, where were a few European and Indian ſoldiers. By this factory the city was ſuddenly attacked on the 25th of June 1763, and inſtantly taken, though it was defended by a ſtrong garriſon, and the fortifications had been newly repaired. The governor and garriſon fled out into the country on the firſt appearance of danger: but perceiving that the victors took no care to prevent a ſurpriſe, he ſuddenly returned with a reinforcement from the country, retook the city, and either cut in pieces or drove into their fort all the Engliſh who were in it, after having been only four hours in poſſeſſion of the place. The Engliſh, diſheartened by this diſaſter, did not now think themſelves able to defend their fort againſt the Indians; for which reaſon they left it, with a deſign to retreat into the territories of a neighbouring nabob; but being purſued by a ſuperior force, they were all either killed or taken.

95
Maſſacre of the Engliſh deputies.

This piece of perfidy, for ſuch it certainly was, the nabob repaid by another, viz. ſlaughtering the deputies who had been ſent him by the council of Calcutta to treat about a new agreement with regard to commercial affairs. They ſet out from Mongheer on the 24th of June, having been unable to bring Meer Coſſim to any terms; and though he furniſhed them with the uſual paſſports, yet, as they were paſſing the city of Muxadabad, they found themſelves attacked by a number of troops aſſembled for that purpoſe on both ſides of the river, whoſe fire killed ſeveral gentlemen in the boats. Mr Amyatt, the chief of the embaſſy, landed with a few ſepoys, whom he forbid to fire, and endeavoured to make the enemy's troops underſtand that he was furniſhed with the nabob's paſſports, and had no deſign of committing any hoſtilities; but the enemy's horſe advancing, ſome of the ſepoys fired notwithſtanding Mr Amyatt's orders to the contrary. On this a general confuſion enſued, and Mr Amyatt, with moſt of the ſmall party who attended him, were cut in pieces.

Theſe acts of treacherous hoſtility were ſoon followed by a formal declaration of war. Meer Jaffier, notwithſtanding the crimes formerly alleged againſt him, was proclaimed nabob of Bengal, and the army immediately took the field under the command of Major Adams. The whole force, however, at firſt conſiſted only of one regiment of the king's troops, a few of the company's, two troops of European cavalry, ten companies of ſepoys, and 12 pieces of cannon. Theſe very ſoon came to action with the enemy; and having got the better in two ſkirmiſhes, cleared the country of them as far as Caſſimbuzar river, a branch of the Ganges, which lay between Calcutta and Muxadabad, or Murſhudabad, the capital of the province.

96
Meer Jaffier again proclaimed nabob.

97
Major Adams marches againſt Meer Coſſim.

The war was now carried on with uninterupted ſucceſs on the part of the Engliſh; nor does it appear that all the pains taken by Meer Coſſim to diſcipline his troops had made them in the leaſt more able to cope with the Europeans. The Engliſh were ſuffered to paſs the river without oppoſition; but an army of 10,000 Indians were advantageouſly poſted between the river and the city. Theſe were entirely defeated, and Major Adams puſhed on directly for the capital. In his way he found the Indians again ſtrongly poſted with intrenchments 15 feet high, and defended by a numerous artillery. This ſtrong poſt was taken by ſtratagem; a feint being made with a ſmall body of troops againſt that part where the enemy had collected their greateſt ſtrength. Thus the attention of the enemy was drawn entirely to that place, without regarding others where no attack was apprehended. The greateſt part of the Engliſh army, however, had in the night time marched round the Indian fortification, and by day break made a furious aſſault on a place where there was only a ſlight guard. Theſe inſtantly fled; the intrenchments were abandoned; and the city, which was protected only by them, fell of courſe into the hands of the conquerors.

98
The Indians defeated.

This ſucceſs of the Engliſh ſerved only to make them redouble their diligence. They now penetrated into the heart of the province, croſſed the numerous branches of the Ganges, and traverſed moraſſes and foreſts in queſt of their enemy. Meer Coſſim, on the other hand, was not wanting in his defence; but the utmoſt efforts he could uſe were totally inſufficient to ſtop the career of an enemy ſo powerful and now fluſhed with victory. The two armies met on the banks of a river called *Nunas Nullas*, on the 2d of Auguſt 1763. The Indians had choſen their poſt with great judgment, and had much more the appearance of an European army than ever was obſerved before, not only in their arms and accoutrements, but in their diviſion into brigades, and even in their cloathing. The battle was much more obſtinate than uſual, being continued for four hours; but though the Indian army conſiſted of no fewer than 20,000 horſe and 80,000 foot, the Engliſh proved in the end victorious, and the enemy were obliged to quit the field with the loſs of all their cannon.

99
Meer Coſſim entirely defeated at Nunas Nullas.

From this time the Indians did not attempt any regular engagement with the Engliſh. They made a ſtand indeed at a place called *Auda Nulla*, which they had fortified in ſuch a manner that it ſeemed proof againſt any ſudden attack. But here alſo they ſuffered themſelves to be deceived in a manner ſimilar to that abovementioned, and the place was taken with great ſlaughter.

ter. They now abandoned a vaſt tract of country; and tho' there were ſeveral very denſenſible poſts one behind another, ſo much were they diſheartened by this miſfortune, that they never attempted to ſtop the progreſs of the Engliſh, but laid open the whole country to the very gates of Mongheer.

100 Mongheer taken.

The next operation was the ſiege of Mongheer itſelf; which, notwithſtanding all the pains Meer Coſſin had been at to fortify it, held out no more than nine days after the trenches were opened: ſo that nothing now remained to complete the conqueſt of Bengal but the reduction of the city of Patna. The unfortunate Meer Coſſim, in the mean time, enraged at the irreſiſtible progreſs of the Engliſh, vented his rage on the unhappy priſoners taken at Patna; all of whom, to the number of about 200, he cauſed to be inhumanly murdered. This villany was perpetrated by one *Somers*, a German, who had originally been in the French ſervice, but deſerted from them to the Engliſh Eaſt India company, and from the company to Meer Coſſim. This aſſaſſin, by the Indians called *Soomeroo*, having invited the Engliſh gentlemen to ſup with him, took the opportunity of borrowing their knives and forks, on pretence of entertaining them after the Engliſh manner. At night, when he arrived, he ſtood at ſome diſtance in the cook-room to give his orders; and as ſoon as the two firſt gentlemen, Mr Ellis and Luſhington, entered, the former was ſeized by the hair, his head pulled backward, and his throat cut by another. On this Mr Luſhington knocked down the murderer with his fiſt, ſeized his ſword, wounded one and killed two before he himſelf was cut down. The other gentlemen being now alarmed, defended themſelves, and even repulſed the ſepoys with plates and bottles. Somers then ordered them on the top of the houſe to fire down on the priſoners; which they obeyed with reluctance, alleging that they could not think of murdering them in that manner, but if he would give the priſoners arms, they would fight them; on which he knocked ſeveral of them down with bamboes. The conſequence was, that all the gentlemen were either ſhot or had their throats cut. Dr Fullerton was the only perſon who eſcaped, having received a pardon from the tyrant a few days before the maſſacre.

101 Inhuman murder of the Engliſh priſoners at Patna.

This inhumanity was far from being of any ſervice to the cauſe of Meer Coſſim. Major Adams marched without delay from Moongheer to Patna; and as the place was but indifferently fortified, it could make but a feeble reſiſtance. The cannon of the Engliſh ſoon made a practicable breach, and in no longer time than eight days this great city was taken by ſtorm. Thus the nabob was deprived of all his fortified places, his army reduced to a ſmall body, and himſelf obliged to fly to Sujah Dowla nabob of Oude, who acted as grand vizier to the Mogul. Here he was kindly received, and an aſylum promiſed for his perſon, but admittance was refuſed to his army, nor would this prince conſent at any rate to make his country a ſeat of war. the Engliſh were now entire maſters of Bengal; for though Meer Jaffier was proclaimed nabob, it is not to be ſuppoſed that he had now any authority farther than what they pleaſed to give him. Major Adams did not long ſurvive the conqueſt of Patna, which was taken on the 6th of November 1763; he died in the month of March 1764.

102 Patna taken, and Bengal entirely reduced by the Engliſh.

103 Alliance propoſed with Sujah Dowla.

Meer Coſſim being thus driven out, an agent was ſent from Calcutta to Sujah Dowla, propoſing an alliance with him and the Mogul, who was along with him, and offering to aſſiſt them againſt Meer Coſſim or any other enemy who ſhould attempt an invaſion of their dominions; in return for which, it was expected that they ſhould declare themſelves open enemies to Meer Coſſim, and uſe their utmoſt endeavours to ſeize and deliver him up with all his effects. This deſign was communicated to Major Adams on the 8th of December 1763; but as he was next day to reſign the command of the army, Major Carnac was deſired to take the command upon him, and to watch the motions of Meer Coſſim, as well as to guard the dominions of Meer Jaffier againſt any hoſtilities which might be attempted. It was alſo reſolved, that in caſe Meer Coſſim ſhould prevail upon the Mogul and Sujah Dowla to aſſiſt him, Major Carnac was deſired to advance to the banks of the river Carumnaſſa, and there oppoſe the entrance of any hoſtile army.

104 Propoſed alliance rejected by Sujah Dowla.

It ſoon appeared that the friendſhip of the Engliſh was not what Sujah Dowla deſired. He conſidered them as rapacious uſurpers, who having got a footing in the country under pretence of commerce, could be ſatisfied with nothing leſs than the entire poſſeſſion of it, to the ruin of the natural inhabitants. In the beginning of February 1764, therefore, it was known that Sujah Dowla had determined to aſſiſt Meer Coſſim in attempting to recover Bengal. The preſident and council on this wrote him, that though they heard ſuch a report, they could not believe it, conſidering the former connections ſubſiſting between him and the chiefs of the company, and were perſuaded he would not act in ſuch an unjuſt manner: but if it really was his intention to eſpouſe the cauſe of Meer Coſſim, they informed him that they were reſolved to keep Bengal free from troubles and carry the war into the dominions of Sujah Dowla himſelf. To this the nabob replied by enumerating the many favours conferred on the Engliſh by the Mogul. "Notwithſtanding theſe (ſays he) you have interfered in the king's country, poſſeſſed yourſelves of diſtricts belonging to the government, and turned out and eſtabliſhed nabobs at pleaſure, without the conſent of the imperial court. Since you have impriſoned dependents on the court, and expoſed the government of the king of kings to contempt and diſhonour; ſince you have ruined the trade of the merchants of the country, granted protection to the king's ſervants, injured the revenues of the imperial court, and cruſhed the inhabitants by your acts of violence; and ſince you are continually ſending freſh people from Calcutta, and invading different parts of the royal dominions; to what can all thoſe wrong proceedings be attributed, but to an abſolute diſregard to the court, and a wicked deſign of ſeizing the country to yourſelves? If theſe diſturbances have ariſen from your own improper deſires, deſiſt from ſuch behaviour in future; interfere not in the affairs of government; withdraw your people from every part, and ſend them to their own country; carry on the company's trade as formerly, and confine yourſelves to commercial affairs," &c. Another letter, much to the ſame purpoſe, was ſent to Major Carnac; but the preſident and council of Calcutta, inſtead of paying any regard to the remonſtrances of the nabob, determined to commence an immediate and offenſive war againſt him.

Notwithſtanding this reſolution, ſeveral difficulties

occurred

105 Sir Hector Munro ſucceeds Major Adams.

occurred in carrying on a war at this time. The principal were the death of Major Adams, whoſe name had become formidable to the Indians, and the mutinous diſpoſition of the army. The former was obviated by the appointment of Colonel Hector Munro, who, in military ſkill, appeared nothing inferior to his predeceſſor; and the mutinous diſpoſition of the ſoldiery was got the better of by a moſt ſevere example of the mutineers, 24 of whom were blown away from the mouths of cannon. Hoſtilities were commenced on the part of Meer Coſſim, who cut off a ſmall party of Engliſh troops, and ſent their heads to the mogul and Sujah Dowlah. An army of 50,000 men was collected, with a moſt formidable train of artillery, ſuch as might be ſuppoſed to follow an European army of equal numbers. This prodigious armament ſeems to have effaced all the caution of Meer Coſſim; for though he had formerly experienced the bad effects of engaging the Engliſh in a pitched battle, yet he now thought proper to try his fortune a ſecond time in the ſame way. The two armies met on the 22d of October 1764, at a place called Buxard, on the river Carumnaſſa, about 100 miles above the city of Patna. The event was ſimilar to that of other engagements with the Engliſh, to whom it never was poſſible for any advantages either in ſituation or number to make the Indians equal, The allied army was defeated with the loſs of 6000 killed on the ſpot, 130 pieces of cannon, a proportionable quantity of military ſtores, and all their tents ready pitched; while, on the ſide of the conquerors, only 32 Europeans and 239 Indians were killed, and 57 Europeans and 473 Indians wounded.

106 Defeats the Indians at Buxard.

107 Is repulſed at Chanda Geer.

The only place of ſtrength now belonging to the allies on this ſide the river was a fort named Chanda Geer. The reduction of this place, however, might well have been deemed impracticable, as it ſtood on the top of a high hill, or rather rock, ſituated on the very brink of the Ganges, by which it could be conſtantly ſupplied with proviſions; and as to military ſtores, it could not ſtand in need of any as long as ſtones could be found to pour down on the aſſailants. Notwithſtanding all thoſe difficulties, however, Colonel Munro cauſed his ſoldiers advance to the attack; but they were received with ſuch vollies of ſtones, which the Indians threw both with hands and feet, that they were repulſed in a very ſhort time; and though the attack was renewed the next day, it was attended with no better ſucceſs; on which the Engliſh commander encamped with his army under the walls of Benares.

Soon after this, Colonel Munro being recalled, the command of the army devolved on Sir Robert Fletcher, a major in the company's troops. The nabob in the mean time, inſtead of attacking the Engliſh army at once, contented himſelf with ſending out parties of light horſe to ſkirmiſh with their advanced poſts, while the main body lay at the diſtance of about 15 miles from Benares, which rendered it very dangerous for them to move from their place. On the 14th of January 1765, however, Sir Robert ventured at midnight to break up his camp under the walls of Benares, and to march off towards the enemy, leaving a party to protect that place againſt any attempt during his abſence. In three days he came up with the main body of Indians, who retreated before him; on which he reſolved to make another attempt on Chanda Geer, before which the late commander had been foiled. His ſucceſs would in all probability have been no better than that of his predeceſſor, had not the garriſon mutinied for want of pay, and obliged the commander to ſurrender the place.

108 Chanda Geer taken by Sir Robert Fletcher.

The reduction of Chanda Geer was followed by that of Eliabad, the capital of the enemy's country, a large city on the Ganges, between 60 and 70 miles above Chanda Geer, defended by thick and high walls and a ſtrong fort; ſoon after which Sir Robert was ſuperſeded in the command of the army by Major Carnac. Sujah Dowla in the mean time had been abandoned by the Mogul, who concluded a treaty with the Engliſh ſoon after the battle of Buxard. He did not, however, give himſelf up to deſpair, but gathered together, with great aſſiduity, the remains of his routed armies; and ſeeing that his own territories could not ſupply him with the requiſite number of troops, he now applied to the Mahrattas for aſſiſtance. But theſe people, though very formidable to the other nations of Indoſtan, were far from being able to cope with the Engliſh. On the 20th of May 1765, General Carnac having aſſembled his troops, marched immediately to attack them; and having gained a complete victory at a place called Calpi, obliged them to retreat with precipitation acroſs the Yumna into their own country.

109 Sujah Dowla aſſiſted by the Mahrattas.

110 Who are defeated, and Sujah Dowla ſubmits.

Sujah Dowla, now deſtitute of every reſource, determined to throw himſelf on the clemency of the Engliſh. Previous to this, however, he allowed Meer Coſſim and the aſſaſſin Somers to eſcape; nor could any conſideration ever prevail upon him to deliver them up. Three days after the battle of Calpi, the nabob ſurrendered himſelf to General Carnac, without ſtipulating any thing in his own favour, farther than that he ſhould await the determination of Lord Clive concerning him.

111 Young nabob of Bengal hardly uſed by the Engliſh.

In the beginning of February this year died Meer Jaffier Ali Cawn, nominal nabob of Bengal. The ſucceſſion was diſputed betwixt his eldeſt ſurviving ſon Najem il Doula, a youth of about 18 years of age, and a grandſon by his eldeſt ſon Miran, at that time only ſeven years old. As the Engliſh were in reality abſolute ſovereigns of the country, it was debated in the council of Calcutta whether Meer Jaffier's ſon ſhould be allowed to ſucceed, according to the cuſtom of the country, or the grandſon, according to the Engliſh cuſtom. The point being carried in favour of Najem, it was next debated on what terms he ſhould be admitted to the ſucceſſion. The late nabob, among other impoſitions, had obliged himſelf to ſupport an army of 12,000 horſe and as many foot. It was alleged on this occaſion, that he had not fulfilled his engagement; that he had diſbanded moſt of the troops; that at beſt they were but an uſeleſs burden, having never anſwered any purpoſe in real ſervice, for which reaſon the company had been obliged to augment their military eſtabliſhment: it was therefore now judged expedient that the nabob ſhould ſettle a ſum, upwards of 800,000 l. annually, on the company, to be paid out of the treaſury; that he ſhould alſo diſcard his prime miniſter and great favourite Nuncomar, and receive in his place a perſon appointed by the council, who was to act in the double capacity of miniſter and governor to aſſiſt and inſtruct him.

The council were alſo to have a negative upon the nomination of all the ſuperintendants and principal officers employed in collecting or receiving of the revenues; that he ſhould take their advice, and have their conſent to ſuch nominations whenever they thought proper to interfere in them. He was alſo to receive their complaints, and pay a due attention to them upon the miſbehaviour of any of the officers who either were appointed already or ſhould be in time to come.

With theſe extravagant requiſitions the young nabob was obliged to comply, though he had diſcernment enough to perceive that he was now an abſolute ſlave to the council of Calcutta. Though obliged by treaty to diſmiſs Nuncomar from the office of prime miniſter, he ſtill continued to ſhow him the ſame favour, until at laſt he was charged with carrying on a treaſonable correſpondence with Sujah Dowla, for which the nabob was enjoined to ſend him to Calcutta to take his trial. The unfortunate prince uſed every method to deliver his favourite from the impending danger, but to no purpoſe: he was obliged to ſubmit to the mortification of having all his offers with regard to his releaſe rejected, though the committee at Calcutta afterwards thought proper to ſet him at liberty without any trial.

Theſe extraordinary powers, exerted in ſuch a deſpotic manner by the council of Calcutta for ſuch a length of time, could not but at laſt induce their ſuperiors to circumſcribe them in ſome degree, by appointing others who ſhould act independently even of this council, and who might be ſuppoſed to be actuated by more upright and honourable principles than had hitherto appeared in their conduct. The great character which Lord Clive had already gained in the eaſt, juſtly marked him out as a proper perſon for adjuſting the affairs of Bengal. On the 3d of May 1765 he arrived in the eaſt, with full powers as commander in chief, preſident, and governor of Bengal. An unlimited power was alſo committed to a ſelect committee, conſiſting of his lordſhip and four gentlemen, to act and determine every thing themſelves, without dependence on the council. It was, however, recommended in their inſtructions, to conſult the council in general as often as it could be done conveniently; but the ſole power of determining in all caſes was left with them, until the troubles of Bengal ſhould be entirely ended. By theſe gentlemen a plan of reformation was inſtantly ſet about: by which, however, violent diſputes were occaſioned: but the committee, diſregarding theſe impotent efforts, exerted their authority to the full extent, ſeldom even acquainting the council with their tranſactions, and never allowing them to give their opinion on any occaſion.

112
Lord Clive arrives in Bengal with unlimited powers.

113
Sujah Dowla reſtored.

On taking the affairs of Bengal into thorough conſideration, Lord Clive found that the ſucceſs of the Britiſh arms could be productive of nothing but wars; that to ruin Sujah Dowla was to break down the ſtrongeſt barrier which the Bengal provinces could have againſt the incurſions of the Mahrattas and other barbarous people to the weſtward, who had long deſolated the northern provinces; and the Mogul, with whom the company had concluded a treaty, was utterly unable to ſupport himſelf, and would require the whole Engliſh power in the eaſt to ſecure him in his dignity. His lordſhip therefore found it neceſſary to conclude a treaty with Sujah Dowla. The Mogul was ſatisfied by obtaining a more ample revenue than he had for ſome time enjoyed; by which means he might be enabled to march an army to Delhi to take poſſeſſion of his empire. For the company his lordſhip obtained the office of duan or collector of revenues for the province of Bengal and its dependencies. Thus Sujah Dowla was again put in poſſeſſion of his dominions, excepting a ſmall territory which was reſerved to the Mogul, and eſtimated at 20 lacks of rupees, or 250,000 l. annually. The company were to pay 26 lacks of rupees, amounting to 325,000 l. ſterling. They engaged alſo to pay to the nabob of Bengal an annual ſum of 53 lacks, or 662,500 l. for the expences of government, and the ſupport of his dignity. The remainder of the revenues of Bengal were allotted to the company, who on their part guaranteed the territories at that time in poſſeſſion of Sujah Dowla and the Mogul.

114
Affairs of Bengal ſettled by Lord Clive.

Thus the Eaſt India company acquired the ſovereignty of a territory equal in extent to the moſt flouriſhing kingdom in Europe. By all this, however, they were ſo far from being enriched, that the diſorder of their affairs attracted the attention of government, and gave the Britiſh miniſtry an opportunity at laſt of depriving them of their territorial poſſeſſions, and ſubjecting the province of Bengal to the authority of the crown*. New miſfortunes alſo ſpeedily occurred, and the company found a moſt formidable enemy in Hyder Aly, or Hyder Naig. This man, from the rank of a common ſepoy, had raiſed himſelf to be one of the moſt conſiderable princes in the empire of Indoſtan. Being ſenſible that the power of the Engliſh was an inſuperable bar to his ambitious deſigns, he practiſed on the nizam of the Decan, and partly by promiſes, partly by threats, engaged him to renounce his alliance with the company, and even to enter into a war againſt them. As he had been at great pains to introduce the European diſcipline among his troops, and had many renegadoes in his ſervice, he imagined, that with the advantage of numbers he ſhould certainly be able to cope with his antagoniſts in the open field. In this, however, he was deceived; for on the 26th of September 1767, his army was entirely defeated by Colonel Smith at a place called *Errour* near Trincomalle; after which the nizam thought it adviſable to deſert his new ally, and conclude another treaty with the Engliſh. From the latter, however, he did not obtain peace but at the expence of ceding to them the Duanny of the Balegat Carnatic, which includes the dominions of Hyder Aly and ſome petty princes.

115
War with Hyder Aly.

116
He is defeated by Colonel Smith.

Hyder, thus deſerted by his ally, transferred the ſeat of war to a mountainous country, where, during the year 1767, nothing deciſive could be effected; while the Indian cavalry was ſometimes enabled to cut off the ſupplies, and interrupt the communications of their antagoniſts. During theſe operations ſome ſhips were fitted out at Bombay, which conveyed 400 European ſoldiers and about 800 ſepoys to attack Mangalore, one of Hyder Aly's principal ſea-ports, where all his ſhips lay. This enterpriſe proved ſucceſsful, and nine ſhips were brought away; but too ſmall a garriſon having been left in the place, it was almoſt immediately after retaken, and all who were in it made priſoners by Hyder Aly.

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* See *Eaſt India Company*.

117 Decline of the Engliſh affairs, with the cauſe of their bad ſucceſs.

In the mean time, an injudicious meaſure, adopted by the Engliſh in their method of managing the army, proved not only of the utmoſt detriment to their cauſe, but occaſioned diſgraces hitherto unheard of in the hiſtory of the nation, viz. the deſertion of officers from the ſervice of Britain to that of a barbarous prince, and the giving up of forts in ſuch a ſhameful manner as could not but ſuggeſt a ſuſpicion that they had been betrayed.—The original cauſe of all this miſchief was the appointment of *field-deputies* to attend the army, and to controul and ſuperintend the conduct of the commander in chief; and theſe, in the preſent inſtance, being deeply concerned in the contracts for the army, took care to regulate its motions in ſuch a manner as beſt ſuited their private intereſt or convenience. Hyder Aly did not fail to improve the errors conſequent upon this kind of management to his own advantage. General Smith had penetrated far into his country, taken ſeveral of his fortreſſes, and was in a fair way of becoming maſter of his capital, when all his operations were checked at once by the field-deputies. His antagoniſt being thus allowed ſome reſpite, ſuddenly entered the Carnatic with a numerous army of horſe, ravaging and deſtroying every thing at pleaſure. Thus the Engliſh were obliged to relinquiſh all their conqueſts in order to defend their own territories; while this reverſe of fortune not only diſcouraged the allies of the Engliſh, but even produced in them an inclination to deſert their cauſe, and go over to Hyder Aly, while thoſe who remained faithful paid dearly for their attachment. The nabob of Arcot, the moſt faithful ally the Engliſh ever had, ſuffered extremely on this occaſion. Hyder Aly had long entertained a violent enmity againſt this prince; moſt probably on account of his inviolable attachment to the Engliſh. His dominions were therefore ravaged without mercy; and thus, while Hyder gratified his perſonal reſentment againſt him, he cut off from the Engliſh one of the principal reſources they had for carrying on the war.

On the return of the company's forces to the defence of the Carnatic, they found themſelves very little able to cope with their adverſary; for, beſides the continuance of the ſame cauſes which had formerly contributed to their want of ſucceſs, they had been very much weakened in their expedition. Hyder Aly had alſo the prudence to avoid a general engagement, but frequently intercepted the convoys of the Engliſh, cut off their detached parties, and wearied them out with long and continual marches. The news of his ſucceſs againſt an enemy hitherto invincible by all the powers of India, ſo raiſed his reputation, that adventurers flocked to him from all parts; by which means his cavalry were ſoon increaſed to upwards of 90,000; to which, however, his infantry bore no proportion.

118 Hyder Aly defeated by Colonel Wood.

Notwithſtanding all his ſucceſs, it appears that the forces of Hyder Aly were altogether unable to cope with thoſe of Britain, even when there was the greateſt imaginable diſparity of numbers. A detachment of the company's forces had made an aſſault upon a fort called *Mulwaggle*, in which they were repulſed with ſome loſs. This, with the ſmall number of the detachment, encouraged Hyder Aly to march, at the head of a great part of his army, to the protection of the fort. The commanding officer, however, Colonel Wood, did not heſitate, with only 460 Europeans and 2300 ſepoys, to attack this army, conſiſting of 14,000 horſe, 12,000 men armed with matchlock guns, and ſix battalions of ſepoys. The engagement laſted ſix hours; when at laſt Hyder Aly, notwithſtanding his numbers, was obliged to retreat, leaving the field covered with dead bodies; the loſs of the Britiſh being upwards of 300 killed and wounded. This engagement, however, was attended with no conſequences affecting the war in general, which went on for ſome time in the ſame manner, and greatly to the diſadvantage of the company. The diviſions and diſcontents among the officers and council daily increaſed, the ſoldiers deſerted, and every thing went to ruin. The revenues of the eſtabliſhment of Madras being at laſt unequal to the expences of the war, large remittances were made from Bengal to anſwer that purpoſe; and as theſe were made in a kind of baſe gold coin, the company is ſaid by that means alone to have loſt 40,000 l. in the difference of exchange only. At laſt Hyder Aly having given the Engliſh army the ſlip, ſuddenly appeared within a few miles of Madras; which occaſioned ſuch an alarm, that the preſidency there were induced to enter into a negociation with him. The Indian prince, on his part, was very ready to hearken to propoſals of peace upon any reaſonable terms. An offenſive and defenſive treaty was therefore concluded on the 3d of April 1769, on the ſimple condition that the forts and places taken on both ſides ſhould be reſtored, and each party ſit down contented with their own expences.

119 A treaty concluded with him.

120 Broken by the Engliſh.

By this treaty it was particularly ſtipulated, that in caſe of either party being attacked by their enemies, the other ſhould give them aſſiſtance; and in this caſe even the number of troops to be ſupplied by each was ſpecified. It ſoon after appeared, however, that the preſidency of Madras were reſolved to pay very little regard to their engagements. Hyder Aly having in a little time been involved in a war with the Mahrattas, applied for aſſiſtance, according to agreement; but was refuſed by the preſidency, who pretended to fear a quarrel with the Mahrattas themſelves. As the latter are a very powerful and warlike nation, Hyder Aly found himſelf overmatched, and therefore applied ſeveral times to the Engliſh for the aſſiſtance he had a right to expect; but was conſtantly refuſed on various pretences: which convinced him at laſt that he could place no dependence on the friendſhip of the Engliſh, and filled him with an implacable hatred againſt them. As ſoon, therefore, as he could make up his differences with the Mahrattas, he reſolved to recover his loſſes, and revenge himſelf on thoſe faithleſs allies. With this view he applied himſelf to their rivals the French; whom no Indian nation ever found backward in ſupplying them with the means of defence againſt the Engliſh. By their means he obtained military ſtores in the greateſt abundance, a number of experienced officers and ſoldiers: and the European diſcipline was brought to much greater perfection than even he himſelf had ever been able to bring it before this period. Thus, in a ſhort time, imagining himſelf a match for the Mahrattas, he renewed the war; and gained ſuch deciſive advantages, as quickly obliged them to conclude an advantageous treaty with him.

121 War between the Engliſh and Mahrattas.

It now appeared that the Engliſh, notwithſtanding their pretended ill-will to quarrel with the Mahrattas, had not the leaſt heſitation at doing ſo when their intereſt was concerned. In order to underſtand the ſubſequent tranſactions, however, we muſt obſerve, that the Mahrattas, like other nations of Indoſtan, were originally governed by princes called *Rajahs*, who reigned at Setterah; and though in proceſs of time they came to be divided into a number of petty ſtates, yet they paid a nominal reſpect to the ram-rajah, who had a right to aſſemble the chiefs, and order out their troops on any neceſſary occaſion. By degrees this dignity of ram-rajah or ſou-rajah (as he was alſo called), became merely titular, the adminiſtration being entirely poſſeſſed by the paiſhwa or chancellor. This office being uſurped by one particular family, Nana-row, the reigning paiſhwa, ſeized the ram-rajah, and confined him in a fortreſs near Setterah. At his death he left two ſons Mada-row and Narain-row; of whom the former, as being the elder, ſucceeded him in the paiſhwaſhip. Ionogee Booſla, or Bouncello, the immediate predeceſſor of Moodagee Booſla, rajah of Berar, was one of the pretenders to the dignity of ram-rajah, as being the neareſt of kin; at the ſame time that Roganaut-row, called alſo Ragobah, uncle to Mada-row himſelf, pretended to the paiſhwaſhip. On this account the latter was confined by Mada-row, but who imprudently releaſed him a little before his death, and even recommended to him in the moſt affectionate manner the care of his brother Narain-row, who was to ſucceed to the paiſhwaſhip. The care he took in conſequence of this recommendation was ſuch as might eaſily have been imagined; the unhappy Narain-row was murdered, and Roganaut-row the aſſaſſin fled to Bombay; where, on promiſing a ceſſion of territory, he was protected and encouraged in his pretenſions. The Mahrattas remonſtrated againſt this behaviour; but the Engliſh had determined at all events to profit by the civil diſſenſions of the Indians, and therefore paid no regard to the juſtice or injuſtice of their cauſe. The Mahrattas therefore not only made up their differences with Hyder Aly, as has been already mentioned, but became determined enemies to the Engliſh, at the ſame time that a dangerous confederacy was formed among the moſt powerful princes of India to expel from that part of the world thoſe intruders whoſe avarice could be ſatisfied with no conceſſions, and whom no treaties could bind when it ſerved their turn to break them.

122
Dreadful invaſion by Hyder Aly.

The reſentment of Hyder Aly was particularly directed againſt the preſidency of Madras for the reaſons already given; he had alſo received freſh provocation by their cauſing a body of troops march through his dominions without his leave, and that to the aſſiſtance of a prince for whom he had no great friendſhip; alſo by the capture of the French ſettlement of Mahie, on the coaſt of Malabar, which he ſaid was within his dominions, and conſequently that the French were under his protection. His troops were therefore aſſembled from every quarter, and the greateſt preparations made for a powerful invaſion. The preſidency of Madras in the mean time ſpent their time in mutual altercations, neglecting even to ſecure the paſſes of the mountains, through which only an invaſion could be made, until their active antagoniſt, having ſeized and guarded thoſe paſſes, ſuddenly poured out thro' them at the head of 100,000 men, among whom was a large body of European troops under French officers, and commanded by colonel Lally, a man of great bravery and experience in war.

123
Unfortunate expedition of Colonel Baillie.

The alarm was given on the 24th of July 1780 that Hyder Aly's horſe were only nine miles diſtant from Madras. The inhabitants inſtantly deſerted their houſes and fled into the fort; while the unreſiſted barbarian burnt the villages, reduced the inferior forts, and prepared to lay ſiege to the capital. It being now abſolutely neceſſary to make ſome reſiſtance, meaſures were taken for aſſembling the troops; in doing which an expreſs was ſent to colonel Ballie, at that time at Gumeroponda, about 28 miles from Madras, to proceed from thence directly to Conjeveram with the corps under his command, where the main body was to meet him. But when the latter was under marching orders, the firſt regiment of cavalry poſitively refuſed to move without money; and as they perſiſted in their reſolution, were at laſt made priſoners and ſent to Madras. The main body, then, conſiſting of 1500 Europeans and 4200 ſepoys, under Sir Hector Munro, with their train of artillery, proceeded towards Conjeveram: and ſuch were the fatigues of their march, that 200 men belonging to the 73d regiment were left lying on the road. On their arrival at Conjeveram, they found the town in flames, great bodies of the enemy's cavalry advancing on both flanks, and no appearance of colonel Baillie's detachment. The march of this body had been impeded by a ſmall river ſwelled by a ſudden fall of rain. On this occaſion, the officer who gives the account of this diſaſter makes the following obſervation. "In this incident we have a moſt remarkable proof and example of the danger of procraſtination, and on what minute circumſtances and ſudden ſprings of the mind the fortune and the general iſſue of war may depend. Had colonel Baillie paſſed over the Tripaſſore without halting, as ſome adviſed, and encamped on its ſouthern inſtead of its northern banks, the diſaſter that ſoon followed would have been prevented, and an order of affairs wholly different from that which took place would have ſucceeded."

Hyder Aly having now raiſed the ſiege of Arcot, in which he had been employed, marched towards Conjeveram; in the neighbourhood of which he encamped, and in the courſe of ſeveral days, at different times, offered battle. On the 6th of September he detached his ſon Tippoo Saib with the flower of his army to cut off the detachment under colonel Baillie, who was now at Perrambaukam, a ſmall village diſtant from the main body about 15 miles, he himſelf remaining in the neighbourhood of Conjeveram, in order to watch the motions of Sir Hector Munro.

124
He is attacked by Tippoo Saib, but repulſes him.

The detachment under Tippoo Saib conſiſted of 30,000 horſe, 8000 foot, with 12 pieces of cannon. Notwithſtanding this ſuperiority in number, however, they were bravely repulſed by Colonel Baillie's handful of troops; and a junction was effected with a detachment under Sir Robert Fletcher, ſent by Sir Hector Munro on firſt hearing the noiſe of the engagement.

125
Is again attacked.

This junction was effected on the 9th of September, and next morning orders were given for the whole army to march; Colonel Fletcher's detachment being diſperſed in different parts of the line. From the moment they began to march the enemy played off their rockets, which, however, did but little execution;

tion; but about ten at night ſeveral guns began to open on the rear of the Engliſh. Colonel Baillie, therefore, after ſome proper manœuvres, cauſed his troops form a line, while the enemy cannonaded them inceſſantly with great execution. On this Colonel Baillie detached Captain Rumley with five companies of ſepoy grenadiers to ſtorm their guns; which ſervice they would have undoubtedly accompliſhed, had not their march been interrupted by a torrent of water which at that time happened to be unfordable. Captain Rumley therefore returned about half an hour after eleven, when the guns of the enemy were heard drawing off towards the Engliſh front, and a general alarm was perceived throughout their camp; owing, as was ſuppoſed, to their having received intelligence of the party that had been ſent to ſtorm their guns. "From their noiſe, confuſion, and irregular firing (ſays our author), one would have imagined that a detachment of our men had fallen upon them with fixed bayonets. At that critical moment, had a party of grenadiers been ſent againſt them, they would have routed without difficulty the whole of Tippoo's army. Having about ten o'clock in the evening advanced a few hundred yards into an avenue, the detachment remained there in perfect ſilence till the morning.

"Colonel Fletcher being aſked by ſome officers, why Colonel Baillie halted; modeſtly anſwered, that Colonel Baillie was an officer of eſtabliſhed reputation, and that he no doubt had reaſons for his conduct. It cannot, however, be concealed, that this halt afforded an opportunity for Tippoo Saib to draw off his cannon to a very ſtrong poſt by which the Engliſh were obliged to paſs; and at the ſame time of informing Hyder of their ſituation, and ſuggeſting to him the expediency of advancing for the improvement of ſo favourable a conjuncture.

"On the 10th of September, at five o'clock in the morning, our little army marched off by the right in ſubdiviſions, having their baggage on their right flank and the enemy on their left. A few minutes after ſix two guns opened on their rear, on which the line halted a few minutes. Large bodies of the enemy's cavalry now appeared on their right flank; and juſt at the moment when the pagoda of Conjeveram appeared in view, and our men had begun to indulge the hopes of a reſpite from toils and dangers, a rocket-boy was taken priſoner, who informed them, that Hyder's whole army was marching to the aſſiſtance of Tippoo. Four guns now opened on their left with great effect. So hot was the fire they ſuſtained, and ſo heavy the loſs, that Colonel Baillie ordered the whole line to quit the avenue, and preſent a front to the enemy; and at the ſame time diſpatched Captain Rumley with ten companies of ſepoy grenadiers to ſtorm the enemy's guns.

"Within a few minutes after Captain Rumley had left the line, Tippoo's guns were ſilenced. Rumley's little detachment immediately took poſſeſſion of four of the enemy's guns, and completely routed the party attached to them. Captain Rumley, overcome with fatigue, ordered Captain Gowdie, the officer next in command, to lead on the party, and take poſſeſſion of ſome more guns placed a few hundred yards in their front. But in a few minutes after, as they were advancing for this purpoſe, a ſudden cry was heard, among the ſepoys, of horſe! horſe! The camp followers, whoſe numbers were nearly five to one of the troops under arms, were driven on a part of our line by the numerous and ſurrounding forces of Hyder Aly; who being informed of the embarraſſing ſituation of Colonel Baillie, had left his camp without ſtriking his tents, with a view to conceal his march from the Engliſh. A great confuſion among our troops was the unavoidable conſequence of this ſudden onſet. The Europeans were ſuddenly left on the field of action alone: and at that critical moment a detachment from the advanced guard of Hyder's army preſſed on with great celerity between our line and Captain Rumley's party. The commanding officer, therefore, apprehenſive of being cut off from our little army, judged it moſt prudent to retreat.

126
Is attacked by Hyder's whole army.

"Colonel Baillie, when he was informed that an immenſe body of horſe and infantry was marching towards him, and that this was ſuppoſed to be Hyder's main army, ſaid, 'Very well, we ſhall be prepared to receive them.' Hyder's whole forces now appeared inconteſtably in view; and this barbarian chief, who as was obſerved of the Roman general by Pyrrhus, had nothing barbarous in his diſcipline, after dividing his guns agreeably to a preconcerted plan, opened from 60 to 70 pieces of cannon, with an innumerable quantity of rockets.

Hyder's numerous cavalry, ſupported by his regular infantry and European troops, driven on by threats, encouraged by promiſes, and led on by his moſt diſtinguiſhed officers, bore on our little army in different quarters without making the leaſt impreſſion. Our men, both Europeans and ſepoys, repeatedly preſented and recovered their fire-arms as if they had been manœuvring on a parade. The enemy were repulſed in every attack; numbers of their beſt cavalry were killed, and many more were wounded; even their infantry were forced to give way: and Hyder would have ordered a retreat, had it not been for the advice of General Lally, who informed him that it was now too late, as General Monro was moſt probably advancing on their rear from Conjeveram; for which reaſon nothing remained but to break the detachment by their artillery and cavalry.

127
Gallant behaviour of the Engliſh.

"Tippoo Saib had by this time collected his party together, and renewed the cannonade; and at the ſame time that the Engliſh were under the neceſſity of ſuſtaining an attack both from the father and ſon, two of their tumbrils were blown up by Hyder's guns, and a large opening made in both lines. They had now no other ammunition than grape; their guns diſcontinued firing; and in this dreadful ſituation, under a terrible fire not only of guns but rockets, loſing great numbers of officers and men, they remained from half paſt ſeven till nine o'clock.

"On this Hyder Aly, perceiving that the guns were quite ſilenced, came with his whole army round their right flank. The cavalry charged them in diſtinct columns, and in the intervals between theſe the infantry poured in vollies of muſketry with dreadful effect. Mhiar Saib, with the Mogul and Sanoor cavalry, made the firſt impreſſion. Theſe were followed by the elephants and the Myſorean cavalry, which completed the overthrow of the detachment. Colonel Baillie, though grievouſly wounded, rallied the Europeans,

128
They are at laſt defeated.

peans, and once more formed them into a ſquare and with this handful of men he gained an eminence, where, without ammunition and moſt of the people wounded, he reſiſted and repulſed 13 ſeparate attacks; but freſh bodies of cavalry continually pouring in, they were broken without giving way. Many of our men, deſperately wounded, raiſing themſelves from the ground received the enemy on their bayonets.

“ Captain Lucas's battalion of ſepoys, at the time when our men moved up to a riſing ground, was ſtationed to the right of the European grenadiers; but that corps, ſeeing the Europeans in motion, and miſunderſtanding perhaps this evolution for a retreat, broke in the utmoſt confuſion. The Europeans, bravely ſuſtaining their reputation for intrepid valour, remained in this extremity of diſtreſs ſteady and undaunted, though ſurrounded by the French troops, and by Hyder's cavalry to the number of 40,000. They even expreſſed a deſire, though their number did not exceed 400, of being led on to the attack. A party of Topaſſes, who lay at the diſtance of about 30 yards in our front, kept up an inceſſant fire of ſmall arms with great effect. Many attempts were made by the enemy's cavalry to break this ſmall body of men; but by the ſteady conduct of both our officers and men they were repulſed.

“ Colonel Baillie, finding that there was now no proſpect of being relieved by General Munro, held up a flag of truce to one of the chiefs of Hyder's army. But this was treated with contempt, and the ſurdar endeavoured at the ſame time to cut off the colonel. The reaſon the enemy aſſigned for this was, that the ſepoys had fired after the ſignal was hoiſted. A few minutes after this, our men received orders to lay down their arms, with intimation that quarter would be given. This order was ſcarcely complied with, when the enemy ruſhed in upon them in the moſt ſavage and brutal manner, ſparing neither age nor infancy nor any condition of life; and, but for the humane interpoſition of the French commanders Lally and Pimoran, who implored and inſiſted with the conqueror to ſhow mercy, the gallant remains of our little army muſt have fallen a ſacrifice to that ſavage thirſt of blood with which the tyrant diſgraced his victory.”(A)

129
Throw down their arms, but are cruelly uſed.

In this unfortunate action near 700 Europeans were killed

(A) In a narrative of the ſufferings of the Engliſh who ſurvived this fatal day, ſaid to be publiſhed by an officer in Colonel Baillie's detachment, we find it related, that “ Hyder Aly, ſeated in a chair in his tent, enjoyed the ſight of the heads of the ſlain, as well as of his priſoners. Colonel Baillie, who was himſelf very much wounded, was brought to his camp on a cannon, and with ſeveral other gentlemen in the ſame ſituation laid at the tyrant's feet on the ground and in the open air. In this ſituation they ſaw many of the heads of their countrymen preſented to the conqueror, ſome of them even by Engliſh officers, who were forced to perform that horrid taſk; in a little time, however, Hyder ordered no more heads to be brought to him while the Engliſh gentlemen were preſent. A tent was fitted up for Colonel Baillie and his officers, but without ſtraw or any thing elſe to lie upon, though many of them were dangerouſly wounded; and as the tent could only contain 10 perſons, the reſt were obliged to lie in the open air. When the priſoners were removed from place to place, they were wantonly inſulted, and even beaten by thoſe who had the charge of them, If the latter halted to refreſh themſelves under a tree, they would be at the trouble of carrying their priſoners to the ſide next the ſun, leſt they ſhould enjoy the benefit of the ſhade. Sometimes they were tormented with thirſt, at others the people allowed them to drink water out of the palms of their hands, it being reckoned a profanation to allow an European to drink out of a veſſel belonging to an Indian,” &c.

In this narrative are likewiſe mentioned ſome examples of a recovery from wounds, which, if we can depend on their authenticity, muſt undoubtedly ſhow a reſtorative power in the human body altogether unknown in this climate.

“ Lieutenant Thomas Bowſer received a muſket ball in his leg, and after that eight deſperate wounds with a ſcymitar. He lay for ſeven hours on the ſpot, deprived of all ſenſation; but, towards evening, awakened from his trance, ſtripped of all his clothes, except a pair of under drawers and part of his ſhirt, with an intenſe thirſt, calling out, and imploring a little water from the enemy. Some were moved with compaſſion, while others anſwered his intreaties only with inſults and threats of immediate death. Some water, however, was brought from a pool in the field of battle, about 50 or 60 yards from the place where he lay. It was deeply tinged with blood; nevertheleſs, Mr Bowſer being furniſhed by one of Hyder's ſoldiers with an earthen *chatty*, or pot containing about a pint, and directed to the place, crawled thither as well as he could. Though ſtruck with horror at the ſight of the dead and wounded with which it was filled, he quenched his thirſt with the liquid; and having filled his chatty, endeavoured to proceed towards Conjeveram. He had not, however, moved from his place above 300 or 400 yards, when, being quite overcome, he was obliged to lie all night in the open air, during which time there fell two heavy ſhowers of rain. Next morning he proceeded to Conjeveram; but after walking about a mile, was met by ſome of the enemy's horſemen, by whom he was brought back priſoner, and obliged to walk without any aſſiſtance. When delivered up to the enemy's ſepoys, he was ſo ſtiff with his wounds, that he could not ſtoop or even bend his body in the ſmalleſt degree.

“ The quarter-maſter ſerjeant of artillery received ſo deep a cut acroſs the back-part of his neck, that he was obliged to ſupport his head with his hands in order to keep it from falling to a ſide all the journey. The leaſt ſhake or unevenneſs of the ground made him cry out with pain. He once and again ceaſed from all attempts to proceed; but being encouraged and conjured by his companions to renew his efforts, he did ſo, reached the camp, and at laſt, as well as Mr Bowſer, recovered.”—It is alſo remarkable, that, according to our author, out of 32 wounded perſons only ſix died; though one would be apt to think that the exceſſively ſevere uſage they met with would have killed every one.

killed on the ſpot; the loſs on Hyder Aly's part was ſo great that he induſtriouſly concealed it, being enraged that the conqueſt of ſuch an inconſiderable body ſhould coſt him ſo many of his braveſt troops. He ſeemed ever after to conſider the Engliſh with an extreme degree of terror; inſomuch that, notwithſtanding his pretended exultation on account of the preſent victory, he no ſooner heard a report of Sir Hector Munro's march to attack him, than he left his camp in the utmoſt confuſion, abandoning great part of his tents and baggage, as well as the vaſt numbers that had been wounded in the late action.

130 Sir Eyre Coote appointed to the command of the army.

On the news of Colonel Baillie's diſaſter, the ſupreme council of Bengal requeſted Sir Eyre Coote to take upon him the management of the war; for the carrying on of which a large ſupply of men and money was inſtantly decreed. This was readily undertaken by the illuſtrious officer juſt mentioned, notwithſtanding his very precarious ſtate of health at that time; and from the moment he took upon him the management of affairs, the fortune of the war was changed.

The ſpirit of diſſenſion, which for a long time had infected the preſidency of Madras, was indeed the true cauſe of all the misfortunes that had happened. This was found by Sir Eyre Coote to be even greater than he had heard by report: the reſpect and confidence of the natives was wholly loſt; the complaints of the officers and ſoldiers were loud and acrimonious; an inactivity prevailed in all the councils and operations, while the enemy carried every thing before them. Sir Hector Munro had been greatly haraſſed on his march to Madras, whither he had retreated after Colonel Baillie's diſaſter; the forces of Hyder Aly had infeſted all the places in that neighbourhood in ſuch a manner as in a great meaſure to cut off all ſupplies; and Arcot, the capital city of the moſt faithful ally the Britiſh ever had, was taken by ſtorm, together with an adjoining fort, by which means an immenſe quantity of ammunition and military ſtores fell into the hands of the enemy.

No ſooner had Sir Eyre Coote taken upon him the command of the Britiſh forces, than his antagoniſt thought proper to change his plan of operations entirely. He now detached large parties of his numerous forces to lay ſiege to the principal fortreſſes belonging to the company; while, with the braveſt and beſt diſciplined part, he kept the field againſt the Britiſh commander in perſon. On the very firſt appearance of the Britiſh army, however, his reſolution failed, and he abandoned the ſiege of every place he had inveſted, retiring to a conſiderable diſtance on the other ſide of the river Palaar, without even diſputing the paſſage of it, as it was expected he would have done.

131 Pondicherry revolts, but is quickly reduced.

A reſpite being thus obtained from the incurſions of their formidable enemy, the next operation was to ſecure Pondicherry, whoſe inhabitants had revolted. They were, however, eaſily diſarmed, their magazines ſeized, and all the boats in their poſſeſſion deſtroyed; in conſequence of which precaution, a French ſquadron that ſoon after appeared off Pondicherry was obliged to depart without being furniſhed with any neceſſaries. But in the mean time Hyder Aly having drawn large reinforcements from all parts of his dominions, reſolved to try his fortune in a pitched battle. His army amounted to 200,000 men, 40,000 of whom were cavalry and 15,000 well diſciplined ſepoys. Still, however, he durſt not openly attack the Britiſh army in the field, but took a ſtrong poſt from whence he might haraſs them on their march. Sir Eyre Coote, however, was not on his part backward to make the attack; and on the other hand Hyder Aly prepared to engage him with all poſſible advantage. The battle was fought on the 1ſt of July 1781; and notwithſtanding the vaſt ſuperiority of Hyder Aly's army, he was routed with great ſlaughter. The Indians, however, made a much more obſtinate reſiſtance than uſual; the engagement laſted from nine in the morning till four in the afternoon, and the deficiency of the Engliſh in cavalry prevented them from purſuing the advantage they had gained.

132 Defeats Hyder Aly.

133 Gains a ſecond victory.

Notwithſtanding the loſs of this battle, Hyder Aly was ſoon encouraged to venture another. This was fought on the 27th of Auguſt the ſame year, on the very ſpot where Colonel Baillie had been defeated. It was more obſtinately conteſted than even the former, being continued with great fury from eight in the morning to near duſk. A number of brave officers and ſoldiers fell on the part of the Britiſh, owing chiefly to the terrible fire of the enemy's artillery and the advantageous poſition of their troops. At laſt, however, the Indian army was totally defeated, and driven from every poſt it had occupied; though from the obſtinate reſiſtance made at this time, Hyder began to entertain hopes that his forces might, by a ſucceſſion of ſuch battles, be at laſt enabled to cope with the Engliſh. He therefore ventured a third battle in ſome weeks after, but was now defeated with greater loſs than before. Undiſcouraged by this bad ſucceſs, however, he laid ſiege to Vellore; and expecting that the relief of it would be attempted, ſeized a ſtrong paſs through which he knew the Britiſh army muſt direct their march. The Britiſh commander accordingly advanced, and found the enemy in poſſeſſion of ſome very ſtrong grounds on both ſides of a marſh through which he was obliged to paſs. Here he was attacked on all ſides, but particularly on the rear, the enemy directing their force principally againſt the baggage and convoy of proviſions deſigned for the garriſon. Their utmoſt efforts, however, were unſucceſsful, and Sir Eyre Coote forced his way to Vellore in ſpite of all oppoſition. Hyder Aly did not fail to wait his return through the ſame paſs; and having exerted his utmoſt ſkill in poſting his troops, attacked him with the utmoſt vigour: but though the Engliſh were aſſaulted in front and in both flanks at once, and a heavy cannonade kept up during the whole time of the engagement, the Indians were at laſt defeated with great ſlaughter.

134 Hyder defeated a third time.

135 A fourth victory gained by the Engliſh.

By theſe ſucceſſes the preſidency of Madras were now allowed ſo much reſpite, that an enterpriſe was planned againſt the Dutch ſettlement of Negapatam, ſituated to the ſouth of Madras, and in the neighbourhood of Tanjour. A very inconſiderable force, however, could yet be ſpared for this purpoſe, as Hyder Aly, though ſo often defeated, was ſtill extremely formidable. Sir Hector Munro had the management of the expedition: and ſo furious was the attack of the Britiſh ſailors, that the troops left to guard the avenues to the place were defeated at the very firſt onſet.

136 Dutch ſettlement of Negapatam reduced.

onſet. A regular ſiege enſued; which, however, was of very ſhort duration, a breach being ſoon made, and the garriſon ſurrendering priſoners of war.

137 And likewiſe Trincomale.

The loſs of Negapatam was quickly followed by that of Trincomale. Admiral Hughes, who had conveyed Sir Hector Munro with the land forces to that place, and aſſiſted him with his ſailors, immediately after its ſurrender ſet ſail for Trincomale, where he arrived about the middle of January 1782. The fort of that name was quickly reduced; but the main ſtrength of the ſettlement conſiſted in a fort named Oſtenburgh, the principal place on the iſland, and by the capture of which the whole ſettlement would be reduced. This fort ſtands on a hill which commands the harbour, but is itſelf overlooked by another hill at the diſtance of no more that 200 yards. Though the gaining of this poſt was undoubtedly to be attended with the loſs of the fort, it does not appear that the governor even attempted to defend it. A Britiſh detachment of ſailors and marines therefore took poſſeſſion of it, when the admiral ſent a ſummons of ſurrender, repreſenting the inutility of making any farther defence after the loſs of ſuch a poſt; and being extremely deſirous of avoiding an effuſion of blood, repeated his arguments at ſeveral different times. The governor, however, proving obſtinate, the place was taken by ſtorm, with the loſs of about 60 on the part of the Britiſh, and very little on that of the Dutch, the victors giving quarter the moment it was aſked. Four hundred Europeans were taken priſoners; a large quantity of ammunition and military ſtores, with a numerous artillery, were found in the place; and two Indiamen richly laden, with a number of ſmall trading veſſels, were taken in the harbour.

138 Admiral Suffrein arrives with a powerful fleet from Europe.

A more formidable enemy, however, now made his appearance on the coaſt of Coromandel. This was Suffrein the French admiral; who ſetting out from his native country with 11 ſhips of the line and ſeveral ſtout frigates, had fallen in with the Hannible of 50 guns, and taken her when ſeparated from her conſorts. This ſhip, along with three others, a 74, a 64, and a 50, had been ſent out to the aſſiſtance of Sir Edward; and the three laſt had the good fortune to join him before the arrival of M. de Suffrein. The latter, ſuppoſing that he had not yet received this reinforcement, bore down upon the Engliſh ſquadron at Madras, to which place they had ſailed immediately after the capture of Trincomale. Perceiving his miſtake, however, he inſtantly bore away. The Engliſh admiral purſued, took ſix veſſels, five of them Engliſh prizes, and the ſixth a valuable tranſport laden with gunpowder and other military ſtores, beſides having on board a number of land officers, and about 300 regular troops.

139 Engagement between him and Sir Edward Hughes.

This brought on an engagement, in which M. Suffrein, perceiving the rear diviſion of the Britiſh fleet unable to keep up with the reſt, directed his force principally againſt it. The ſhips of Admiral Hughes himſelf and Commodore King ſuſtained the moſt violent efforts of the French, having moſtly two, and ſometimes three, veſſels to contend with. Thus the commodore's ſhip was reduced almoſt to a wreck; but about ſix in the evening, the wind becoming more favourable to the Engliſh, the ſquadron of the enemy were obliged to draw off. The loſs of men on the part of the Britiſh amounted to little more than 130 killed and wounded, but that of the French exceeded 250.

After the battle Sir Edward returned to Madras; but meeting with no intelligence of Suffrein at that place, he made the beſt of his way for Trincomale, being apprehenſive of an attack upon that place, or of the intercepting of a convoy of ſtores and reinforcements at that time expected from England. Suffrein had indeed got intelligence of this convoy, and was at that time on his way to intercept it. This brought the hoſtile fleets again in ſight of each other; and as the Britiſh admiral had been reinforced by two ſhips of the line, he was now better able to encounter his adverſary. A deſperate battle enſued, which continued till towards night, when the ſhips on both ſides were ſo much ſhattered, that neither could renew the engagement next day.

140 A ſecond battle.

Though theſe engagements produced nothing deciſive, they were neverthelefs of the utmoſt prejudice to the affairs of Hyder Aly, who was thus prevented from receiving the ſuccours he had been promiſed from France; and he was ſtill farther mortified by the defeat of his forces before Tellicherry, which place he had blocked up ſince the commencement of hoſtilities. This laſt misfortune was the more ſenſibly felt, as an open paſſage was now left for the Engliſh into thoſe countries beſt affected to Hyder. His bad ſucceſs here, however, was in ſome meaſure compenſated by the entire defeat of a detachment of about 2000 Engliſh infantry and 300 cavalry under Colonel Braithwaite, a brave and experienced officer. This detachment, conſiſting of choſen troops from Sir Eyre Coote's army, lay encamped on the banks of the Coleroon, which forms the northern boundary of Tanjour. Tippoo Saib having procured exact intelligence of the ſituation of this party, formed a deſign of attacking it while no danger was ſuſpected on account of the diſtance of Hyder Aly's army. He ſet out on this deſign with an army of 15,000 horſe and 5000 foot, accompanied by a body of French regulars; and having croſſed the Coleroon, ſuddenly ſurrounded the Britiſh forces on all ſides. The colonel perceiving his danger, formed his men into a ſquare, diſtributing the artillery to the ſeveral fronts, and keeping his cavalry in the center. In this ſituation he reſiſted for three days the utmoſt efforts of his numerous enemies, always compelling them to retreat with great loſs. At laſt General Lally, rightly conjecturing that the ſtrength of the Engliſh muſt be exhauſted and their numbers thinned by ſuch deſperate ſervice, propoſed that the French infantry, which was freſh and entire, ſhould attack one of the fronts of the ſquare, while the forces of Tippoo ſhould do the ſame with the other three. This laſt attack proved ſucceſsful; the Britiſh forces were broken with great ſlaughter, which however was ſtopped by the humanity of the French commander; who even obtained from Tippoo Saib the care of the priſoners, and treated them with a tenderneſs and humanity they certainly would not otherwiſe have experienced. A number of Britiſh officers, however periſhed in the engagement, and only one remained unwounded.

141 Hyder Aly's forces defeated at Tellicherry

142 Colonel Braithwaite's detachment cut off by Tippo Saib.

143 Cuddalore taken.

In the mean time, the ſuccours from France, ſo ong expected by Hyder, made their appearance. As ſoon as a junction was formed, they proceeded, under

the

144
Hyder Aly defeated a fifth time by Sir Eyre Coote.

the command of M. Duchemin, to inveſt Cuddalore; which not being in any ſituation to ſtand a ſiege, was ſurrendered on capitulation. In like manner ſome other places of ſmaller conſequence were reduced, until at laſt being joined by Hyder's numerous forces, they determined to lay ſiege to Vandervaſh, a place of great importance, and the loſs of which would have been extremely detrimental to the Engliſh. This quickly brought Sir Eyre Coote with his army to its relief; but Hyder Aly, notwithſtanding his being reinforced by the French, durſt not yet venture a battle in the open field. On this the Britiſh commander proceeded to attack Arnee, the principal depoſit of Hyder's warlike ſtores and neceſſaries. Thus the latter was obliged to quit his advantageous ground; but he did ſo with ſuch ſecrecy and ſpeed, that he came upon the Britiſh army unawares while preparing for its laſt march to Arnee, now only five miles diſtant. Perceiving that the march of the Britiſh troops was through low grounds, encompaſſed on moſt parts with high hills, he planted his cannon upon the latter; from which he kept a continual and heavy fire on the troops below, while his numerous cavalry attacked them on every ſide. Notwithſtanding all diſadvantages, the Britiſh commander at laſt cloſed in with the enemy; and after an obſtinate diſpute completely routed them. Neither this, however, nor any other engagement with Hyder Aly, ever proved deciſive; for as the want of cavalry prevented the Britiſh general from purſuing his advantage, ſo that of his antagoniſt was ſo numerous, that by it he always covered his retreats in ſuch an effectual manner as to loſe but few men, and in a ſhort time to be in a condition to act again on the offenſive. This was remarkably the caſe at preſent; for notwithſtanding this defeat, which happened on the 2d of June 1782, he cut off an advanced body of the Britiſh army five days after; and haraſſed the whole in ſuch a manner, that Sir Eyre Coote, notwithſtanding his ſucceſs, was obliged to move nearer Madras; ſoon after which, he was obliged, on account of his bad ſtate of health, to relinquiſh the command of the army to General Stuart.

145
A third ſea-fight, greatly to the diſadvantage of the French.

Hyder Aly now perceiving that he was likely to be attended with no ſucceſs by land, began to reſt his hopes on the ſucceſs of the French by ſea. He therefore earneſtly requeſted M. Suffrein, who poſſeſſed at that time a deciſive ſuperiority in the number of ſhips, to loſe no time in attacking the Britiſh ſquadron before it could be joined by a reinforcement which was then on its way, and was reported to be very formidable. As the French commander was by no means deficient in courage, a third engagement took place on the 5th of July 1783. At this time the Britiſh had the advantage of the wind, the battle was much more cloſe, and the victory more plainly on their ſide. It is ſaid indeed, that had not the wind fortunately ſhifted in ſuch a manner as to enable the French to diſengage their ſhips, a total and ruinous defeat would have enſued. After the engagement, the French admiral proceeded to Cuddalore, having received intelligence that a large body of French troops in tranſports was arrived off the iſland of Ceylon, in company with three ſhips of the line. As this ſeemed to afford hopes of retaliation he uſed ſuch diligence in refitting his ſhips, that the fleet was able to put to ſea in the beginning of Auguſt. His intention was to make an attempt on Trincomale; and ſo well were his deſigns conducted, that Sir Edward received no intelligence of the danger, till a Britiſh frigate chaſing a French one, which took ſhelter with a ſquadron at Trincomale, diſcovered it by this accident, and haſtened back with the news to Madras. It was now, however, too late; the place was not in a condition to reſiſt a ſiege; and the French batteries having ſilenced thoſe of the fort in two days, a capitulation took place on the laſt day of Auguſt.

146
Who nevertheleſs take Trincomale.

147
A fourth battle between the French and Engliſh fleets.

Sir Edward Hughes having been detained by contrary winds, did not arrive at Trincomale before the 2d of September, when he had the mortification to ſee the forts in the hands of the French, and that Suffrein was in the harbour with 15 ſail of the line while he had only 12. He did not heſitate at venturing an engagement with this inferiority, nor did M. Suffrein decline the combat. The event of the battle was no other than ſhattering the fleet and killing and wounding a number of men on both ſides, In this, however, as well as in the other engagements, the ſuperiority of the Engliſh was very manifeſt; and in entering the harbour of Trincomale the French loſt a 74 gun ſhip.

148
Engliſh fleet ſhattered by a dreadful tempeſt.

The loſs of Trincomale was ſeverely felt by the Engliſh; for while the French lay ſafely in the harbour refitting their ſquadron, the Engliſh were obliged for that purpoſe to ſail to Madras. Here the fleet was aſſailed by one of the moſt dreadful tempeſts ever known on that coaſt. Trading veſſels to the number of near 100 were wrecked, as well as thoſe for Madras laden with rice, of which there was an extreme ſcarcity at that place. Thus the ſcarcity was augmented to a famine, which carried off vaſt numbers of the inhabitants before ſupplies could arrive from Bengal. The continuance of the bad weather obliged Sir Edward with his whole ſquadron to ſail to Bombay; and there he did not arrive till towards the end of the year, when his ſquadron was ſo much ſhattered, that, in order to repair it with proper expedition, he was obliged to diſtribute it between the dock-yards of Bombay and the Portugueſe ſettlement at Goa.

In the mean time Sir Richard Bickerton arrived at Bombay from England with five men of war, having on board 5000 troops, after a very favourable paſſage; having neither ſeen nor heard of the bad weather which had deſolated the coaſts of India. It was likewiſe the intention of the French to ſignalize the campaign of this year by an immenſe force both by ſea and land in India. Excluſive of the forces already on the Coaſt of Coromandel, they were to be joined by 5000 more, all regulars, from their iſlands on the African coaſt. Suffrein was to be reinforced by ſeveral ſhips of the line, when it was hoped that a decided ſuperiority at ſea would be obtained over the Engliſh; while their ſuperior numbers and artillery on ſhore would render them invincible by any force that could be brought againſt them. To oppoſe their deſigns it was deemed neceſſary by the preſidency of Bombay to make a powerful diverſion on the coaſt of Malabar. Here was ſituated the kingdom of Myſore, the ſovereignty of which had been uſurped by Hyder Aly under the title of *Dayva*, as that of the Mahrattas was by a perſon ſtyled *Paiſhwa*. This kingdom is nearly in the ſame parallel with Arcot. To the northward is the kingdom of Canara, which is ſaid to have been the favourite poſſeſſion of Hyder Aly; the name of its capital is Bidnore, which alſo gives name to an extenſive territory, and was by Hyder changed to that of Hydernagur.

149 Expedition of Colonel Humberſtone.

The expedition had been ſet on foot as early as the end of the year 1781; a ſtrong body of forces under the command of Colonel Humberſtone had taken the two cities of Calicut and Panyan, beſides others of leſſer note, and penetrated into the inland country, which is there difficult and dangerous. Having here made himſelf maſter of a place called *Mongarry Cotta*, of which the ſituation commanded the entrance into the inner parts of the country, he proceeded to attack Palatacherry, a conſiderable town at ſome miles diſtance; but being ſuddenly environed with a numerous and hoſtile army, inſtead of making himſelf maſter of the place, it was not without the utmoſt difficulty that he made his eſcape after loſing all his proviſions and baggage. A great army, conſiſting of 20,000 foot and 10,000 horſe under Tippoo Saib, alſo advanced againſt him with ſuch celerity, that the colonel had only time to retreat to Panyan, where he was ſuperſeded in the command by Colonel Macleod, and ſoon after the place was inveſted by the forces of the enemy, among whom was general Lally with a conſiderable body of French. Two Britiſh frigates, however, having come to the aſſiſtance of the place, rendered all the attempts of the enemy to reduce it abortive. At laſt, Tippoo Saib, impatient of delay, made a vigorous effort againſt the Britiſh lines; but though both the Indian and French commanders behaved with great bravery, the attack not only proved unſucceſsful, but they were repulſed with ſuch loſs as determined Tippoo to abandon the ſiege of the place, and retire beyond the river of Panyan.

150 Unfortunate expedition of General Matthews.

As ſoon as the preſidency of Bombay were acquainted with the ſucceſs of Colonel Humberſtone, General Matthews was diſpatched to his aſſiſtance with a powerful reinforcement. This expedition, which began the campaign of 1783 in the kingdom of Canara, has been related with circumſtances ſo diſgraceful, and ſo exceedingly contrary to the behaviour for which the Britiſh troops are remarkable, that we are totally at a loſs to account for them. On the one hand, it ſeems ſurpriſing how the national character could be forfeited by a particular body, and not by any other part of the army; and on the other, it ſeems equally ſurpriſing why ſuch calumnies (if we ſuppoſe them to be ſo) ſhould have ariſen againſt this particular body and no other part of the army.

151 The army charged with great cruelty in this expedition.

Such accounts of it, however, were publiſhed as raiſed the indignation of the military gentlemen, who thought proper to publiſh a vindication of themſelves. In the Annual Regiſters, from whence, next to the Gazettes and News-papers, the generality receive what they look upon to be authentic intelligence, the character of this army is treated with the higheſt aſperity. "In the ſtory of the conqueſt and recovery of Canara (ſays the New Annual Regiſter), the Spaniards may be ſaid to be brought a ſecond time upon the ſcene, but not to ſit down in ſullen and inſolent proſperity after all their crimes The Spaniards of Britain were overtaken in the midſt of their career; and he who is more of a man than an Engliſhman, will rejoice in the irregular and unmeaſured, but at the ſame time the juſt and merited, vengeance that was inflicted upon them by the prince whoſe dominions they were ravaging!" In ſupport of this dreadful exclamation the following account is given of the expedition. It began with the putting in execution a deſign formed by General Matthews of carrying the war into the heart of Hyder Aly's dominions. For this purpoſe the Engliſh inveſted the city of Onore, ſituated about 300 miles to the ſouth of Bombay, and one of the principal places in the country of Canara. "It was taken by aſſault (ſays Dr Andrews) with great ſlaughter, and plundered with circumſtances of avarice and rapine that diſgraced the victors; among whom, at the ſame time, great diſcontents aroſe concerning the diviſion of the ſpoil." "No quarter (ſays the Annual Regiſter) was given by the victorious Engliſh; every man they met was put to the ſword. Upon this occaſion we beg leave to tranſcribe three lines from the private letter of one of the officers concerned in the expedition. 'The carnage (ſays he) was great: we trampled thick on the bodies that were ſtrewed in the way. It was rather ſhocking to humanity; but ſuch are only ſecondary conſiderations, and to a ſoldier, whoſe boſom glows with heroic glory, they are thought only accidents of courſe; his zeal makes him aſpire after farther victory.' This part of the peninſula had hitherto been untouched by the barbarous and unſparing hands of Europeans, and of conſequence was full of riches and ſplendor. In the fortreſs of Onore were found ſums of money to an unknown amount, beſides jewels and diamonds. A conſiderable part of this appears to have been ſecured as private plunder by General Matthews. The complaints of the military were loud; they thought, and naturally, that the acquiſition of riches was the fair and reaſonable conſequence of the perpetration of bloodſhed. But their commander turned a deaf ear to their repreſentations; and haſtened, by adding new laurels to his fame, to hide the ſlander that might otherwiſe reſt upon him."

From Onore the army proceeded to the neareſt fortreſſes on the ſea-coaſt, More and Cundapour. Here they were joined by a reinforcement from Bombay under the command of Colonels Macleod and Humberſtone, with poſitive orders to proceed for Bignore or Hydernagur the capital of Canara. On this General Matthews marched for the mountains called the *Ghauts*, where there is a paſs three miles in length, though only eight feet wide, and which was then ſtrongly fortified and defended by a vaſt number of the natives. "The Engliſh (ſays our authors), however, had already obtained a conſiderable reputation by their executions; and the uſe of the bayonet, the moſt fatal inſtrument of war, and which was employed by them on all occaſions, created ſuch an extreme terror in the enemy, as to enable them to ſurmount this otherwiſe impregnable defile."

The gaining of this paſs laid open the way to Bidnore the capital, to which a ſummons was now ſent. An anſwer was returned, that the place was ready to ſubmit, provided the inhabitants were not moleſted, and the governor was permitted to ſecure his property, The wealth of this city was undoubtedly great, but the eſtimates of its amount are very different. By the accounts of Bombay it was ſtated only at 175,000 l.

while the officers concerned in the expedition ſay that it was not leſs than 1,200,000 l. or even 1,920,000 l.; and even this was only public property; that ſeized upon by the ſoldiers, and which belonged to private perſons, was undoubtedly very conſiderable alſo.

This treaſure was at firſt ſhown by the general to his officers, and declared to belong to the army; but he afterwards told them that it was all the property of the Mahommedan governor, and had been ſecured to him by the terms of the ſurrender. It was therefore ſent to Cundapour under the convoy of Lieutenant Matthews, brother to the general, to be thence tranſmitted to Bombay; but whether any part of it ever reached that ſettlement or not was never known. The diſcontents of the army were now carried to the utmoſt height; and the conteſt became ſo ſerious, that Colonels Macleod, Humberſtone, and Shaw, quitted the ſervice altogether, and returned to Bombay. The officers charged their general with the moſt inſatiable and ſhameful avarice; while he, in return, accuſed his whole army of doing every thing diſreſpectful and injurious to him; of paying no regard to order and diſcipline, and of becoming looſe and unfeeling as the moſt licentious freebooters.

From Bidnore detachments were ſent to reduce ſeveral fortreſſes, the principal of which was Ananpour or Anantpore. Here orders were iſſued for a ſtorm and no quarter. Every man in the place was put to death, except one horſeman who made his eſcape after being wounded in three places. "The women, unwilling to be ſeparated from their relations, or expoſed to the brutal licentiouſneſs of the ſoldiery, threw themſelves in multitudes into the moats with which the fort was ſurrounded. Four hundred beautiful women, pierced with the bayonet, and expiring in one another's arms, were in this ſituation treated by the Britiſh with every kind of outrage."

This exploit was ſucceeded by the reduction of Carwa and Mangalore, which completed the reduction of Canara, when General Matthews put his army in cantonments for the rainy ſeaſon.

This rapid ſucceſs was owing to the death of Hyder Aly, which happened in the end of the year 1782. His ſon Tippoo Saib, however, having taken poſſeſſion of the government, and ſettled his affairs as well as time would allow, inſtantly reſumed his military operations. On the 7th of April 1783 he made his appearance before Bidnore, ſo that General Matthews had ſcarce time to collect a force of 2000 men, and to write to Bombay for a reinforcement. But, however neceſſary the latter muſt have been in his circumſtances, the preſidency were ſo much prejudiced againſt him by the unfavourable reports of his officers, that they ſuſpended him from his commiſſion, appointing Colonel Macleod to ſucceed to the command of the army.

Tippoo Saib now advanced with a vaſt army, ſuppoſed not to be fewer than 150,000 men, covering the hills on each ſide of the metropolis as far as the eye could reach. The army of General Matthews, altogether unable to cope with ſuch a force, were quickly driven from the town, and forced to take refuge in the citadel. Tippoo having cut off their retreat by gaining poſſeſſion of the Ghauts, laid cloſe ſiege to the fortreſs; which in leſs than a fortnight was obliged to capitulate. The terms propoſed were, that all public property ſhould remain in the fort; that the Engliſh ſhould engage not to act againſt Tippoo for a ſtipulated time; that they ſhould march out with the honours of war; that they ſhould pile their arms, and have full liberty to proceed unmoleſted with their private property to the ſea-coaſt, from thence to embark for Bombay; and in this capitulation the garriſons of Ananpour and other inland fortreſſes were alſo included.

All theſe terms were broken by Tippoo, who ſaid that they had forfeited their title to liberty by a breach of the articles of capitulation, in embezzling and ſecreting the public money, which was all, in good faith, to be delivered up. That this was really the caſe ſeems to be univerſally acknowledged. In the Annual Regiſter we are told, that "to prevent too much money being found in the poſſeſſion of one man, the general ordered his officers to draw on the paymaſter-general for whatever ſums they wanted. When the fort was ſurrendered to the Sultan, there was not a ſingle rupee found in it." By this circumſtance the fate of the garriſon was decided. General Matthews was ſent for next morning to a conference. He was not, however, admitted into his preſence, but immediately thrown into chains. Moſt of the other principal officers were, on various pretences, ſeparated from the army. The general and his companions were conducted to Seringapatnam the capital of Myſore; and after having experienced a variety of ſeverities, were at laſt put to death by poiſon. In this manner the general and 20 officers periſhed. The poiſon adminiſtered was the milk of the cocoa-tree, which is ſaid to be very deadly.

The above account was repeatedly complained of as partial, and at laſt openly contradicted in a pamphlet intitled "A vindication of the Conduct of the Engliſh Forces" employed in that expedition, and publiſhed by order of the Eaſt India Company. In this pamphlet the circumſtance moſt found fault with was that regarding the women at Anantpore, which was poſitively contradicted. On this account therefore the publiſhers of the abovementioned work retract that part of their narrative, as being founded in miſrepreſentation. Notwithſtanding this vindication, however, they ſtill draw the following concluſions, "It is already ſufficiently evident, how little has been effected by this vindication of the Bombay officers. The great outlines of the expedition remain unaltered. It is ſtill true that a remarkable degree of ſeverity was employed in the field; that, in the capture of the fortreſſes of Canara, the principle of a ſtorm and no quarter was very frequently applied; and that the acquiſition of money was too much the governing object in every ſtage of the undertaking. The vindication of the officers has therefore done them little ſervice; and it happens here, as it generally does in the caſe of an imperfect reply, that the majority of the facts are rather ſtrengthened and demonſtrated by the attempt to refute them. With reſpect to the concluſion of the ſtory, the treaſures of Hydernagur, and the charge brought againſt them by Tippoo, that they had broken the terms of the capitulation, and that when the fort was ſurrendered not a rupee was to be found in it; theſe circumſtances are paſſed over by the officers in the profoundeſt ſilence. It was this that rouſed the ſultan to vengeance; and it is to this that he appeals for his juſtification in diſregarding a capitulation which had been firſt diſſolved by the vanquiſhed Engliſh."

The vindication above alluded to was ſigned by one major and 52 ſubaltern officers. It ſeems not, however, to have given entire ſatisfaction to the military gentlemen themſelves, as other vindications have appeared ſaid to be written by officers; but theſe being anonymous, can be ſuppoſed to add very little weight to that already mentioned, where ſuch a reſpectable body have ſigned their names. We ſhall therefore drop a ſubject ſo diſagreeable, and the inveſtigation of which at the ſame time is entirely foreign to the plan of this work.

152 Account of the Mahratta war.

It now remains to give ſome account of the war with the Mahrattas, begun, as was formerly hinted, on account of the protection afforded to the aſſaſſin Roganaut-row. This man had formerly obliged the Mogul to take ſhelter in the Engliſh factory at Bengal; but being unable to keep up his credit among his countrymen, was expelled as already related. On his arrival at Bombay, an alliance was formed betwixt him and the Engliſh government; by which the latter engaged to replace him in the Mahratta regency in conſideration of ſome valuable ceſſions of territory. The ſupreme council of Bengal, however, diſowned this treaty, and concluded one with the Mahrattas in the month of March 1776; by which it was agreed that they ſhould provide for Ragobah's ſubſiſtence according to his rank, on condition of his reſiding in their country. This being not at all agreeable to Ragobah, he fled once more to Bombay, where a new confederacy was entered into for his reſtoration. The council of Bengal approved of this on account of the approaching rupture with France; and in conſequence of this, a detachment was, in February 1778, ordered to march acroſs the continent of India. By ſome miſmanagements in this expedition the whole army was obliged to capitulate with the Mahratta general on the 29th of January 1779. One of the terms of the capitulation was, that a body of troops which were advancing on the other ſide ſhould be obliged to return to Bengal. But General Goddard, the commander of theſe forces, denying the right of the council of Bengal to remand him, proceeded on his march, and arrived on the 18th of February. Here he received orders to conclude a new treaty, if it could be obtained on eaſier terms than that of the capitulation by which it had been engaged to cede all our acquiſitions in the country of the Mahrattas.

Such extreme diſregard to any ſtipulations that could be made, undoubtedly provoked the Mahrattas, and induced them to join in the confederacy with Hyder Aly already mentioned. The war, however, was ſucceſsfully begun by General Goddard in January 1780. In three months he reduced the whole province of Guzerat. Madajee Sindia the Mahratta general advanced to oppoſe him; but as he did not chooſe to venture a battle, the Engliſh general ſtormed his camp, and totally routed him. Other exploits were performed in the courſe of this campaign; during which the governor-general (Mr. Haſtings) ſeeing no hopes of an accommodation, entered into a treaty with the rajah of Gohud, and with his conſent Major Popham received a fortreſs in his dominions named *Guallior*, garriſoned by the Mahrattas, and hitherto reckoned impregnable.

Theſe ſucceſſes were followed by the dreadful incurſions of Hyder Aly already related, which put a ſtop to the conqueſts of General Goddard; all the forces he could ſpare being required to aſſiſt the army under Sir Eyre Coote. The laſt exploit of General Goddard was the reduction of the iſland of Salſette, and of a ſtrong fortreſs named *Baſſein* in its neighbourhood. The army of Sindia, conſiſting of 30,000 men, was alſo defeated this year by Colonel Carnac; and the Mahrattas, diſheartened by their loſſes, conſented to a ſeparate peace with the Engliſh, leaving Hyder Aly to manage the war as he thought proper.

153 Revolt of Benares.

In the mean time, however, the expences incurred by theſe wars were ſo high, that Mr Haſtings, who was obliged to furniſh them ſome how or other, was reduced to the greateſt difficulties. For this purpoſe not only all the treaſure of Bengal was exhauſted, but it was found neceſſary to draw extraordinary contributions from the Britiſh allies, which was productive of many diſagreeable circumſtances. One of the moſt remarkable was the revolt of Benares. The rajah of this country had formerly put himſelf under the protection of the Engliſh, who on their part agreed to ſecure his dominions to him on condition of his paying an annual ſubſidy to the nabob of Oude. In 1770 the rajah died, and was ſucceeded by his ſon Cheit Sing, who held the ſovereignty at the time we ſpeak of. On the death of the nabob in 1775, a new treaty was made with his ſucceſſor, by which the ſovereignty of Benares was transferred to the Eaſt India company, an acquiſition equivalent to 240,000 l. *per annum*; at the ſame time that the ſubſidy paid by Suja Dowla, and which, by Lord Clive, had been fixed at 36,000 l. and afterwards raiſed to 252,000 l. was now augmented to 312,000 l. *per annum*.

On receiving intelligence in July 1778, that war had actually commenced between France and England, Cheit Sing was required to pay 50,000 l. as his ſhare of the public burdens. Such a demand was paid with extreme reluctance on the part of a prince who already contributed 240,000 l. and probably thought that an abundant equivalent for the protection enjoyed. The ſame requiſition, however, was made the two ſucceeeding years, but with a promiſe that the demand ſhould ceaſe when peace was reſtored. Inſtead of any preſent alleviation, however, a body of troops was alſo quartered upon him, and he was likewiſe obliged to pay for their maintenance, leſt he ſhould not voluntarily pay the additional 50,000 l. In November 1780, in addition to all theſe demands, he was alſo required to ſend into the field ſuch a body of horſe as he could ſpare; but this requiſition, owing to ſome miſunderſtanding, was never complied with.

154 Cheit Sing arreſted and depoſed.

In July 1781 Mr Haſtings having, it is ſaid, received ſome intelligence that the oppreſſed rajah meditated rebellion, ſet out on a viſit to the nabob of Oude, and in his way propoſed to clear up the miſunderſtanding with him. The method by which he intended to clear up this miſunderſtanding was to lay a fine upon the poor prince of 400,000 l. or 500,000 l.; and as a reaſon for doing ſo, it was alleged that the late rajah had left a million ſterling in his treaſury; a ſum which was continually increaſing. Cheit Sing, advanced to the borders of his territories to meet the governor general, behaved with all imaginable ſubmiſſion; and having got private intelligence of what was meditated againſt him, offered to pay down 200,000 l. This was refuſed; and the governor general having reached the capital, forbid the rajah his preſence, and by a letter acquainted him with his cauſes of complaint. Cheit Sing ſent a very ſubmiſſive anſwer; but as he endeavoured to exculpate himſelf, Mr Haſtings was ſo far from being ſatisfied, that he put the prince under an arreſt.

Such an unheard-of proceeding excited the utmoſt ſurpriſe and reſentment in ſubjects accuſtomed to regard their ſovereign with a degree of reverence little ſhort of adoration. On the very day of the arreſt they aſſembled tumultuouſly, cut in pieces the guard which had been ſet on the palace, and carried off their prince in triumph. It does not appear, however, that this was any other than a tranſitory tumult; for though they could eaſily have cut off the governor-general, they made no attempt againſt him. Cheit Sing proteſted his innocence, and made the moſt unlimited offers of ſubmiſſion, but all in vain. His government was declared vacant, and the zemindary beſtowed on the next heir; the annual ſubſidy to the government of Bengal was augmented from 240,000 l. to 400,000l. annually. The miſerable rajah was forced to fly his country; and his mother, though promiſed leave to retire upon conditions, was attacked in her retreat and plundered by the ſoldiers. After all his endeavours to procure money, however, Mr Haſtings found this adventure turn out much leſs profitable than he had expected; for the treaſury of the fugitive prince was ſeized and retained by the ſoldiery.

155
New treaties with the nabob of Oude.

As to the nabob of Oude, a new treaty was concluded with him; the deſign of which was evidently to eaſe him of ſome of the burdens to which he was at that time ſubjected. Part of the Britiſh troops were therefore withdrawn from his dominions. As Fizulla Khan, the moſt proſperous of his dependents, had been called upon to furniſh a body of 5000 horſe to join the nabob's army, and had not complied with the requiſition, the guarantee of his treaty with the nabob, formerly executed, was withdrawn; but it being afterwards diſcovered that his territory was not equivalent to the claims of the governor, the treaty was renewed on payment of a ſlight fine. As the widow of Sujah Dowla was ſuſpected of favouring the late rajah Cheit Sing, the reigning prince was allowed to reclaim the treaſures of his father in her poſſeſſion, and likewiſe to deprive her of a ſmall province ſhe had in poſſeſſion, on condition of paying her a certain ſtipulated allowance annually. The treaſures were ſeized as payment of the debts of the prince to the company.

Hoſtilities continued in India between the French and Engliſh till the year 1783 was far advanced, and long after tranquillity had been reſtored to other parts of the world. In the beginning of the ſeaſon for action the governor and council of Bengal determined to ſend an ample ſupply to the preſidency of Madras, that ſo they might be enabled to put an end to the war, which Tippoo ſeemed willing to proſecute with even more vigour than his father had done. For this purpoſe Sir Eyre Coote, who, for his health, had gone to Bengal by ſea, ſet ſail once more for Madras, being intruſted with a large ſum of money for the neceſſary expences of the war. In his paſſage he was chaced for 48 hours by two French men of war. The ſolicitude and fatigue he underwent during this time, being almoſt conſtantly upon deck, occaſioned a relapſe, ſo that he died in two days after his arrival at Madras. His death was greatly lamented, as the greateſt expectations had been formed of an happy concluſion being put to the war by his extraordinary military talents, for which he had already acquired ſo great reputation in India.

The invaſion of Tippoo's dominions having called him off from the Carnatic, general Stuart took the opportunity of attacking him in another quarter. Colonel Fullerton was diſpatched with a large body of troops to invade the province of Coimbatour. This he executed with great ſucceſs; over-running the country, taking ſeveral fortreſſes, and making a very alarming diverſion on this ſide of Tippoo's dominions. General Stuart, however, having ſtill greater deſigns in view, was obliged to recal this gentleman in the midſt of his ſucceſs. The ſiege of the ſtrong fortreſs of Cuddalore was the operation which now engaged his attention. It was now become the principal place of arms belonging to the French; was ſtrongly fortified, and garriſoned by a numerous body of the beſt troops in France, as well as a conſiderable number of Tippoo's choiceſt forces. The ſiege therefore proved ſo difficult, that though the Engliſh diſplayed the utmoſt valour and military ſkill, they were not able to reduce the place until hoſtilities were interrupted by the news of a general pacification having taken place in Europe. In this ſiege a remarkable circumſtance took place, viz. that of a corps of ſepoy grenadiers encountering and overcoming the French troops oppoſed to them with fixed bayonets. For this remarkable inſtance of valour, they not only received the higheſt applauſe at the time, but proviſion was made for themſelves and families by the preſidencies to which they belonged.

156
Cuddalore unſucceſsfully beſieged by the Engliſh.

After the reduction of Hydernagur, and the deſtruction of the army under general Matthews, the Engliſh poſſeſſed only three places of conſequence in the kingdom of Canara. Theſe were Mangalore, Onore and Carwa. The ſiege of all theſe places was undertaken at once. Mangalore, the principal port in the country, was defended by a very numerous garriſon under Major Campbell. Tippoo ſat down before it on the 19th of May; and the attack and defence were both conducted with the greateſt ſpirit and activity. Notwithſtanding the utmoſt efforts of the beſiegers, however, and that the garriſon were reduced to the laſt extremity for want of proviſions, they held out in ſpite of every difficulty, until the general pacification being concluded, the place was afterwards delivered up. In other parts nothing more happened than an indeciſive engagement between M. Suffrein and admiral Hughes; ſo that the Britiſh empire in Bengal was for that time fully eſtabliſhed, and has ſince continued unmoleſted by foreign enemies, till very lately, that the ambition of Tippoo Saib has again prompted him to invade the territories of the nabob, an ally of Britain. This again brought on a war with that reſtleſs, but able prince; whom the Britiſh, however, in conjunction with the Mahrattas,
under

under the conduct of Lord Cornwallis, purſued towards his capital:—The particulars of this war would ſwell this article too much; we ſhall only add, that it was terminated in 1792, by a treaty much to the advantage of the Britiſh.

India Company. See Company.

India Rubber, See Caoutchouc.

INDIAN, In a general ſenſe, denotes any thing belonging to the Indies, Eaſt or Weſt.

Indian Berry. See Menispermum.

Indian Bread. See Jatropha.

Indian Corn, or *Maize*. See Zea.

Indian Creſſes. See Tropæolum.

Indian Fig. See Cactus.

Indian Pagod-tree. See Ficus.

Indian Ink. See Ink.

Indian Reed. See Canna.

INDICATION, in phyſic, whatever ſerves to direct the phyſician how to act.

INDICATIVE, in grammar, the firſt mood or manner of conjugating a verb, by which we ſimply affirm, deny, or aſk ſomething: as, *amant*, they love; *non amant*, they do not love; *amantne?* do they love? See Grammar.

INDICTION, in chronology, a cycle of 15 years. See Cycle.

INDICTMENT, in law, one of the modes of proſecuting an offender. See Prosecution.

Blackſt. Comment.

Wilk. L. L. Ann. Lex. 117.

In Engliſh law it is a written accuſation of one or more perſons of a crime or miſdemeanor, preferred to, and preſented upon oath by, a grand jury. To this end, the ſheriff of every county is bound to return to every ſeſſion of the peace, and every commiſſion of *oyer* and *terminer*, and of general goal-delivery, twenty-four good and lawful men of the county, ſome out of every hundred, to inquire, preſent, do, and execute all thoſe things, which on the part of our lord the king ſhall then and there be commanded them. They ought to be freeholders; but to what amount is uncertain: which ſeems to be *caſus omiſſus*, and as proper to be ſupplied by the legiſlature as the qualifications of the petit jury; which were formerly equally vague and uncertain, but are now ſettled by ſeveral acts of parliament. However, they are uſually gentlemen of the beſt figure in the county. As many as appear upon this pannel, are ſworn upon the grand jury, to the amount of twelve at the leaſt, and not more than twenty-three; that twelve may be a majority. Which number, as well as the conſtitution itſelf, we find exactly deſcribed ſo early as the laws of king Ethelred: *Exeant ſeniores duodecim thani, et præfectus cum eis, ut jurent ſuper ſanctuarium quod eis in manus datur, quod nolint ullum innocentem accuſare, nec aliquem noxium celare.* In the time of king Richard I. (according to Hoveden), the proceſs of electing the grand jury, ordained by that prince, was as follows: Four kights were to be taken from the county at large, who chuſe two more out of every hundred; which two aſſociated to themſelves ten other principal freemen, and thoſe twelve were to anſwer concerning all particulars relating to their own diſtrict. This number was probably found too large and inconvenient; but the traces of this inſtitution ſtill remain, in that ſome of the jury muſt be ſummoned out of every hundred. This grand jury are previouſly inſtructed in the articles of their inquiry, by a charge from the judge who preſides upon the bench. They then withdraw to ſit and receive indictments, which are preferred to them in the name of the king, but at the ſuit of any private proſecutor; and they are only to hear evidence on behalf of the proſecution: for the finding of an indictment is only in the nature of an inquiry or accuſation, which is afterwards to be tried and determined; and the grand jury are only to inquire upon their oaths, whether there be ſufficient cauſe to call upon the party to anſwer it. A grand jury, however, ought to be thoroughly perſuaded of the truth of an indictment, ſo far as the evidence goes; and not to reſt ſatisfied merely with remote probabilities: a doctrine that might be applied to very oppreſſive purpoſes.

The grand jury are ſworn to inquire only for the body of the county, *pro corpore comitatus*; and therefore they cannot regularly inquire of a fact done out of that county for which they are ſworn, unleſs particularly enabled by act of parliament. And to ſo high a nicety was this matter anciently carried, that where a man was wounded in one county and died in another, the offender was at common law indictable in neither, becauſe no complete act of felony was done in any one of them: but by ſtatute 2 and 3 Ed. VI. c. 24. he is now indictable in the county where the party died. And, by ſtatute 2 Geo. II. c. 21. if the ſtroke or poiſoning be in England, and the death upon the ſea or out of England, or *vice verſa*, the offenders, and their acceſſories, may be indicted in the county where either the death, poiſoning, or ſtroke, ſhall happen. And ſo in ſome other caſes; as particularly, where treaſon is committed out of the realm, it may be inquired of in any county within the realm, as the king ſhall direct, in purſuance of ſtatutes 26 Hen. VIII. c. 13. 33.; Hen. VIII. c. 23. 35.; Hen. VIII. c. 2. 5. 6.; Edw. VI. c. 11. And counterfeiters, waſhers, or miniſhers, of the current coin, together with all manner of felons and their acceſſories, may, by ſtatute 26 Hen. VIII. c. 6. (confirmed and explained by 34 and 35 Hen. VIII. c. 26. § 75. 76.) be indicted and tried for thoſe offences, if committed in any part of Wales, before the juſtices of gaol-delivery and of the peace, in the next adjoining county of England, where the king's writ runneth: that is, at preſent in the county of Hereford or Salop; and not, as it would ſeem, in the county of Cheſter or Monmouth: the one being a county palatine where the king's writ did not run; and the other a part of Wales, in 26 Hen. VIII. Murders alſo, whether committed in England or in foreign parts, may, by virtue of the ſtatute 33 Hen. VIII. c. 23. be inquired of and tried by the king's ſpecial commiſſion in any ſhire or place in the kingdom. By ſtatute 10 and 11 W. III. c. 25. all robberies, and other capital crimes, committed in Newfoundland, may be inquired of and tried in any county in England. Offences againſt the black act, 9 Geo. I. c. 22. may be inquired of and tried in any county of England, at the option of the proſecutor. So felonies, in deſtroying turnpikes, or works upon navigable rivers, erected by authority of parliament, may, by ſtatutes 8 Geo. II. c. 20. and 13 Geo. III. c. 84. be inquired of and tried in any adjacent county. By ſtatute 26 Geo. II. c. 19. plundering or ſtealing from any veſſel in diſtreſs or wrecked, or breaking any ſhip contrary to 12 Ann. ſt. 2.

c. 18. may be proſecuted either in the county where the fact is committed, or in any county next adjoining: and if committed in Wales, then in the next adjoining Engliſh county: by which is underſtood to be meant ſuch Engliſh county as, by the ſtatute 26 Hen. VIII. abovementioned, had before a concurrent juriſdiction of felonies committed in Wales. Felonies committed out of the realm, in burning or deſtroying the king's ſhips, magazines, or ſtores, may, by ſtatute 12 Geo. III. c. 24. be inquired of and tried in any county of England, or in the place where the offence is committed. By ſtatute 13 Geo. III. c. 63. miſdemeanors committed in India may be tried upon information or indictment in the court of king's bench in England, and a mode is marked out for examining witneſſes by commiſſion, and tranſmitting their depoſitions to the court. But, in general, all offences muſt be inquired into as well as tried, in the county where the fact is committed. Yet if larceny be committed in one county, and the goods carried into another, the offender may be indicted in either; for the offence is complete in both. Or he may be indicted in England for larceny in Scotland, and carrying the goods with him into England, or *vice verſa;* or for receiving in one part of the united kingdom goods that have been ſtolen in another. But for robbery, burglary, and the like, he can only be indicted where the fact was actually committed; for though the carrying away and keeping of the goods is a continuation of the original taking, and is therefore larceny in the ſecond county, yet it is not a robbery or burglary in that juriſdiction. And if a perſon be indicted in one county for larceny of goods originally taken in another, and be thereof convicted, or ſtands mute, he will not be admitted to his clergy; provided the original taking be attended with ſuch circumſtances as would have ouſted him of his clergy by virtue of any ſtatute made previous to the year 1691.

When the grand jury have heard the evidence, if they think it a groundleſs accuſation, they uſed formerly to endorſe on the back of the bill *Ignoramus;* or, We know nothing of it: intimating, that though the facts might poſſibly be true, that truth did not appear to them. But now they aſſert in Engliſh more abſolutely *Not a true bill;* or (which is the better way) *Not found:* and then the party is diſcharged without farther anſwer. But a freſh bill may afterwards be preferred to a ſubſequent grand jury. If they are ſatisfied of the truth of the accuſation, they then endorſe upon it, "A true bill;" anciently, *Billa vera.* The indictment is then ſaid to be found, and the party ſtands indicted. But to find a bill, there muſt at leaſt twelve of the jury agree: for ſo tender is the law of England of the lives of the ſubjects, that no man can be convicted at the ſuit of the king of any capital offence, unleſs by the unanimous voice of twenty-four of his equals or neighbours; that is, by twelve at leaſt of the grand jury, in the firſt place, aſſenting to the accuſation; and afterwards by the whole petit jury of twelve more, finding him guilty upon his trial. But if twelve of the grand jury aſſent, it is a good preſentment, though ſome of the reſt diſagree. And the indictment, when ſo found, is publicly delivered into court.

Indictments muſt have a preciſe and ſufficient certainty. By ſtatute 1 Hen. V. c. 5. all indictments muſt ſet forth the Chriſtian name, ſurname, and addition of the ſtate and degree, myſtery, town, or place, and the county of the offender; and all this to identify his *perſon.* The *time* and *place* are alſo to be aſcertained, by naming the day and townſhip in which the fact was committed: though a miſtake in theſe points is in general not held to be material, provided the *time* be laid previous to the finding of the indictment, and the *place* to be within the juriſdiction of the court; unleſs where the place is laid, not merely as a *venue*, but as part of the deſcription of the fact. But ſometimes the *time* may be very material, where there is any limitation in point of time aſſigned for the proſecution of offenders; as by the ſtatute 7 Will. III. c. 3. which enacts, that no proſecution ſhall be had for any of the treaſons or miſpriſions therein mentioned (except an aſſaſſination deſigned or attempted on the perſon of the king), unleſs the bill of indictment be found within three years after the offence committed; and, in caſe of murder, the time of the death muſt be laid within a year and a day after the mortal ſtroke was given. The offence itſelf muſt alſo be ſet forth with clearneſs and certainty; and in ſome crimes particular words of art muſt be uſed, which are ſo appropriated by the law to expreſs the preciſe idea which it entertains of the offence, that no other words, however ſynonymous they may ſeem, are capable of doing it. Thus, in treaſon, the facts muſt be laid to be done "treaſonably, and againſt his allegiance;" anciently, *proditoriè et contra ligeantiæ ſuæ debitum;*" elſe the indictment is void. In indictments for murder, it is neceſſary to ſay that the party indicted "murdered," not "killed" or "ſlew," the other; which, till the late ſtatute, was expreſſed in Latin by the word *murderavit.* In all indictments for felonies, the adverb "feloniouſly," *felonicè,* muſt be uſed; and for burglaries alſo, *burglariter,* or, in Engliſh, "burglariouſly:" and all theſe to aſcertain the intent. In rapes, the word *rapuit,* or "raviſhed," is neceſſary, and muſt not be expreſſed by any periphraſis, in order to render the crime certain. So in larcenies alſo, the words *felonice cepit et aſportavit,* "feloniouſly took or carried away," are neceſſary to every indictment; for theſe only can expreſs the very offence. Alſo, in indictments for murder, the length and depth of the wound ſhould in general be expreſſed, in order that it may appear to the court to have been of a mortal nature: but if it goes through the body, then its dimenſions are immaterial; for that is apparently ſufficient to have been the cauſe of the death. Alſo, where a limb, or the like, is abſolutely cut off, there ſuch deſcription is needleſs. Laſtly, in indictments, the *value* of the thing which is the ſubject or inſtrument of the offence muſt ſometimes be expreſſed. In indictments for lacenies this is neceſſary, that it may appear whether it be grand or petit larceny; and whether intitled or not to the benefit of clergy. In homicides of all ſorts it is neceſſary; as the weapon with which it is committed is forfeited to the king as a deodand. For the manner of proceſs upon an indictment, ſee Process.

Indictment, in Scots law, the name of the ſummons, or libel, upon which criminals are cited before the court of juſticiary to ſtand trial. See Law, Part III. nº clxxxvi. 44.

Plea to INDICTMENT. See PLEA.

INDIES, Eaſt and Weſt. See INDIA and AMERICA, and Plates CCLIV. CCLV.

INDIGENOUS, of *indigena*, denotes a native of a country, or that which was originally born or produced in the country where it is found. In this ſenſe, particular ſpecies of animals and plants are ſaid to be *indigenous* in the country where they are native, in oppoſition to EXOTIC.

INDIGESTION, a crudity or want of due coction of the food in the ſtomach. See DIGESTION.

INDIGETES, a name which the ancients gave to ſome of their gods.

There are various opinions about the origin and ſignification of this word. Some pretend it was given to all the gods in general; and others, only to the demigods, or great men deified. Others ſay, it was given to ſuch gods as were originally of the country, or rather ſuch as were the gods of the country that bore this name; and others again hold it was aſcribed to ſuch gods as were patrons and protectors of particular cities. Laſtly, others hold *indigetes* to be derived from *inde genitus* or *in loco degens*, or from *inde* and *ago*, for *dego*, "I live, I inhabit;" which laſt opinion ſeems the moſt probable.

In effect it appears, 1. That theſe *indigetes* were alſo called *local gods (dii locales)*, or *topical gods*, which is the ſame thing. 2. The *indigetes* were ordinarily men deified, who indeed were in effect local gods, being eſteemed the protectors of thoſe places where they were deified; ſo that the ſecond and third opinions are very conſiſtent. 3. Virgil joins *patrii* with *indigetes*, as being the ſame thing, *Georg.* i, ver. 498. "*Dii patrii, indigetes.*" 4. The gods to whom the Romans gave the name *indigetes* were, Faunus, Veſta, Æneas, Romulus, all the gods of Italy; and at Athens, Minerva, ſays Servius; and at Carthage, Dido. It is true, we meet with Jupiter *indiges:* but that Jupiter *indiges* is Æneas, not the great Jupiter; as we may ſee in Livy, lib. i. cap. 3. in which laſt ſenſe Servius aſſures us, *indiges* comes from the Latin *in diis ago*, "I am among the gods."

Among theſe *indigetes* gods, there is none more celebrated, nor more extenſively worſhipped, than HERCULES.

INDIGO, a dye, prepared from the leaves and ſmall branches of the *Indigofera Tinctoria*. See the next article.

INDIGOFERA, the INDIGO PLANT: A genus of the decandria order, belonging to the diadelphia claſs of plants; and in the natural method ranking under the 32d order, *Papilionaceæ*. The Calyx is patent; the carina of the corolla furniſhed with a ſubulated patulous ſpur on each ſide; the legumen is linear.—There are five ſpecies; the moſt remarkable of which is the *tinctoria*, a native of the warm parts of Aſia, Africa, and America, and from which the Indigo dye is made. The root of this plant is three or four lines thick, and more than a foot long, of a faint ſmell ſomething like parſley. From this root iſſues a ſingle ſtem nearly of the ſame thickneſs, about two feet high, ſtraight, hard, almoſt woody, covered with a bark ſlightly ſplit, of a grey aſh-colour towards the bottom, green in the middle, reddiſh at the extremity, and without appearance of pith in the inſide. The leaves, ranged in pairs around the ſtalk, are of an oval form, ſmooth, ſoft to the touch, furrowed above, of a deep green on the under-ſide, and connected by a very ſhort peduncle. From about one third of the ſtem to the extremity there are ears that are loaded with very ſmall flowers from a dozen to 15, but deſtitute of ſmell. The piſtil, which is in the midſt of each flower, changes into a pod, in which the ſeeds are incloſed.

This plant requires a ſmooth rich ſoil, well tilled, and not too dry. The ſeed of it, which, as to figure and colour, reſembles gun-powder, is ſown in little furrows that are about the breadth of the hoe, two or three inches deep, at a foot's diſtance from each other, and in as ſtraight a line as poſſible. Continual attention is required to pluck up the weeds, which would ſoon choak the plant. Though it may be ſown in all ſeaſons, the ſpring is commonly preferred. Moiſture cauſes this plant to ſhoot above the ſurface in three or four days. It is ripe at the end of two months. When it begins to flower, it cut with pruning-knives; and cut again at the end of every ſix weeks, if the weather is a little rainy. It laſts about two years, after which term it degenerates; it is then plucked up, and planted afreſh. As the plant ſoon exhauſts the ſoil, becauſe it does not abſorb a ſufficient quantity of air and dew to moiſten the earth, it is of advantage to the planter to have a vaſt ſpace which may remain covered with trees, till it become neceſſary to fell them in order to make room for the indigo.

Indigo is diſtinguiſhed into two kinds, the *true* and the *baſtard*. Though the firſt is ſold at a higher price on account of its ſuperiority, it is uſually advantageous to cultivate the other, becauſe it is heavier. The firſt will grow in many different ſoils; the ſecond ſucceeds beſt in thoſe which are moſt expoſed in the rain. Both are liable to great accidents. Sometimes the plant becomes dry, and is deſtroyed by an inſect frequently found on it; at other times, the leaves, which are the valuable part of the plant, are devoured in the ſpace of 24 hours by caterpillars. This laſt misfortune, which is but too common, has given occaſion to the ſaying, "that the planters of indigo go to bed rich, and riſe in the morning totally ruined."

This production ought to be gathered in with great precaution, for fear of making the farina that lies on the leaves, and is very valuable, fall off by ſhaking it. When gathered, it is thrown into the ſteeping-vat, which is a large tub filled with water. Here it undergoes a fermentation, which in 24 hours at furtheſt is completed. A cock is then turned, to let the water run into the ſecond tub, called the *mortar* or *pounding tub.* The ſteeping-vat is then cleaned out, that freſh plants may be thrown in: and thus the work is continued without interruption.

The water which has run into the pounding-tub is found impregnated with a very ſubtile earth, which alone conſtitutes the dregs or blue ſubſtance that is the object of this proceſs, and which muſt be ſeparated from the uſeleſs ſalt of the plant, becauſe this makes the dregs ſwim on the ſurface. To effect this, the water is forcibly agitated with wooden buckets, that are full of holes and fixed to a long handle. This part of the proceſs requires the greateſt precautions.

If the agitations be diſcontinued too ſoon, the part that is uſed in dying, not being ſufficiently ſeparated from the ſalt, would be loſt. If, on the other hand, the dye were to be agitated too long after the complete ſeparation, the parts would be brought together again, and form a new combination; and the ſalt reacting on the dregs would excite a ſecond fermentation, that would alter the dye, ſpoil its colour, and make what is called *burnt indigo.* Theſe accidents are prevented by a cloſe attention to the leaſt alterations that the dye undergoes, and by the precaution which the workmen take to draw out a little of it from time to time in a clean veſſel. When they perceive that the colouring particles collect by ſeparating from the reſt of the liquor, they leave of ſhaking the buckets, in order to allow time to the blue dregs to precipitate to the bottom of the tub, where they are left to ſettle till the water is quite clear.—Holes made in the tub, at different heights, are then opened one after another, and this uſeleſs water is let out,

The blue dregs remaining at the bottom having acquired the conſiſtence of a thick muddy liquid, cocks are then opened, which draw it off into the ſettler. After it is ſtill more cleared of much ſuperfluous water in this third and laſt tub, it is drained into ſacks; from whence, when water no longer filters through the cloth, this matter, now become of a thicker conſiſtence, is put into cheſts, where it entirely loſes its moiſture. At the end of three months the indigo is fit for ſale.

It is uſed, in waſhing, to give a bluiſh colour to linen: painters alſo employ it in their water colours; and dyers cannot make fine blue without indigo. The ancients procured it from the Eaſt-Indies; in modern times it has been tranſplanted into America. The cultivation of it, ſucceſſively attempted at different places, appears to be fixed at Carolina, St Domingo, and Mexico. That which is known under the name of *Guatimala* indigo, from whence it comes, is the moſt perfect of all.

There are two kinds of indigo prepared in the Eaſt-Indies, particularly on the coaſt of Coromandel, at Pondicherry, &c. Of theſe the worſt kind is uſed for giving the body of colour to the dyed ſubſtance, the other being employed only to give it a gloſs afterwards. The fineſt is prepared on the coaſt of Agra, Maſulipatam, and Ayanoo, but eſpecially in the iſland of Java; but this laſt, being extremely dear, is very little uſed by the dyers. The beſt ought to float on the ſurface of the water; its colour ought to be a very dark blue inclining to a violet, bright and ſparkling, eſpecially when broken. It may be tried by diſſolving a little in a glaſs of water: if pure, it will mix equably with liquor; but if otherwiſe, it will ſeparate and fall to the bottom. Another method of trying the goodneſs of this ſubſtance is by fire; for the pure indigo will be entirely conſumed, while the extraneous particles will remain. The pounded indigo is much more ſubject to adulteration than ſuch as is ſold in cakes or tablets; as the aſhes or dirt with which it is mixed are very apt to ſeparate from the pure colouring ſubſtance when ſtanding in a liquid ſtate, as it muſt always do before the moiſture is evaporated: whence, on breaking a bit of indigo ſo adulterated, the extraneous matter will be perceived in ſtrata of a different colour.

INDIVIDUAL, a particular being of any ſpecies, or that which cannot be divided into two or more beings equal or alike.

The uſual diviſion in logic is made into *genera,* or into *genuſes;* thoſe *genera* into *ſpecies;* and thoſe *ſpecies* into *individuals.*

INDIVISIBLE, among metaphyſicians.—A thing is ſaid to be abſolutely *indiviſible,* that is a ſimple being, and conſiſts of no parts into which it may be divided. Thus God is *indiviſible* in all reſpects; as is alſo the human mind; not having extenſion, or other properties of body.

INDIVISIBLES, in geometry, the elements or principles into which any body or figure may be ultimately reſolved; which elements are ſuppoſed to be infinitely ſmall: thus, a line may be ſaid to conſiſt of points, a ſurface of parallel lines, and a ſolid of parallel and ſimilar ſurfaces.

INDORSEMENT, in law, any thing written on the back of a deed; as a receipt for money received.

There is likewiſe an *indorſement,* by way of aſſignment, on bills of exchange and notes of hand; which is done by writing a perſon's name on the back thereof.

INDOSTAN, or HINDOSTAN, PROPER INDIA, or *the Empire of the great Mogul.* See HINDOSTAN.

INDUCTION, in logic and rhetoric, a conſequence drawn from ſeveral propoſitions or principles firſt laid down. See LOGIC; and ORATORY, n° 32.

INDUCTION, in law, is putting a clerk or clergyman in poſſeſſion of a benefice or living to which he is collated or preſented. See the article PARSON.—Induction is performed by a mandate from the biſhop to the arch-deacon, who uſually iſſues out a precept to other clergymen to perform it for him. It is done by given the clerk corporal poſſeſſion of the church, as by holding the ring of the door, tolling a bell or the like; and is a form required by law, with intent to give all the pariſhioners due notice and ſufficient certainty of their new miniſter, to whom their tythes are to be paid. This therefore is the inveſtiture of the temporal part of the benefice, as inſtitution is of the ſpiritual. And when a clerk is thus preſented, inſtituted, and inducted into a rectory, he is then, and not before, in full and complete poſſeſſion; and is called in law *perſona imperſonata,* or *parſon imparſonee.*

INDULGDNCES, in the Romiſh church, are a remiſſion of the puniſhment due to ſins, granted by the church, and ſuppoſed to ſave the ſinner from Purgatory.

According to the doctrine of the Romiſh church, all the good works of the ſaints over and above thoſe which were neceſſary towards their own juſtification are depoſited, together with the infinite merits of Jeſus Chriſt, in one inexhauſtible treaſury. The keys of this were committed to St Peter, and to his ſucceſſors the popes, who may open it at pleaſure, and by transferring a portion of this ſuperabundant merit to any particular perſon, for a ſum of money, may convey to him either the pardon of his own ſins, or a releaſe for any one in whom he is intereſted, from the pains of Purgatory. Such indulgences were firſt invented in the 11th century, by Urban II. as a recompence for thoſe who went in perſon upon the glorious enterprize of conquering the Holy Land. They were afterwards granted to thoſe who hired a ſoldier for that purpoſe; and in proceſs of time were beſtowed on ſuch as gave money for accompliſhing any pious work enjoined by the Pope.

The power of granting indulgences has been greatly abuſed in the church of Rome. Pope Leo X. in order to carry on the magnificent ſtructure of St. Peter's at Rome, publiſhed indulgences, and a plenary remiſſion to all ſuch as ſhould contribute money towards it. Finding the project take, he granted to Albert elector of Mentz, and archbiſhop of Magdeburg, the benefit of the indulgences of Saxony and the neighbouring parts, and farmed out thoſe of other countries to the higheſt bidders; who, to make the beſt of their bargain, procured the ableſt preachers to cry up the value of the ware. The form of theſe indulgences was as follows: "May our Lord Jeſus Chriſt have mercy upon thee, and abſolve thee by the merits of his moſt holy paſſion. And I, by his authority, that of his bleſſed apoſtles Peter and Paul, and of the moſt holy Pope, granted and committed to me in theſe parts, do abſolve thee, firſt from all eccleſiaſtical cenſures, in whatever manner they have been incurred; then from all thy ſins, tranſgreſſions, and exceſſes, how enormous ſoever they may be, even from ſuch as are reſerved for the cognizance of the holy ſee, and as far as the keys of the holy church extend: I remit to you all puniſhment which you deſerve in Purgatory on their account; and I reſtore you to the holy ſacraments of the church, to the unity of the faithful, and to that innocence and purity which you poſſeſſed at baptiſm; ſo that when you die, the gates of puniſhment ſhall be ſhut, and the gates of the paradiſe of delight ſhall be opened: and if you ſhall not die at preſent, this grace ſhall remain in full force when you are at the point of death. In the name of the Father, and of the Son, and of the Holy Ghoſt."

Robertſon's Charles V. vol. ii. 89.

The terms in which the retailers of indulgences deſcribed their benefits and the neceſſity of purchaſing them, are ſo extravagant, that they appear almoſt incredible. If any man (ſaid they) purchaſes letters of indulgence, his ſoul may reſt ſecure with reſpect to its ſalvation. The ſouls confined in Purgatory, for whoſe redemption indulgences are purchaſed, as ſoon as the money tinkles in the cheſt, inſtantly eſcape from that place of torment and aſcend into heaven. That the efficacy of indulgences was ſo great, that the moſt heinous ſins, even if one ſhould violate (which was impoſſible) the mother of God, would be remitted and expiated by them, and the perſons be freed both from puniſhment and guilt. That this was the unſpeakable gift of God, in order to reconcile men to himſelf. That the croſs erected by the preachers of indulgences was equally efficacious with the croſs of Chriſt itſelf. "Lo! the heavens are open; if you enter not now, when will you enter? For twelve pence you may redeem the ſoul of your father out of Purgatory; and are you ſo ungrateful, that you will not reſcue your parent from torment? If you had but one coat, you ought to ſtrip yourſelf inſtantly, and ſell it, in order to purchaſe ſuch benefits," &c.

It was this great abuſe of indulgences that contributed not a little to the firſt reformation of religion in Germany, where Martin Luther began firſt to declaim againſt the preachers of indulgences, and afterwards againſt indulgences themſelves: but ſince that time the popes have been more ſparing in the exerciſe of this power: however, they ſtill carry on a great trade with them to the Indies, where they are purchaſed at two rials a piece, and ſometimes more.

The pope likewiſe grants indulgences to perſons at the point of death; that is, he grants them, by a brief, power to chooſe what confeſſor they pleaſe, who is authorized thereby to abſolve them from all their ſins in general.

INDULT, in the church of Rome, the power of preſenting to benefices granted to certain perſons by the pope. Of this kind is the indult of kings and ſovereign princes in the Romiſh communion, and that of the parliament of Paris granted by ſeveral popes. By the concordat for the abolition of the pragmatic ſanction, made between Francis I. and Leo X. in 1516, the French king has the power of nominating to biſhoprics and other conſiſtorial benefices, within his realm. At the ſame time, by a particular bull, the pope granted him the privilege of nominating to the churches of Brittany and Provence. In 1648 pope Alexander VIII. and in 1668 Clement IX. granted the king an indult for the biſhoprics of Metz, Toul, and Verdun, which had been yielded to him by the treaty of Munſter; and in 1668, the ſame pope Clement IX. granted him an indult for the benefices in the counties of Rouſillon, Artois, and the Netherlands. The cardinals likewiſe have an indult granted them by agreement between pope Paul IV. and the ſacred college in 1555, which is always confirmed by the popes at the time of their election. By this treaty the cardinals have the free diſpoſal of all the benefices depending on them, and are empowered likewiſe to beſtow a benefice *in commendam*.

INDULTO, a duty, tax, or cuſtom, paid to the king of Spain for all ſuch commodities as are imported from the Weſt Indies in the galleons.

INDUS, a large river of Aſia, which riſes in the mountains which ſeparate Tartary from India, and diſcharges itſelf into the Indian ocean. See Hindostan and India.

INEBRIANTS, are defined to be ſuch things as affect the nerves in a particular and agreeable manner, and through them alter and diſturb the functions of the mind. They are properly divided into native and artificial; the former is chiefly in uſe among the oriental and other nations, the latter principally throughout Europe.

Natural Inebriants, are, 1. Opium; in uſe all over the eaſt, and of which the Turks, through cuſtom, ſwallow a drachm. 2. Peganum harmala, Syrian rue. The ſeeds are ſold in Turkey for this purpoſe; and with theſe, as Bellonius relates, the Turkiſh emperor Solyman kept himſelf intoxicated. 3. Maſlac of the Turks, or bangue of the Perſians; prepared from the duſt of the male-flower of hemp, or from the leaves. 4. Bangue of the Indians, from the leaves of the hibiſcus ſabdariffa. 5. Seeds of various ſpecies of the datura, or thorny apple. 6. Pinang, or betel of the Indians. 7. Roots of black henbane. 8. The hyoſcyamus phyſaloides. 9. Berries of the deadly nightſhade. 10. Leaves of millfoil, are uſed by the Dalekarlians to render their beer intoxicating. 11. Tobacco, and ſeveral others leſs material are mentioned; ſuch as clary, ſaffron, and darnel.

Artificial Inebriants, are fermented liquors from farinaceous ſeeds; wines, and ſpirits drawn by diſtillation. With theſe is ranked the nectar of the gods, and the anodyne medicine of Homer, commonly called *nepenthes*; and the ſpells by which Medea and Circe produced their inchantments.

INERTIA *of* MATTER, in philoſophy, is defined by Sir Iſaac Newton to be a paſſive principle by which bodies perſiſt in their motion or reſt, receive motion in proportion to the force impreſſing it, and reſiſt as much as they are reſiſted. It is alſo defined by the ſame author to be a power implanted in all matter, whereby it reſiſts any change endeavoured to be made in its ſtate. See MECHANICS.

INESSE is applied to things which are actually exiſting.

Authors make a difference between a thing *in eſſe*, and a thing *in poſſe*: a thing that is not, but may be, they ſay is *in poſſe*, or *potentia*; but a thing apparent and viſible, they ſay is *in eſſe*, that is, has a real being *eo inſtanti*; whereas the other is caſual, and at beſt but a poſſibility.

INFALISTACIO, an ancient puniſhment of felons, by throwing them among the rocks and ſands, cuſtomarily uſed in port-towns. It is the opinion of ſome writers, that *infaliſtatus* did imply ſome capital puniſhment, by expoſing the malefactor upon the ſands till the next tide carried him away; of which cuſtom, it is ſaid, there is an old tradition. However the penalty ſeems to take its name from the Norman *faleſe*, or *faleſia*, which ſignified not the ſands, but the rocks and cliffs adjoining, or impending on the ſea-ſhore. *Commiſit feloniam ob quam fuit ſuſpenſus, utlegatus, vel alio modo morti damnatus*, &c. *vel apud Dover* infaliſtatus, *apud Southampton ſubmerſus*, &c.

INFALLIBLE, ſomething that cannot err, or be deceived.

One of the great controverſies between the Proteſtants and Papiſts, is the infallibility which the latter attribute to the pope; though, in fact, they themſelves are not agreed on that head, ſome placing this pretended infallibility in the pope and a general council.

INFAMY, in law, is a term which extends to forgery, perjury, groſs cheats, &c. by which a perſon is rendered incapable of being a witneſs or juror, even though he is pardoned for his crimes.

INFANCY, the firſt part of life.—Fred. Hoffman ſays, that the human ſpecies are *infants* until they begin to talk, and *children* to the age of puberty. Anatomy diſcovers to us, that during infancy there is much imperfection in the human frame; *e. g.* its parts are diſproportioned, and its organs incapable of thoſe functions which in future life they are deſigned to perform. The head is larger in proportion to the bulk of the body than that of an adult. The liver and pancreas are much larger in proportion than in advanced life; their ſecretions are more in quantity alſo. The bile is very inert; the heart is ſtronger and larger than in future life; the quantity of blood ſent through the heart of an infant, in a given time, is alſo more in proportion than in adults. Though theſe circumſtances have their important uſefulneſs, yet the imperfection attending them ſubjects this age to many injuries and dangers from which a more perfect ſtate is exempted. Dr Percival obſerves, in his *Eſſays Med. and Exp.* that of all the children who are born alive, two thirds do not live to be two years old.

Infants have a larger proportion of brain than adults, hence are moſt ſubject to nervous diſorders; and hence the diagnoſtics of diſeaſes are in many reſpects obſcure or uncertain, as particularly thoſe taken from the pulſe, which, from the irritability of the tender bodies of infants, is ſuddenly affected by a variety of accidents too numerous, and ſeemingly too trivial to gain our attention. However, no very great embarraſſment ariſes to the practitioner from hence; for the diſorders in this ſtate are generally acute, leſs complicated than thoſe in adults, and are more eaſily diſcovered than is generally apprehended.

INFANT, denotes a young child. See INFANCY.

INFANTS, amongſt the Jews, Greeks, and Romans, were ſwadled as ſoon as they were born, in a manner ſimilar to that practiſed among the moderns. The Jews circumciſed and named their infant children on the 8th day from the birth. Upon the birth of a ſon, the Grecians crowned their doors with olive—of a daughter, with wool. The infant was waſhed in warm water, and anointed with oil—by the Spartans with wine; it was then dreſſed, and laid in a baſket, or on a ſhield if the father was a warrior, particularly amongſt the Spartans. At five days old they ran with it round the fire, and the mother's relations ſent preſents. The Greeks named their children on the tenth day, the Romans on the ninth: The naming was attended with ſacrifices and other demonſtrations of joy. The maternal office of ſuckling their own children was never declined, when circumſtances would permit. How much different is this from the unnatural delicacy obſerved by modern mothers, a delicacy which to the child is cruelty! The 40th day was a day of ſolemnity for the mother. The names of children were regiſtered both by the Greeks and Romans. See REGISTER.

For an account of the cuſtom of expoſing infants, ſee EXPOSING.

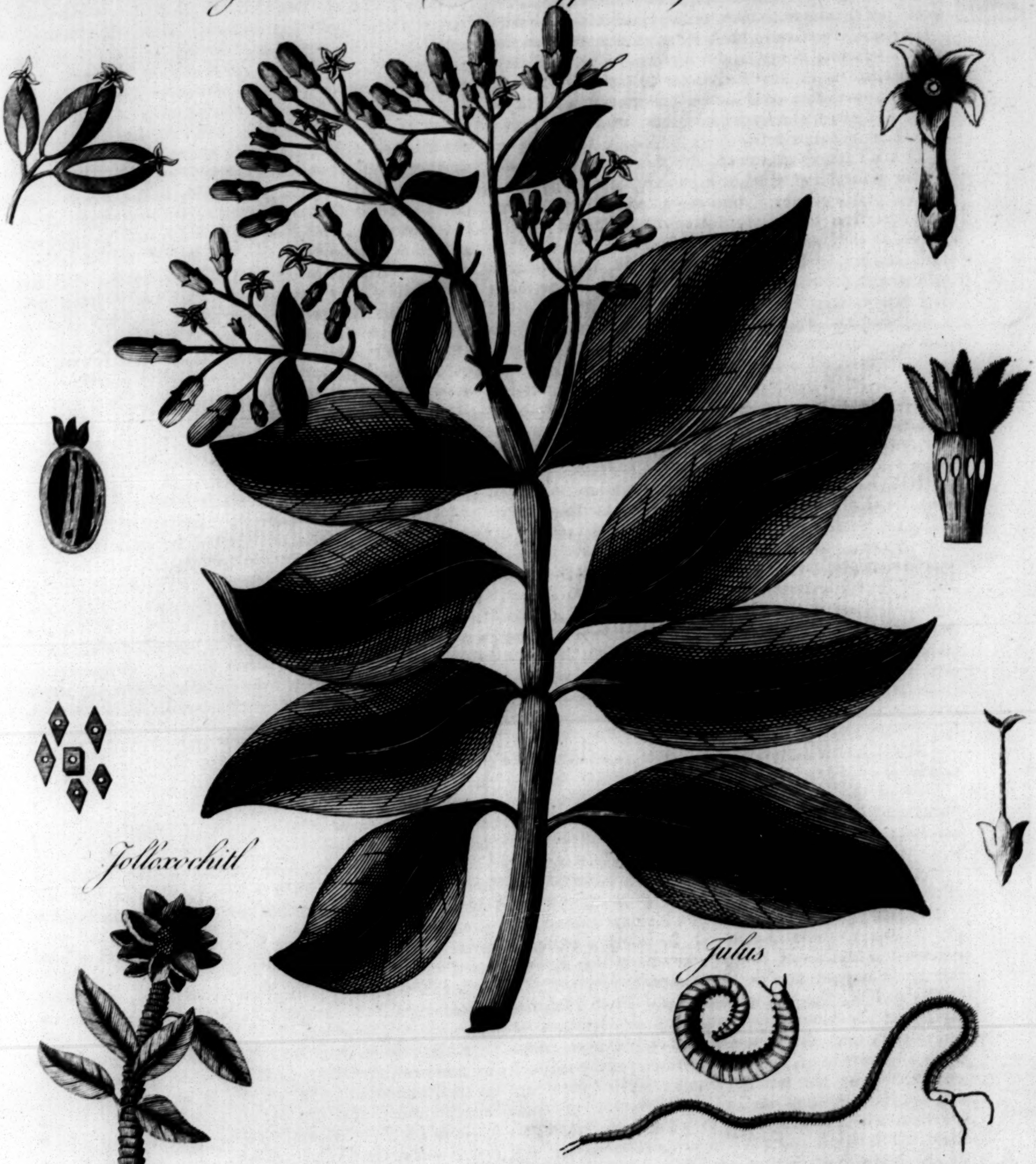
Infants were kept from crying in the ſtreets by means of a ſponge ſoaked in honey. Nurſes had alſo their bugbears and terrible names to frighten the children into peace:—The figure with which they were principally intimidated was Μαρμογυκειου, a ſort of raw-head and bloody bones.

INFANT, in law, is a perſon under 21 years of age; whoſe capacities, incapacities, and privileges, are various.

1. In *criminal* matters. The law of England does in ſome caſes privilege an infant under the age of 21, as to common miſdemeanours; ſo as to eſcape fine, impriſonment, and the like: and particularly in the caſes of omiſſion, as not repairing a bridge, or a high way, and other ſimilar offences; for, not having the command of his fortune till the age of 21, he wants the capacity to do thoſe things which the law requires. But where there is any notorious breach of the peace, a riot, battery, or the like, (which infants when full-grown are at leaſt as liable as others to commit); for thoſe, an infant above the age of 14 is equally liable to ſuffer, as a perſon of the full age of 21. *Blackſt. Comment.*

Jesuits Bark (Cinchona officinalis)

Plate CCLII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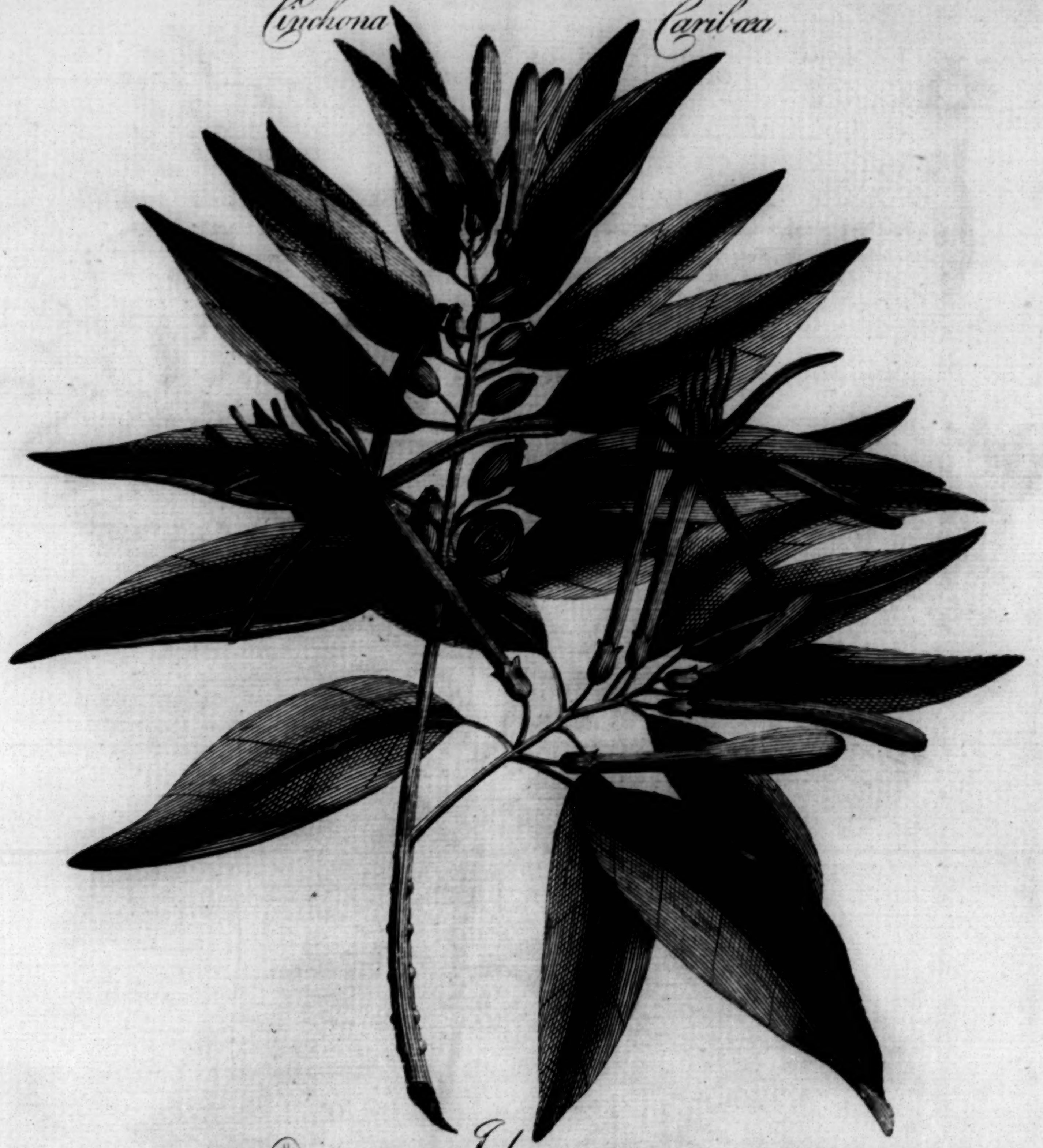
BRITISH MUSEUM

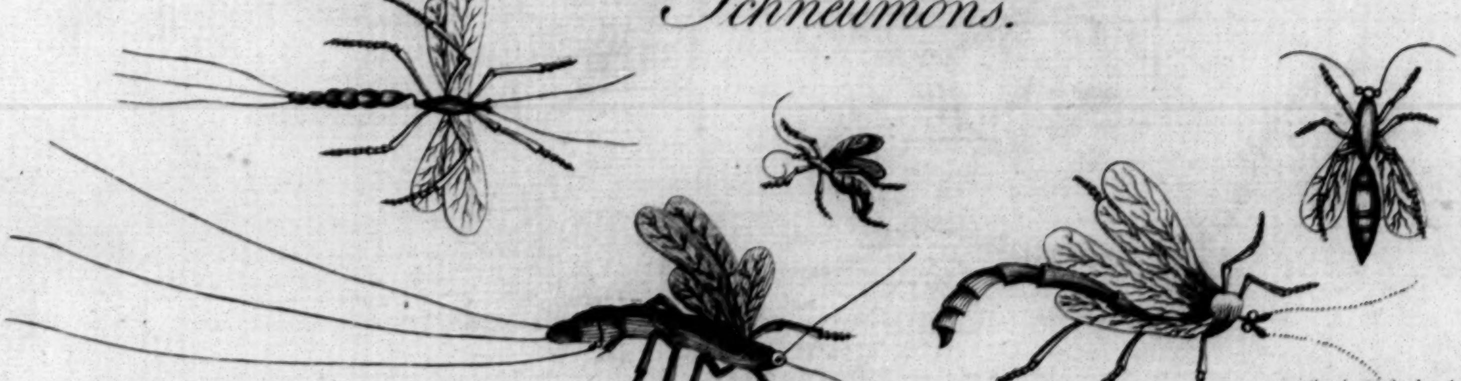
Plate CCLIII.

Jesuits Bark.

Cinchona Caribæa.



Ichneumons.



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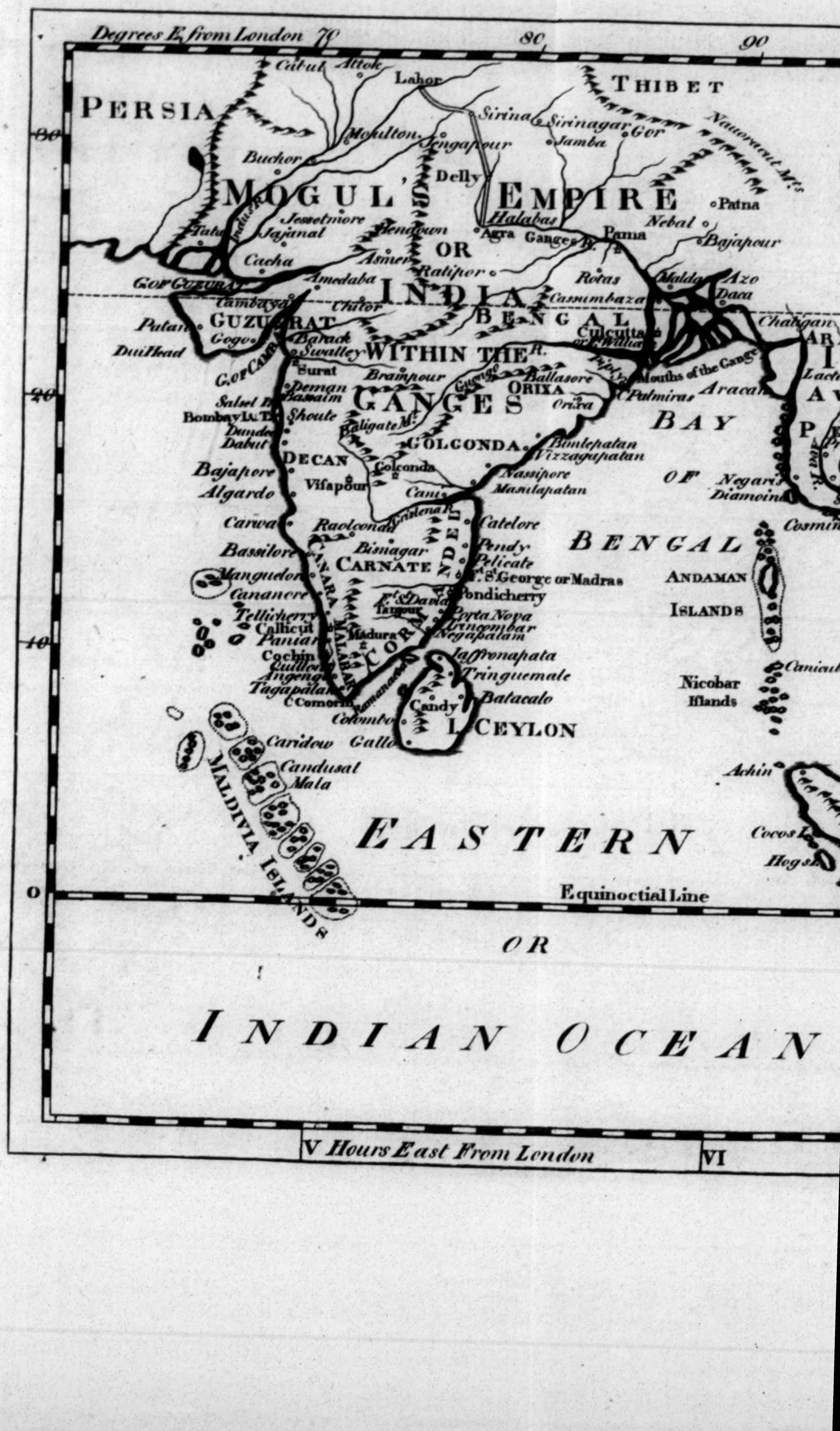
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MOGUL'S EMPIRE
OR
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Barack
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Surat
G. of Camb
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Chatigan
Mouths of the Ganges
Pipley
Ballasore
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Palmiras
Aracan
Brampour
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Salset I.
Bombay I.
Shoule
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Dabul
Baligate Mts
GOLCONDA
Bimlepatan
Vizzagapatan
Nassipore
Masulapatan
Golconda
Visapour
DECAN
Bajapore
Algardo
Carwar
Bassilore
Manguelore
Cananore
Tellicherry
Callicut
Paniani
Cochin
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Kristena R.
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Cocos I.
Hogs I.
Caridow
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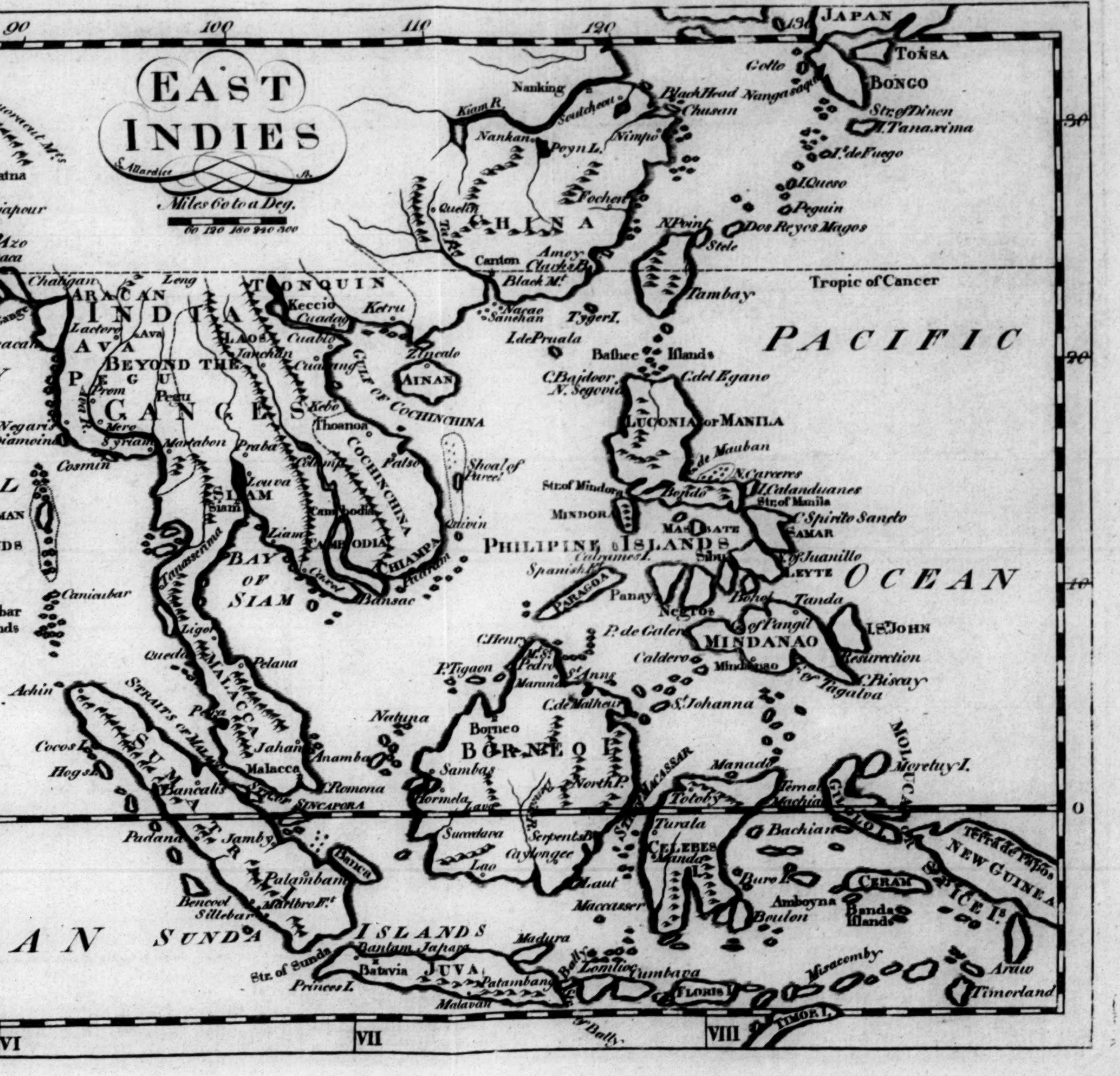
MALDIVIA ISLANDS
EASTERN
Equinoctial Line
OR
INDIAN OCEAN
V Hours East From London
VI

Plate CCLIV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Poyn L.
Quelin
Fochen
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STRAITS OF MALACCA
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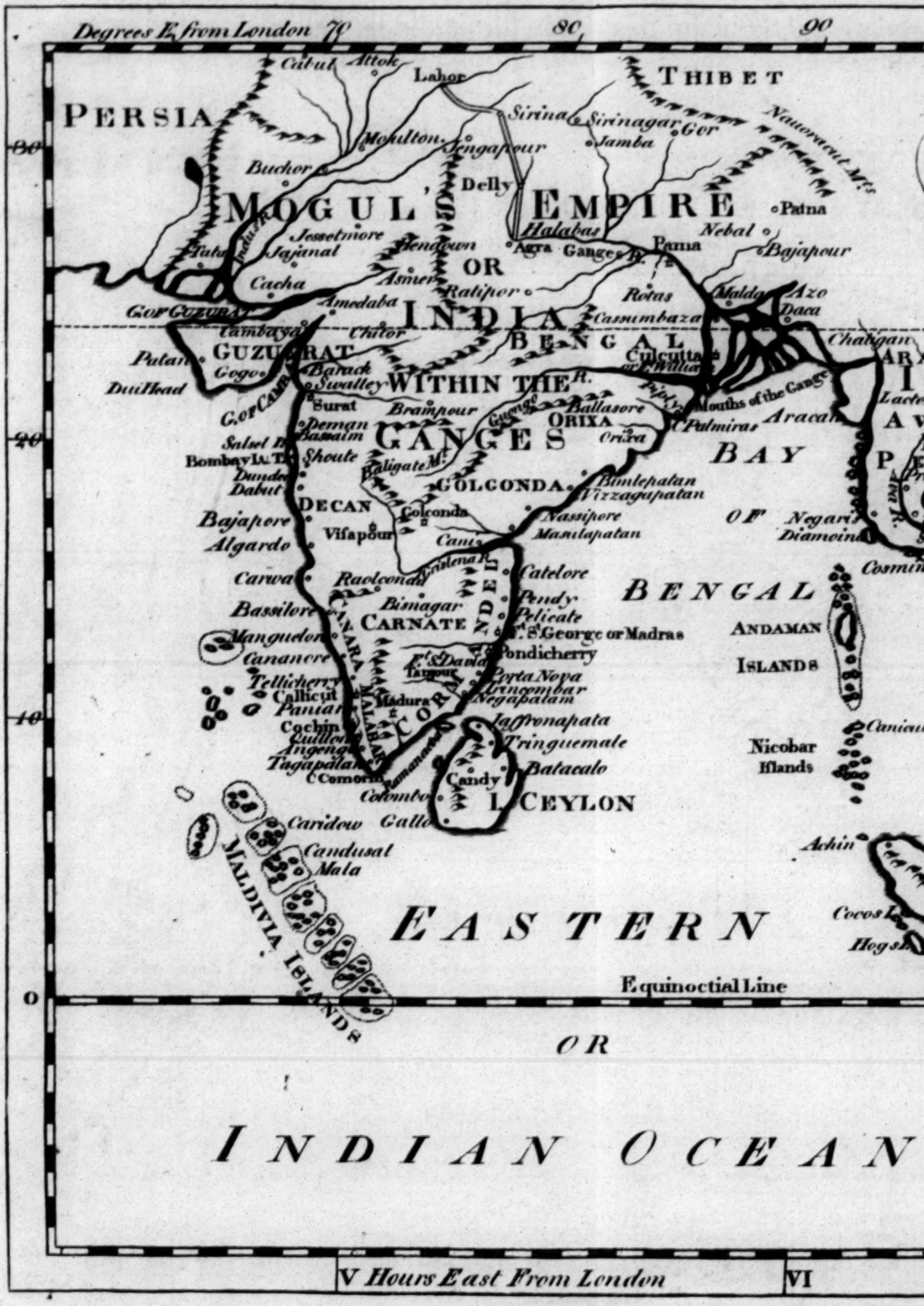
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Bombay I.
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Baligate M.
GOLCONDA
Golconda
Bimlepatan
Vizzagapatan
DECAN
Bajapore
Algardo
Visapour
Nassipore
Masulipatan
BAY OF BENGAL
Negarie
Diamond
Cosmin
Carwa
Raolconda
Kristena R.
Catelore
Pendy
Pelicate
Ft. St. George or Madras
Bassilore
Bisnagar
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CANARA
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COROMANDEL
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Tellicherry
Pondicherry
Ft. St. David
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ANDAMAN ISLANDS
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I. CEYLON
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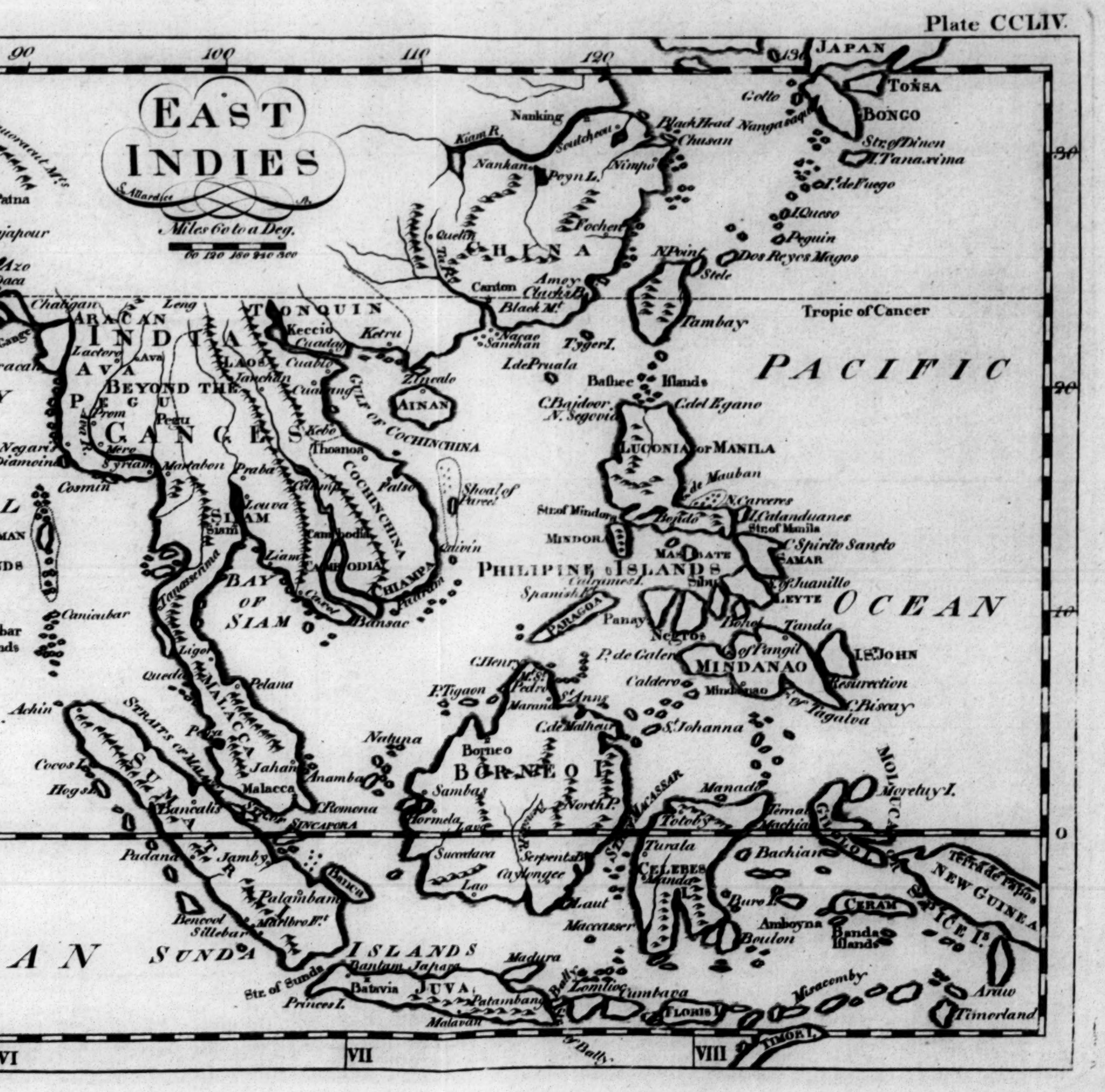
MALDIVIA ISLANDS
EASTERN
Cocos I.
Hogs I.
Equinoctial Line
OR
INDIAN OCEAN
V Hours East From London
VI

Plate CCLIV.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Bohol
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Negros
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P. de Galera
C. Henry
Caldero
Mindanao
Resurrection
C. Biscay
Tagalva
P. Tigaon
M.t S.t Pedro
Mamno
S.t Anne
C. de Malhea
S.t Johanna
Caniabar
Ligor
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MALACCA
Pera
Jahan
Malacca
SUMATRA
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Hogs I.
Bancalis
C. Romona
Anamba
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Hormela
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Sucadana
Serpent B.
Cayiongee
Lao
Laut
Turala
CELEBES
Manda
Bachian
Terra de Papos
NEW GUINEA
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CERAM
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Amboyna
Banda Iſlands
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Miracomby
Aruw
Timorland
TIMOR I.

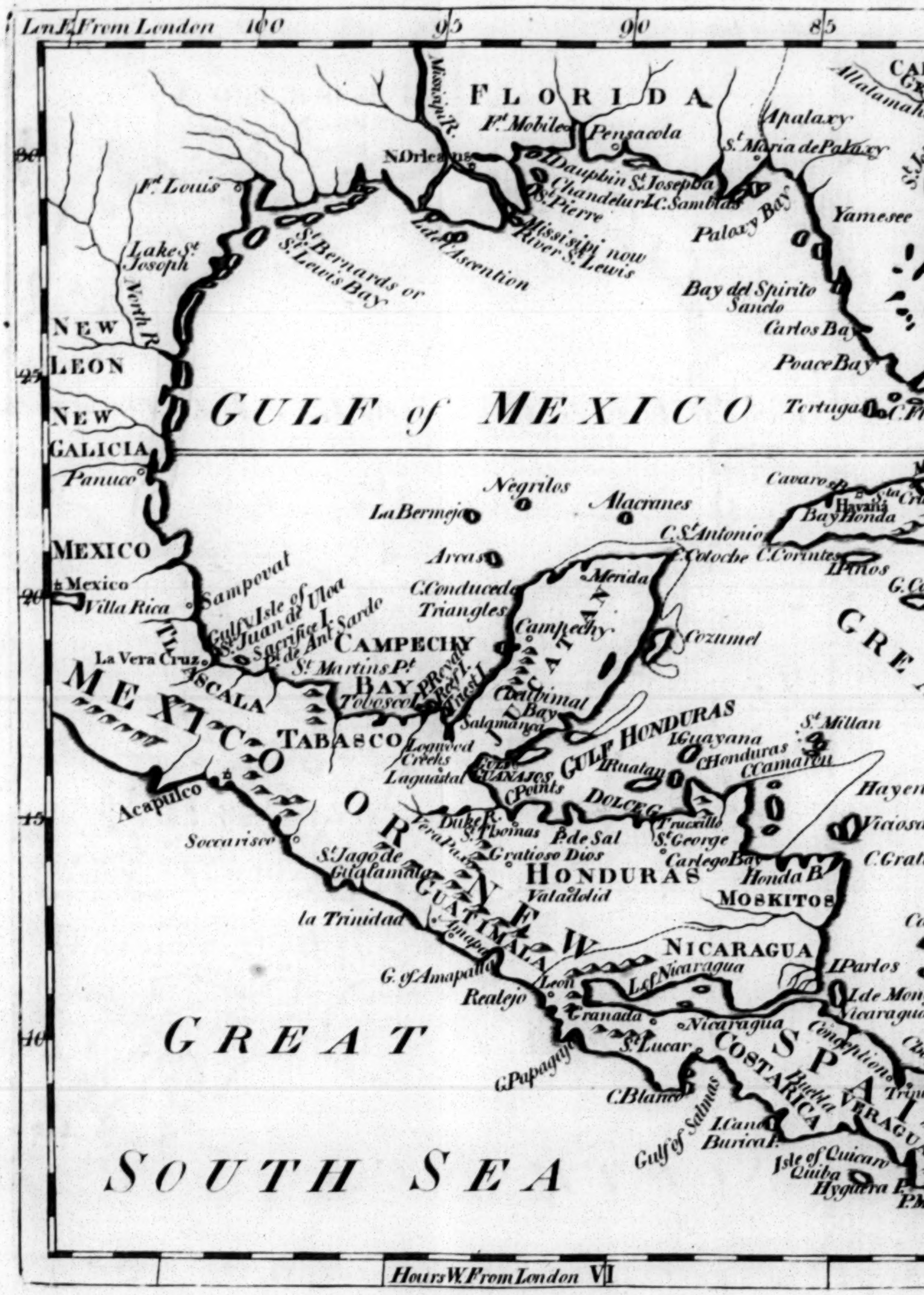
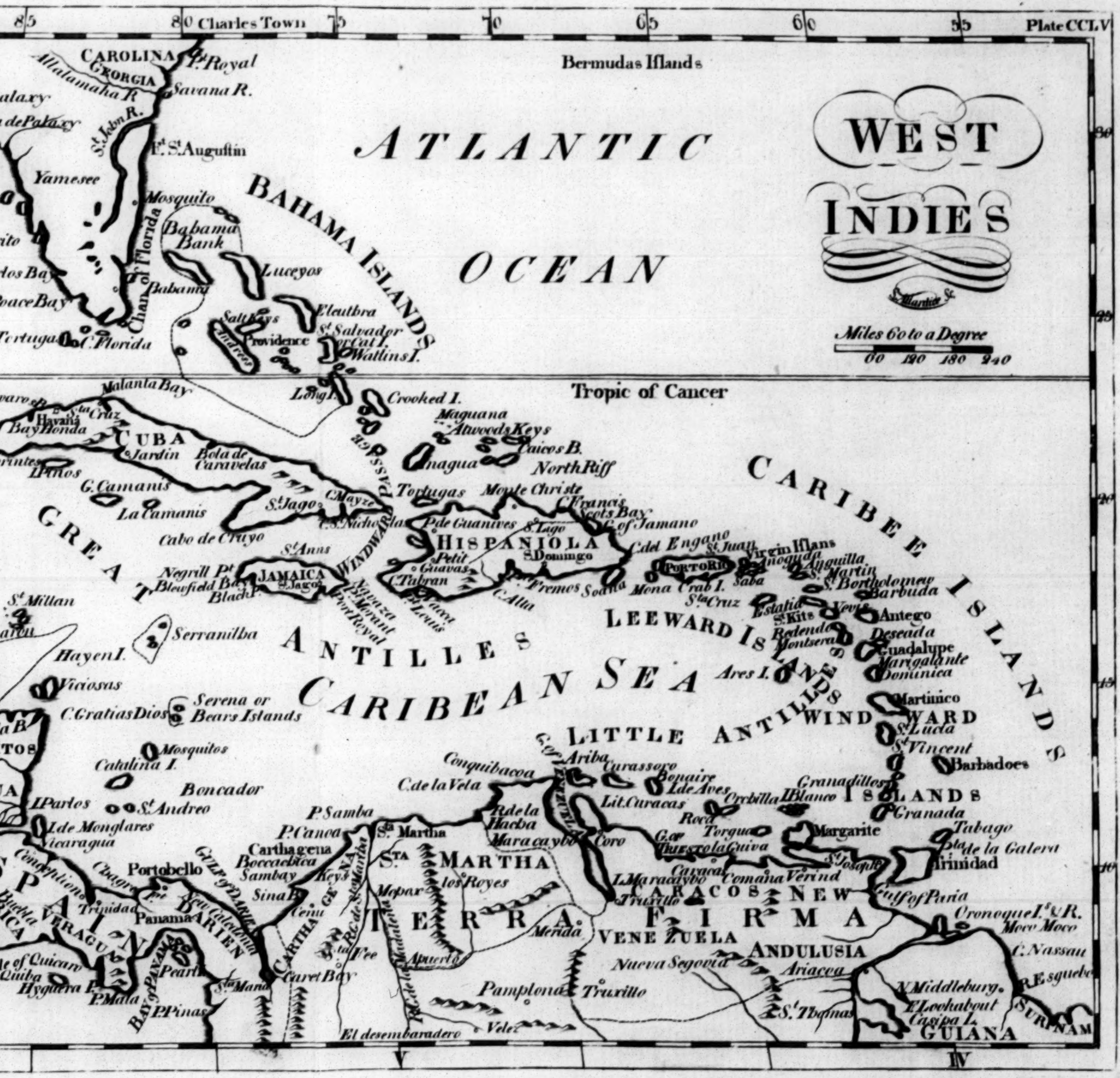

Lon. E. From London
100
95
90
85
30
25
20
15
10
FLORIDA
Missisipi R.
Ft. Mobile
Pensacola
N.Orleans
I.Dauphin
St. Josepha
Chandelur I.
C.Samblas
St. Pierre
Apalaxy
St. Maria de Palaxy
Palaxy Bay
Yamesee
Altalamaha
Ft. Louis
Lake St. Joseph
North R.
St. Bernards or St. Lewis Bay
Pt. Ascention
Missisipi now River St. Lewis
Bay del Spirito Sancto
Carlos Bay
Poace Bay
Tortugas
NEW LEON
NEW GALICIA
Panuco
GULF of MEXICO
Negrilos
La Bermeja
Alacranes
Arcas
C.St. Antonio
Cotoche
C.Corintes
I.Pinos
Cavaro
Havana
Bay Honda
MEXICO
Mexico
Villa Rica
Sampoval
C.Conducedo
Triangles
Merida
Campechy
Cozumel
YUCATAN
Gulf & Isle of St. Juan de Ulloa
Sacrifice I.
Pt. de Ant. Sardo
CAMPECHY BAY
St. Martins Pt.
P.Royal
Reef I.
Triest I.
Tobosco
La Vera Cruz
TLASCALA
MEXICO
TABASCO
Logwood Creeks
Laguatal
Salamanca
Chabimal Bay
GULF HONDURAS
I.Guayana
C.Honduras
Ruatan
C.Camaron
St. Millan
GUANAJOS
C.Points
DOLCE G.
Acapulco
Soccarisco
Dulce R.
St. Thomas
Vera Paz
Gratioso Dios
P.de Sal
Truxillo
St. George
Carlego Bay
Honda B.
HONDURAS
Valadolid
MOSKITOS
St. Jago de Guatamala
GUATIMALA
Amapa
OR NEW
la Trinidad
NICARAGUA
Lt. Nicaragua
I.Parlos
G. of Amapalla
Realejo
Leon
Granada
Nicaragua
Conception
I.de Mon
GREAT
SOUTH SEA
St. Lucar
COSTARICA
G.Papagayo
C.Blanco
Gulf of Salinas
I.Cano
Burica P.
Isle of Quicaro
Quiba
Hygura P.
Buena Vista
VERAGUA
SPA
GREA
Hayen
Viciosa
C.Grat
Hours W. From London VI

Plate CCLV


WEST INDIES
Miles 60 to a Degree
60 120 180 240
ATLANTIC OCEAN
Bermudas Islands
Charles Town
85
80
75
70
65
60
55
30
25
20
15
10
V
IV
CAROLINA
GEORGIA
P.t Royal
Savana R.
Allatamaha R.
St. John R.
F.t St. Augustin
Yamesee
Mosquito
Chan. of Florida
C. Florida
Tortugas
BAHAMA ISLANDS
Bahama Bank
Bahama
Lucayos
Providence
Salt Keys
Andreos
Eleuthra
St. Salvador or Cat I.
Wattins I.
Long I.
Crooked I.
Maguana
Atwoods Keys
Inagua
Caicos B.
North Riff
Tropic of Cancer
Malanta Bay
Havana
St. Cruz
Bay Honda
CUBA
Jardin
Bola de Caravelas
I. Pinos
G. Camanis
La Camanis
Cabo de Cruyo
St. Jago
C. Mayze
C. St. Nicholas
WINDWARD PASSAGE
Tortugas
Monte Christe
C. Francis
Scots Bay
G. of Jamano
HISPANIOLA
P. de Guanives
St. Iago
Petit Guavas
C. Tabran
S. Domingo
C. Alta
Tremos
Soana
C. del Engano
St. Juan
PORTO RICO
Mona
Crab I.
St. Cruz
Saba
Virgin Islans
Anegada
Anguilla
St. Martin
St. Bartholomew
Barbuda
Statia
St. Kits
Nevis
Antego
Redonda
Montserat
Deseada
Guadalupe
Margalante
Dominica
Martinico
St. Lucia
St. Vincent
Barbadoes
Granadilles
Granada
Tabago
Pta. de la Galera
Trinidad
CARIBEE ISLANDS
LEEWARD ISLANDS
WINDWARD ISLANDS
LITTLE ANTILLES
Ares I.
St. Anns
JAMAICA
St. Jago
Negrill P.t
Blewfield Bay
Black P.
Navaza
Port Royal
P. Morant
Vacca
St. Louis
Serranilba
GREAT ANTILLES
CARIBEAN SEA
St. Millan
Hayen I.
Viciosas
C. Gratias Dios
Serena or Bears Islands
Mosquitos
Catalina I.
Boncador
I. Parlos
St. Andreo
I. de Monglares
Nicaragua
Conception
Chagre
Portobello
Trinidad
Panama
VERAGUA
New Calendonia
DARIEN
GULF of DARIEN
Bay of Panama
Pearl I.
P. Pinas
P. Mala
St. Maria
Caret Bay
Quibo
Hyguera P.
Conquibacoa
C. de la Vela
P. Samba
P. Canoa
Carthagena
Boccachica
Sambay
Sina R.
St. Martha
Rio de la Hacha
Maracaybo
STA. MARTHA
los Reyes
Mopar
CARTHAGENA
Aruba
Curassoa
Bonaire
I. de Aves
Orchilla
I. Blanco
Lit. Curacas
Roca
Torgua
Coro
Gulf of VENEZUELA
L. Maracaybo
Truxillo
Margarite
Comana
Verina
St. Joseph
Gulf of Paria
CARACOS
NEW TERRA FIRMA
VENEZUELA
ANDULUSIA
Merida
Nueva Segovia
Ariacoa
Pamplona
Truxillo
St. Thomas
El desembaradero
Velez
Oronoque R.
Moco Moco
C. Nassau
Esquebe R.
N. Middleburg
F.t Lookabout
Caspia L.
GUIANA
SURINAM

With regard to capital crimes, the law is ſtill more minute and circumſpect; diſtinguiſhing with greater nicety the ſeveral degrees of age and diſcretion. By the ancient Saxon law, the age of twelve years was eſtabliſhed for the age of poſſible diſcretion, when firſt the underſtanding might open: and from thence till the offender was 14, it was *ætas pubertati proxima*, in which he might, or might not, be guilty of a crime, according to his natural capacity or incapacity. This was the dubious ſtage of diſcretion: but, under twelve, it was held, that he could not be guilty in will, neither after fourteen could be ſuppoſed innocent, of any capital crime which he in fact committed. But by the law, as it now ſtands, and has ſtood at leaſt ever ſince the time of Edward III. the capacity of doing ill, or contracting guilt, is not ſo much meaſured by years and days, as by the ſtrength of the delinquent's underſtanding and judgment. For one lad of 11 years old may have as much cunning as another of 14; and in theſe caſes our maxim is, that *malitia ſupplet ætatem*. Under ſeven years of age, indeed, an infant cannot be guilty of felony; for then a felonious diſcretion is almoſt an impoſſibility in nature: but at eight years old, he may be guilty of felony. Alſo, under 14, though an infant ſhall be *prima facie* adjudged to be *dolia incapax*, yet if it appear to the court and jury that he was *doli capax*, and could diſcern between good and evil, he may be convicted and ſuffer death. Thus a girl of 13 has been burnt for killing her miſtreſs: and one boy of ten, and another of nine years old, who had killed their companions, have been ſentenced to death, and he of ten years actually hanged; becauſe it appeared upon their trials, that the one hid himſelf, and the other hid the body he had killed; which hiding maniſeſted a conſciouſneſs of guilt, and a diſcretion to diſcern between good and evil. And there was an inſtance in the laſt century, where a boy of eight years old was tried at Abington for firing two barns; and, it appearing that he had malice, revenge, and cunning, he was found guilty, condemned, and hanged accordingly. Thus alſo, in very modern times, a boy of ten years old was convicted on his own confeſſion of murdering his bedfellow; there appearing in his whole behaviour plain tokens of a miſchievous diſpoſition; and, as the ſparing this boy merely on account of his tender years might be of dangerous conſequence to the public, by propagating a notion that children might commit ſuch atrocious crimes with impunity, it was unanimouſly agreed by all the judges, that he was a proper ſubject of capital puniſhment. But, in all ſuch caſes, the evidence of that malice, which is to ſupply age, ought to be ſtrong and clear beyond all doubt and contradiction.

2. In *civil* matters. The ages of male and female are different for different purpoſes. A male at 12 years old may take the oath of allegiance; at 14 is at the years of diſcretion, and therefore may conſent or diſagree to marriage, may chooſe his guardian, and, if his diſcretion be actually proved, may make his teſtament of his perſonal eſtate; at 17 may be an executor; and at 21 is at his own diſpoſal, and may aliene his lands, goods, and chattels. A female alſo at ſeven years of age may be betrothed or given in marriage; at nine is intitled to dower; at 12 is at years of maturity, and therefore may conſent or diſagree to marriage, and, if proved to have ſufficient diſcretion, may bequeath her perſonal eſtate; at 14 is at years of legal diſcretion, and may chooſe a guardian; at 17 may be executrix; and at 21 may diſpoſe of herſelf and her lands. So that full age in male or female is 21 years, which age is completed on the day preceding the anniverſary of a perſon's birth; who till that time is an infant, and ſo ſtyled in law. Among the ancient Greeks and Romans, women were never of age, but ſubject to perpetual guardianſhip, unleſs when married, *niſi conveniſſent in manum viri*: and, when that perpetual tutelage wore away in proceſs of time, we find that, in females as well as males, full age was not till 25 years. Thus by the conſtitutions of different kingdoms, this period, which is merely arbitrary, and *juris poſitivi*, is fixed at different times. Scotland agrees with England in this point; (both probably copying from the old Saxon conſtitutions on the continent, which extended the age of minority *ad annum vigeſimum primum, et eo uſque juvenes ſub tutelam reponunt*): but in Naples perſons are at full age at 18; in France, with regard to marriage, not till 30; and in Holland at 25.

The very diſabilities of infants are privileges; in order to ſecure them from hurting themſelves by their own improvident acts. An infant cannot be ſued but under the protection, and joining the name, of his guardian; for he is to defend him againſt all attacks as well by law as otherwiſe: but he may ſue either by his guardian, or *prochein amy*, his next friend who is not his guardian. This *prochein amy* may be any perſon who will undertake the infant's cauſe; and it frequently happens, that an infant, by his *prochein amy*, inſtitutes a ſuit in equity againſt a fraudulent guardian.

With regard to eſtates and civil property, an infant hath many privileges. In general, an infant ſhall loſe nothing by nonclaim, or neglect of demanding his right; nor ſhall any other *laches* or negligence be imputed to an infant, except in ſome very particular caſes.

It is generally true, that an infant can neither aliene his lands, nor do any legal act, nor make a deed, nor indeed any manner of contract, that will bind him. But ſtill to all theſe rules there are ſome exceptions: part of which were juſt now mentioned in reckoning up the different capacities which they aſſume at different ages: and there are others, a few of which it may not be improper to recite, as a general ſpecimen of the whole. And, firſt, it is true, that infants cannot aliene their eſtates; but infant-truſtees, or mortgagees, are enabled to convey, under the direction of the court of chancery or exchequer, or other courts of equity, the eſtates they hold in truſt or mortgage, to ſuch perſon as the court ſhall appoint. Alſo it is generally true, that an infant can do no legal act: yet an infant, who has an advowſon, may preſent to the benefice when it becomes void. For the law in this caſe diſpenſes with one rule, in order to maintain others of far greater conſequence: it permits an infant to preſent a clerk (who, if unfit, may be rejected by the biſhop), rather than either ſuffer the church to be unſerved till he comes of age, or permit the infant to be debarred of his right by lapſe to the biſhop. An infant may alſo purchaſe lands, but his purchaſe is incomplete; for, when he comes to age, he may either agree or diſagree to it, as he thinks prudent or proper, without alleging any reaſon; and ſo may his heirs after him, if he dies without having completed his agreement. It is, farther, generally true, that an infant, under 21, can make no deed but what is afterwards voidable: yet in ſome caſes he may bind himſelf apprentice by deed indented or indentures, for ſeven years; and he may by deed or will appoint a guardian to his children, if he has any. Laſtly, it is generally true, that an infant can make no other contract that will bind him: yet he may bind himſelf to pay for his neceſſary meat, drink, apparel, phyſic, and ſuch other neceſſaries; and likewiſe for his good teaching and inſtruction, whereby he may profit himſelf afterwards.

INFANTE, and **Infanta**, all the ſons and daughters of the kings of Spain and Portugal, except the eldeſt; the princes being called *infantes*, and the princeſſes *infantas*.

INFANTRY, in military affairs, the whole body of foot-ſoldiers, whether independent companies or regiments.—The word takes its origin from one of the infantas of Spain, who, finding that the army commanded by the king her father had been defeated by the Moors, aſſembled a body of foot ſoldiers, and with them engaged and totally routed the enemy. In memory of this event, and to diſtinguiſh the foot-ſoldiers, who were not before held in much conſideration, they received the name of *infantry*.

Heavy-armed Infantry, among the ancients, were ſuch as wore a complete ſuit of armour, and engaged with broad ſhields and long ſpears. They were the flower and ſtrength of the Grecian armies, and had the higheſt rank of military honour.

Light-Armed Infantry, among the ancients, were deſigned for ſkirmiſhes, and for fighting at a diſtance. Their weapons were arrows, darts, or ſlings.

Light Infantry, among the moderns, have only been in uſe ſince the year 1656. They have no camp-equipage to carry, and their arms and accoutrements are much lighter than thoſe of the infantry. Light infantry are the eyes of a general, and the givers of ſleep and ſafety to an army. Wherever there is found light cavalry, there ſhould be light infantry. They ſhould be accuſtomed to the pace of four miles an hour, as their uſual marching pace, and to be able to march at five miles an hour upon all particular occaſions. Moſt of the powers on the continent have light infantry. It is only of late years that light infantry came to be uſed in the Britiſh army: But now every regiment has a company of light infantry, whoſe ſtation is on the left of the regiment, the right being occupied by the grenadiers.

INFATUATE, to prepoſſeſs any one in favour of ſome perſon or thing that does not deſerve it, ſo far as that he cannot eaſily be diſabuſed.—The word *infatuate* comes from the Latin *fatuus* "fool;" of *fari*, "to ſpeak out," which is borrowed from the Greek φαν, whence φατις, which ſignifies the ſame with *vates* in Latin, or *prophet* in Engliſh; and the reaſon is, becauſe their prophets or prieſts uſed to be ſeized with a kind of madneſs or folly, when they began to make their predictions, or deliver oracles.

The Romans called thoſe perſons *infatuati*, who fancied they had ſeen viſions, or imagined the god Faunus, whom they called *Fatuus*, had appeared to them.

INFECTION, among phyſicians. See Contagion.

INFEFTMENT, in Scots law, the ſolemnity of the delivery of an heritable ſubject to the purchaſer.

INFERIÆ, ſacrifices offered by the Romans to the *Dii Manes*, or the ſouls of deceaſed heroes or other illuſtrious perſons, or even any relation or perſon whoſe memory was held in veneration. Theſe ſacrifices conſiſted of honey, water, wine, milk, the blood of victims, variety of balſamic unguents, chaplets, and looſe flowers. The victims upon theſe occaſions were generally of the ſmaller cattle, though in ancient times they ſacrificed ſlaves or captives: But what a ſhocking view does this give us of their ſentiments of human nature, as if nothing but murder, cruelty, and human blood, could ſatisfy or prove acceptable to an human ſoul! The ſacrifices were uſually black and barren. The altars on which they were offered were holes dug in the ground.

The honey, water, wine, &c. were uſed as libations, and were poured on the tombs of children by children, on thoſe of virgins by virgins, and on thoſe of married men by women. The *inferiæ* were offered on the 9th and 40th days after interment among the Greeks, and repeated in the month Antheſterion. The whole of this article applies equally to the Greeks and the Romans.

INFIBULATION, in antiquity. It was a cuſtom among the Romans to infibulate their ſinging boys, in order to preſerve their voices: for this operation, which prevented their retracting the prepuce over the glans, and is the very reverſe to circumciſion, kept them from injuring their voices by premature and prepoſterous venery: ſerving as a kind of padlock, if not to their inclinations, at leaſt to their abilities. It appears by ſome paſſages in Martial, that a leſs decent uſe was made of infibulation among the luxurious Romans: for ſome ladies of diſtinction, it ſeems, took this method of confining their paramours to their own embraces. Juvenal alſo hints at ſome ſuch practice. Celſus, a chaſte author, ſays infibulation was ſometimes practiſed for the ſake of health, and that nothing deſtroys it more than the ſilly practice this operation ſeems intended to prevent. This practice is not perhaps likely to be revived; if, however, any one who has ſuffered in his conſtitution by prepoſterous venery, ſhould be able to get children, and ſhould be inclined to prevent the ſame misfortune in them by infibulation, the method of doing it is thus: The ſkin which is above the glans is to be extended, and marked on both ſides with ink, where it is perforated, and then ſuffered to retract itſelf. If the marks recur upon the glans, too much of the ſkin has been taken up, and we muſt make the marks farther; if the glans remain free from them, they ſhow the proper place for affixing a fibula: then paſs a needle and thread through the ſkin where the marks are, and tie the threads together; taking care to move it every day, till the parts about the perforations are cicatriſed: this being effected, take out the thread, and put in the fibula; which the lighter it is the better.

Authors have not determined what the fibula of the ancient ſurgeon was, though no doubt it was for different purpoſes. In the preſent caſe, the fibula ſeems to mean a ring of metal, not unlike what the country people put through the noſes of ſwine.

INFIDEL, a term applied to ſuch perſons as are not baptized, and that do not believe the truths of the Chriſtian religion. See Deist.

INFIDELITY, in a general ſenſe, denotes want of faith or belief in regard to any ſubject or tranſactions.

Religious Infidelity ſignifies a diſbelief of Chriſtianity.

Of all the methods (ſays an Elegant modern Eſſayiſt*) which the vanity of man has deviſed with a view to acquire diſtinction, there is none eaſier than that of profeſſing a diſbelief of the eſtabliſhed religion. That which ſhocks the feelings of thoſe with whom we converſe, cannot fail of attracting notice; and as the vain are uſually confident, they utter their doubts with an air ſo oracular and deciſive, as induces the ſimple to think them profoundly wiſe. Audacity, with little ingenuity, will attract the eyes of ſpectators, and this will ſufficiently anſwer the purpoſe of many among the profeſſed unbelievers. One might be diverted, if one were not hurt, at ſeeing a circle of ſilly admirers, gaping and fixing their eyes on ſome half-learned and impudent prater, who throws out oblique inſinuations againſt the Bible, the clergy, or the ſacraments. Theſe are fertile topics of wit and ingenuity; but it might mortify the vanity of ſome very vain writers and talkers, if they were to recollect, what is undoubtedly true, that it is a ſpecies of wit and ingenuity which not only the vileſt, but the moſt ſtupid and illiterate of mankind, have frequently diſplayed in all its poſſible perfection.

There is indeed no doubt, but that vanity is one of the principal cauſes of infidelity. It muſt be the ſole cauſe of communicating it to others, by writing or converſation. For let us ſuppoſe the caſe of a very humane, judicious, and learned man, entertaining doubts of the truth of Chriſtianity: if he cannot clear his doubts by examination, he will yet recollect that doubts are no certainties; and, before he endeavours to propagate his ſcepticiſm, he will aſk himſelf theſe queſtions: “Am I quite convinced that what I doubt of cannot poſſibly be true; If I am convinced of it, am I ſure that the publication of my opinions will not do more harm than good? Is not the diſturbing of any long-eſtabliſhed civil conſtitution attended with confuſion, rebellion, bloodſhed, and ruin? And are not the majority of men more ſtrongly attached to the religion than the government of their forefathers? Will it ſerve my country to introduce diſcontent of any ſpecies? May not thoſe innovations in religion, which diſcontent may introduce, lead to all the evils which are cauſed by frenzy and fanaticiſm? Granting that I were able to make a party formidable enough to cruſh oppoſition and to exterminate Chriſtianity, ſtill am I certain that I act, in this inſtance, like a good member of ſociety? For is not this ſyſtem, whether well or ill founded, friendly to ſociety? I muſt confeſs it; its greateſt enemies have acknowledged it. What motive then can induce me to divulge my doubts of its authenticity? Not the good of mankind; for it is already allowed by unbelievers, that the good of mankind is intereſted in the belief of its divine original. Is it for my own good, and with a view to be convinced? I will not deceive myſelf: my motive, I ſuſpect, is of another kind; for do I read thoſe books which have been already written to ſatiſfy ſimilar doubts? Nothing but the vanity of appearing to be wiſer than my credulous neighbours can induce me to interrupt the happineſs of their belief. But vanity of this ſort, which tends to diſturb ſociety, to injure the national morals and to rob many thouſand individuals of a copious ſource of ſweet and ſolid comfort, muſt be pronounced extreme wickedneſs, even according to the obvious dictates of natural religion. I ſhall act the part of a good citizen and a good man, by conforming to a ſyſtem whoſe beneficial influence I feel and confeſs, and by endeavouring to acquire a belief in that which has for ſo many centuries been eſtabliſhed, and which promiſes to ſoothe me in diſtreſs with the ſweeteſt conſolations, and to brighten the diſmal hour of death, by the hope of a more glorious and happy ſtate of exiſtence. At all events, I ſhall have the ſatisfaction of having commanded myſelf ſo far, as not to have run the hazard of endangering the welfare of my fellow-creatures, either here or hereafter, by indulging a degree of vanity, which, in a creature ſo weak and ſo ſhort-lived as myſelf, is a folly very inconſiſtent with the ſuperior wiſdom which I ſeem to arrogate.

“I will venture to repeat (continues our author), that all writers againſt Chriſtianity, however they may affect even the extremes of benevolence, honour, philoſophy, and enlargement of mind, are actuated by vanity and wickedneſs of heart. Their motives are as mean, ſelfiſh, narrow, and in every reſpect unjuſtifiable, as the tendency of their writings is miſchievous. Their malice is often impotent, through the fooliſh ſophiſtry of their arguments; but if even it be ſucceſsful, it is highly injurious: and indeed, conſidering their motives and the probable conſequences of their endeavours, the infidel writer is a greater enemy to ſociety, and conſequently guiltier, according to all the principles of ſocial union, than the thief or the traitor. Perſecution would, however, only promote his cauſe, and his proper puniſhment is contempt.

“It is certainly no derogation from the character of a man of ſenſe, to conform, even while he is ſo unfortunate as to doubt their truth, to the opinions of his country. His conformity will probably lead him to a train of actions and of thought, which, in due time, will induce him to believe. But, if that ſhould not happen, yet he will act, as very wiſe and very great men have acted, in paying a reſpectful deference to the avowed conviction of others. The moſt intelligent and powerful men of ancient Rome, not only appeared to believe a very abſurd and hurtful ſyſtem, but aſſiſted in all its ceremonies as prieſts. Even Socrates, who evidently entertained ſome notions adequate to the dignity of the one great and ſupreme Being, yet thought it was a duty which he owed to his country, ſo far to conform to its wretched eſtabliſhment, as to order in his dying words a ſacrifice to Æſculapius. This external conformity to the national religion ought not to be confounded with hyprocriſy. If indeed it is carried to extremes, or zealouſly affected, it certainly is very blameable and contemptible deceit; but while it keeps within the bounds of reaſon and moderation, it ought to be called a decent deference to the opinions of the majority, ariſing from humility, and from a deſire to maintain the tranquillity of the ſtate, and to continue an innocent and uſeful ſyſtem, which has and will always greatly contribute to leſſen the quantity and degree both of moral and of natural evil.

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* *Knox's Eſſays*, n° 16.

"The eaſieſt, after all, or at leaſt the moſt effectual method of appearing in any character, is really to be what we wiſh to appear. But belief, you will ſay, is not in our power, and how can we believe what appears to us incredible? Certainly you cannot while it appears incredible. But let me aſk you, whether you have taken any pains to believe, or have at once and at a glance perſuaded yourſelf, that the Chriſtian religion is totally falſe? It is probable that a great number of ſceptical writers never gave themſelves the trouble to read thoſe ſcriptures which they warmly oppoſe. They hear objections, they read objections, and they find, that from men of reputed wit and ingenuity the objections often originate. They alſo wiſh to be reputed men of wit and ingenuity, and therefore eagerly adopt the language and ſentiments of the order. Perhaps the vanity and pride of this claſs of men will render all attempts to convince them abortive; but to modeſt doubters, and to thoſe whoſe good ſenſe and good diſpoſitions lead them to wiſh to adopt the religion of their country, it may not be uſeleſs to ſuggeſt advice, with a view to facilitate their conviction.

"The chief thing required is to free themſelves from the pride of human reaſon. Humility (and ſurely our blindneſs and imperfections are ſufficient to render us humble, if we would be reaſonable), humility will open our hearts, and belief will find admiſſion. Sincere endeavours, ſeconded by prayers, will never fail to help our unbelief. But, alas! a fine, gay, ſpirited, liberal, and enlarged modern philoſopher, would be aſhamed to be found on his knees, or with a Teſtament in his poſſeſſion. There is ſcarcely any vicious act, or any vicious book, which would put him ſo much to the bluſh.

"A modeſt well-meaning man might, however, one ſhould think, diveſt himſelf of thoſe prejudices which prevent the poſſibility of belief, by the following ſoliloquy: 'I find myſelf placed in a world abounding with evil and miſery. Under the immediate preſſure of it, I feel my heart inclining, like the needle to the north, by its natural tendency, to the Deity for ſupport. Man, of all animals, is the only one who has the ſenſe of religion. Feeling this diſtinctive propenſity of my nature, I look around to diſcover to what object, and in what manner, that part of my fellow creatures, who live in the ſame ſociety with myſelf, pay their adoration. I find a ſyſtem of religion already eſtabliſhed, and which has been eſtabliſhed in the moſt enlightened countries of the earth near 2000 years. I reſolve to examine it. It claims that reſpect from its antiquity and univerſality. Many difficulties appear on the firſt inſpection. My reaſon is often ſtartled, and my belief wavers. But I will not yet give up a point of ſo ſerious importance, without further and cloſer attention to it. I reflect, that 2000 years is a vaſt ſpace in the age of the world. How many myriads of men like myſelf have lived and died in the faith during that time! And were all of them fools or hypocrites? It could not have been. Can the underſtanding of a poor individual, juſt come into the world, and hardly knowing where he is, comprehend on intuition an object of ſuch magnitude, and make the mighty diſcovery which has eſcaped millions of the wiſeſt and moſt learned of mortals? Or, ſuppoſing that they all perceived the deception, am I then at laſt the only honeſt man who will confeſs it? I am aſhamed to avow ſuch an idea to myſelf. But yet, if I reject what they received, ſurely I avow it in the more expreſſive language of my conduct. Pride, I fear, is the foundation of my ſcepticiſm; and humility muſt form the baſis of my belief. I will check my own preſumption, and reject the cavils of vain and fooliſh philoſophy. Shall a poor weak creature, who cometh up like a flower, and is cut down, who fleeth as a ſhadow, and never continueth in one ſtay, preſume to pronounce deciſively in that little period, in which he hath ſcarcely time to look about him before he dies, againſt a ſyſtem which has ſtrong internal and external evidence of divine original, which is moſt uſeful and comfortable, and which has been admitted among a great portion of mankind during almoſt 20 centuries? No, it is the firſt wiſdom to be humble. Humility will be followed by grace, and grace by faith, and faith by ſalvation. It plainly appears, that I can loſe nothing by belief, but ſome of thoſe exceſſive and irregular enjoyments, which would deſtroy my health and life; but I may poſſibly gain a glory and a happineſs which ſhall continue to all eternity."

INFINITE, that which hath neither beginning nor end: in which ſenſe God alone is infinite.

Infinite is alſo uſed to ſignify that which has had a beginning, but will have no end, as angels and human ſouls. This makes what the ſchoolmen call *infinitum a parte poſt;* as, on the contrary, by *infinitum a parte ante*, they mean that which has an end, but had no beginning.

Infinite Quantities. The very idea of magnitudes infinitely great, or ſuch as exceed any aſſignable quantities, does include a negation of limits; yet if we nearly examine this notion, we ſhall find that ſuch magnitudes are not equal among themſelves, but that there are really, beſides infinite length and infinite area, three ſeveral ſorts of infinite ſolidity; all of which are *quantitates ſui generis*, and that thoſe of each ſpecies are in given proportions.

Infinite length, or a line infinitely long, is to be conſidered either as beginning at a point, and ſo infinitely extended one way, or elſe both ways from the ſame point; in which caſe the one, which is a beginning infinity, is the one half of the whole, which is the ſum of the beginning and ceaſing infinity; or, as may be ſaid, of infinity *a parte ante* and *a parte poſt*, which is analogous to eternity in time and duration, in which there is always as much to follow as is paſt, from any point or moment of time; nor doth the addition or ſubduction of finite length, or ſpace of time, alter the caſe either in infinity or eternity, ſince both the one or the other cannot be any part of the whole.

INFINITESIMALS, among mathematicians, are defined to be infinitely ſmall quantities.

In the method of infiniteſimals, the element, by which any quantity increaſes or decreaſes, is ſuppoſed to be infinitely ſmall; and is generally expreſſed by two or more terms, ſome of which are infinitely leſs than the reſt; which being neglected as of no importance, the re-

remaining terms form what is called the *difference of the propoſed quantity*. The terms that are neglected in this manner, as infinitely leſs than the other terms of the element, are the very ſame which ariſe in conſequence of the acceleration, or retardation, of the generating motion, during the infinitely ſmall time in which the element is generated; ſo that the remaining terms expreſs the elements that would have been produced in that time, if the generating motion had continued uniform: therefore thoſe differences are accurately in the ſame ratio to each other as the generating motions or fluxions. And hence, though in this method infiniteſimal parts of the elements are neglected, the concluſions are accurately true without even an infinitely ſmall error, and agree preciſely with thoſe that are deduced by the method by fluxions. See FLUXIONS.

INFINITIVE, in grammar, the name of one of the moods, which ſerve for the conjugating of verbs. See GRAMMAR.

INFINITY, the quality which denominates a thing infinite. See METAPHYSICS.

INFIRMARY, a kind of hoſpital, where the weak and ſickly are properly taken care of.

INFLAMMABILITY, that property of bodies which diſpoſes them to kindle or catch fire. See FIRE, FLAME, PHLOGISTON, &c.

INFLAMMATION, in medicine and ſurgery, a redneſs and ſwelling of any part of the body, attended with heat, pain, and ſymptoms of fever. See (the *Index* ſubjoined to) MEDICINE.

INFLAMMATION of Oils by concentrated Acids. See CHEMISTRY, n° 778.

INFLATION, formed from *in* and *flatus*; of *flo*, "I blow;" blowing up, the act of ſtretching or filling any flaccid or diſtenſible body with a flatulent or windy ſubſtance.

INFLECTED RAYS. See *Inflected Rays*.

INFLECTION, called alſo a *diffraction*, and *deflection*, in optics, is a property of light, by reaſon of which, when it comes within a certain diſtance of any body, it will either he bent from it, or towards it; which is a kind of imperfect reflection or refraction. See OPTICS.

INFLECTION, or *Point of* INFLECTION, in the higher geometry, is a point where a curve begins to bend a contrary way.

INFLECTION, in grammar, the variation of nouns and verbs, by declenſion and conjugation.

INFLUENCE, a quality ſuppoſed to flow from the heavenly bodies, either with their light or heat; to which aſtrologers idly aſcribe all ſublunary events.

Alchemiſts alſo, who to this aſcribe the philoſophers ſtone, tell us, that every thing in nature is produced by the influence of the ſtars, which, in their paſſage through the atmoſphere, imbibe many of its moiſt parts, the groſſeſt whereof they depoſit in the ſands and earths where they fall; that theſe, filtrating through the pores of the earth, deſcend even to the centre, whence they are driven by the central fire, back again to the ſurface; and in their aſcent, by a natural kind of ſublimation, as they find earths duly diſpoſed, they form natural bodies, as metals, minerals, and vegetables, &c. Thus, it is pretended, that chemiſtry, conſiſting of an artificial imitation of theſe natural operations, and in applying active principles to paſſive principles, can form natural bodies, make gold, &c.

INFORMATION, in law, is nearly the ſame in the crown office, as what in other courts is called a *declaration*. See PROSECUTION.

Informations are of two ſorts; firſt, thoſe which are partly at the ſuit of the king, and partly at that of a ſubject; and ſecondly, ſuch as are only in the name of the king. The former are uſually brought upon penal ſtatutes, which inflict a penalty upon conviction of the offender, one part to the uſe of the king, and another to the uſe of the informer. By the ſtatute 31 Eliz. c. 5. no proſecution upon any penal ſtatute, the ſuit and benefit whereof are limited in part to the king and in part to the proſecutor, can be brought by any common informer after one year is expired ſince the commiſſion of the offence; nor on behalf of the crown, after the lapſe of two years longer; nor, where the forfeiture is originally given only to the king, can ſuch proſecution be had after the expiration of two years from the commiſſion of the offence.

The informations that are exhibited in the name of the king alone, are alſo of two kinds: firſt, thoſe which are truly and properly his own ſuits, and filed *ex officio* by his own immediate officer, the attorney-general; ſecondly, thoſe in which, though the king is the nominal proſecutor, yet it is at the relation of ſome private perſon or common informer; and they are filed by the king's coroner and attorney in the court of king's bench, uſually called the *maſter of the crown-office*, who is for this purpoſe the ſtanding officer of the public. The objects of the king's own proſecutions, filed *ex officio* by his own attorney general, are properly ſuch enormous miſdemeanors, as peculiarly tend to diſturb or endanger his government, or to moleſt or affront him in the regular diſcharge of his royal functions. For offences ſo high and dangerous, in the puniſhing or preventing of which a moment's delay would be fatal, the law has given to the crown the power of an immediate proſecution, without waiting for any previous application to any other tribunal; which power, thus neceſſary, not only to the eaſe and ſafety, but even to the very exiſtence, of the executive magiſtrate, was originally reſerved in the great plan of the Engliſh conſtitution, wherein proviſion is wiſely made for the due preſervation of all its parts. The objects of the other ſpecies of informations, filed by the maſter of the crown-office upon the complaint or relation of a private ſubject, are any groſs and notorious miſdemeanors, riots, batteries, libels, and other immoralities of an atrocious kind, not peculiarly tending to diſturb the government (for thoſe are left to the care of the attorney-general), but which, on account of their magnitude or pernicious example, deſerve the moſt public animadverſion. And when an information is filed, either thus, or by the attorney-general *ex officio*, it muſt be tried by a petit jury of the county where the offence ariſes: after which, if the defendant be found guilty, he muſt reſort to the court for his puniſhment. See a hiſtory and vindication of this mode of proſecution in the work cited on the margin, vol. iv. p. 309.—312.

Blackſt. Comment.

INFORMER, (*informator*), in law, a perſon that informs againſt, or proſecutes in any of the king's courts, thoſe that offend againſt any law or penal ſtatute. See INFORMATION.

Informers were very common both in Greece and Rome. Every corner of the ſtreets was peſtered with ſwarms of turbulent raſcals, who made it their conſtant buſineſs to pick up ſtories and catch at every occaſion to accuſe perſons of credit and reputation: Theſe by the Greeks were called Συκοφανται; for a more particular account of whom, ſee the article SYCOPHANT.

Amongſt the Romans, informers were of two ſorts, *mandatores* and *delatores*. Theſe played into each other's hands; the former marking down ſuch perſons as they pretended to have found guilty of any miſdemeanor, and the other proſecuting them. What tended to increaſe the number of theſe peſtilent fellows was, that the informers were entitled to a fourth part of the effects of the perſons convicted. Wicked princes rewarded and countenanced this miſchievous tribe; but Titus ſet on foot a moſt diligent ſearch after them, and puniſhed ſuch as he found with death or baniſhment. Trajan alſo is praiſed by Pliny for a ſimilar conduct.

INFRACTION, (formed from *in*, and the ſupine of *frango*, "I break,") a rupture or violation of a treaty, law, ordinance, or the like.

INFRALAPSARII, the name of a ſect of predeſtinarians, who maintain, that God has created a certain number of men only to be damned, without allowing them the means neceſſary to ſave themſelves, if they would; and they are thus called, becauſe they hold that God's decrees were formed *infra lapſum*, after his knowledge of the fall, and in conſequence thereof; in contradiſtinction to the SUPRALAPSARIANS.

INFRA-SCAPULARIS, in anatomy. See ANATOMY, *Table of the Muſcles*.

INFRA Spinatus, in anatomy. See ANATOMY, *ibid.*

INFULA, in antiquity, was a mitre worn by the Romans and Grecian prieſts, upon the head, from which on each ſide hung a ribband. The covering the head with a mitre was rather a Roman than a Grecian cuſtom, introduced into Italy by Æneas, who covered his head and face at the performance of ſacrifices, leſt any ill-boding omen ſhould diſturb the rites. The infulæ were commonly made of wool, and were not only worn by the prieſts, but were put upon the horns of the victims, upon the altar and the temple. The infulæ were alſo called *vittæ*.

INFUNDIBULIFORM, in botany, an appellation given to ſuch monopetalous or one-leaved flowers as reſemble a funnel in ſhape, or which have a narrow tube at one end, and gradually widen towards the limb or mouth.

INFUSION, in pharmacy, an operation whereby the virtues of plants, roots, and the like, are drawn out, by letting them ſteep in ſome convenient fluid menſtruum, without boiling them therein; ſince boiling is found to diſſipate the finer parts of many bitter and aromatic ſubſtances, without carefully extracting their medicinal principles.

INGELSHEIM, a town of Germany, in the palatinate of the Rhine, remarkable for having been the reſidence of the emperors; ſeated on the river Salva, on an eminence, from whence there is a charming proſpect. E. Long. 8. 5. N. Lat. 49. 58.

INGENUOUS, in a general ſenſe, ſignifies *open*, *fair*, and *candid*.

INGENUOUS, *(ingenuus)*, in Roman antiquity, an appellation given to perſons born of free parents, who had never been ſlaves: for the children of the *liberti*, or perſons who had obtained their liberty, were called *libertini*, not *ingenui*; this appellation of *ingenuus* being reſerved for their children, or the third generation.

INGESTA, is uſed by ſome authors to expreſs all ſorts of aliment taken into the body.

INGLIS (Sir James), a Scottiſh poet who flouriſhed towards the middle of the 16th century. According to Mackenzie, he was deſcended from an ancient family in Fifeſhire, where he was born in the reign of James IV. He was educated at St Andrew's, went to Paris, and returned in the minority of James V. into whoſe favour he ingratiated himſelf by his poetry, having written ſundry tragedies and comedies, and other poems, that were much applauded by good judges. He joined the French faction againſt the Engliſh; and in ſome ſkirmiſhes preceding the fatal battle of Pinkie, ſo diſtinguiſhed himſelf, that he was knighted on the field. After the loſs of that day, he retired into Fife, and amuſed himſelf with his favourite ſtudies; and in 1548 publiſhed at St Andrew's his noted Complaint of Scotland. This is a well-written work for the time: and ſhows abundance of learning. He appears from it to have read much both in Greek and Latin authors, to have been well-ſkilled in mathematics and philoſophy, and to have been a great lover of his country. Unpubliſhed and in MS. (ſays Mackenzie) are Poems, conſiſting of Songs, Ballads, Plays, and Farces. He died at Culroſs in 1554.

INGLUVIES, the crop or craw of granivorous birds, ſerving for the immediate reception of the food, where it is macerated for ſome time before it is tranſmitted to the true ſtomach.

INGOLSTADT, a handſome town of Germany, and the ſtrongeſt in Bavaria, with a famous univerſity, and a handſome church. The houſes are built with ſtone, and the ſtreets large. It is ſeated on the Danube, in E. Long. 11. 10. N. Lat. 48. 42.

INGOT, a maſs of gold or ſilver melted down, and caſt in a mould, but not coined or wrought.

INGRAFTING, in gardening. See GRAFTING.

INGRATITUDE, the oppoſite of gratitude. See GRATITUDE.

Ingratitude is a crime ſo ſhameful, that there never was a man found who would own himſelf guilty of it; and, though too frequently practiſed, it is ſo abhorred by the general voice, that to an ungrateful perſon is imputed the guilt or the capability of all other crimes.

The ungrateful are neither fit to ſerve their Maker, their country, nor their friends.

Ingratitude perverts all the meaſures of religion and ſociety, by making it dangerous to be charitable and good-natured. (See GRATITUDE). However, it is better to expoſe ourſelves to ingratitude than to be wanting in charity and benevolence.

> Great minds, like heav'n, are pleas'd with doing good:
> Though the ungrateful ſubjects of their favours
> Are barren in return.

1. In a little work intitled *Friendly Cautions to Officers*, the following atrocious inſtance of ingratitude is related. An opulent city in the weſt of England, little uſed to have troops with them, had a regiment ſent to be quartered there: the principal inhabitants and wealthieſt merchants, glad to ſhow their hoſpitality and attachment to their ſovereign, took the firſt opportunity to get acquainted with the officers, inviting them to their houſes, and ſhowing them every civility in their power. This was truly a deſirable ſituation. A merchant, extremely eaſy in his circumſtances, took ſo prodigious a liking to one officer in particular, that he gave him an apartment in his own houſe, and made him in a manner abſolute maſter of it, the officer's friends being always welcome to his table. The merchant was a widower, and had only two favourite daughters; the officer in ſo comfortable a ſtation caſt his wanton eyes upon them; and too fatally ſucceeding, ruined them both. Dreadful return to the merchant's miſplaced friendſhip! The conſequence of this ungenerous action was, that all officers ever after were ſhunned as a public nuiſance, as a peſt to ſociety: nor have the inhabitants perhaps yet conquered their averſion to a red-coat.

2. We read in Rapin's Hiſtory, that during Monmouth's rebellion, in the reign of James II. a certain perſon knowing the humane diſpoſition of one Mrs Gaunt, whoſe life was one continued exerciſe of beneficence, fled to her houſe, where he was concealed and maintained for ſome time. Hearing, however, of the proclamation, which promiſed an indemnity and reward to thoſe who diſcovered ſuch as harboured the rebels, he betrayed his benefactreſs; and ſuch was the ſpirit of juſtice and equity which prevailed among the miniſters, that he was pardoned and recompenſed for his treachery, while ſhe was burnt alive for her charity!

3. The following inſtance is alſo to be found in the ſame Hiſtory.—Humphry Banniſter and his father were both ſervants to and raiſed by the duke of Buckingham; who being driven to abſcond, by an unfortunate accident befalling the army he had raiſed againſt the uſurper Richard III. he without footman or page retired to Banniſter's houſe near Shrewſbury, as to a place where he had all the reaſon in the world to expect ſecurity. Banniſter, however, upon the king's proclamation promiſing 1000l. reward to him that ſhould apprehend the duke, betrayed his maſter to John Merton high ſheriff of Shropſhire, who ſent him under a ſtrong guard to Saliſbury, where the king then was, and there in the market-place the duke was beheaded. But Divine vengeance purſued the traitor Banniſter; for demanding the 1000l. that was the price of his maſter's blood, King Richard refuſed to pay it him, ſaying, "He that would be falſe to ſo good a maſter, ought not to be encouraged." He was afterwards hanged for manſlaughter, his eldeſt ſon run mad and died in a hog-ſty, his ſecond became deformed and lame, and his third ſon was drowned in a ſmall puddle of water. His eldeſt daughter was got with child by one of his carters, and his ſecond was ſeized with a leproſy whereof ſhe died.—*Hiſt. of Eng.* 8vo. vol. 1. p. 304.

The following barbarous inſtances are from ancient Hiſtory.

Vid. Herod l. 7 c. 38. Seneca *de Ira*, l. 3. c. 17.

4. When Xerxes king of Perſia was at Celene, a city of Phrygia, Pythius, a Lydian, who had his reſidence in that city, and next to Xerxes was the moſt opulent prince of thoſe times, entertained him and his whole army with an incredible magnificence, and made him an offer of all his wealth towards defraying the expences of his expedition. Xerxes, ſurpriſed and charmed at ſo generous an offer, had the curioſity to inquire to what a ſum his riches amounted. Pythius made anſwer, that having the deſign of offering them to his ſervice, he had taken an exact account of them, and that the ſilver he had by him amounted to 2000 talents (about 255,000l. Sterling), and the gold to 4,000,000 of darics (about 1,700,000l. Sterling), wanting 7000. All this money he offered him, telling him, that his revenue was ſufficient for the ſupport of his houſehold. Xerxes made him very hearty acknowledgments, and entered into a particular friendſhip with him, but declined accepting his preſent. The ſame prince who had made ſuch obliging offers to Xerxes, having deſired a favour of him ſome time after, that out of his five ſons who ſerved in his army, he would be pleaſed to leave him the eldeſt, in order to be a comfort to him in his old age: the king was ſo enraged at the propoſal, though ſo reaſonable in itſelf, that he cauſed the eldeſt ſon to be killed before the eyes of his father, giving the latter to underſtand, that it was a favour he ſpared him and the reſt of his children. Yet this is the ſame Xerxes who is ſo much admired for his humane reflection at the head of his numerous army, "That of ſo many thouſand men, in 100 years time there would not be one remaining; on which account he could not forbear weeping at the uncertainty and inſtability of human things." He might have found another ſubject of reflection, which would have more juſtly merited his tears and affliction, had he turned his thoughts upon himſelf, and conſidered the reproaches he deſerved for being the inſtrument of haſtening the fatal term to millions of people, whom his cruel ambition was going to ſacrifice in an unjuſt and unneceſſary war.

Zonor. Annal. tom. 3. p. 155.

5. Baſilius Macedo the emperor, exerciſing himſelf in hunting, a ſport he took great delight in, a great ſtag running furiouſly againſt him, faſtened one of the branches of his horns in the emperor's girdle, and pulling him from his horſe, dragged him a good diſtance, to the imminent danger of his life; which a gentleman of his retinue perceiving, drew his ſword and cut the emperor's girdle aſunder, which diſengaged him from the beaſt, with little or no hurt to his perſon. But obſerve what reward he had for his pains: "He was ſentenced to loſe his head for putting his ſword ſo near the body of the emperor;" and ſuffered death accordingly.

INGRESS, in aſtronomy, ſignifies the ſun's entering the firſt ſcruple of one of the four cardinal ſigns, eſpecially Aries.

INGRIA, a province of the Ruſſian empire, lying on the gulf of Finland, being abont 130 miles in length, and 50 in breadth. It abounds in game and fiſh; and here are a great number of elks, which come in troops from Finland in the ſpring and autumn. It was conquered by the Czar Peter the Great, and Peterſburg is the capital town. It is bounded by the river Nieva, and the gulf of Finland, on the north;

by Great Novogorod, on the eaſt and ſouth; and by Livonia, on the weſt.

INGROSSER, or Engrosser, in common law, is one who buys up corn growing, or any proviſions by wholeſale, before the market, to ſell again. See Forestalling.

It alſo ſignifies a clerk who writes records or inſtruments of law on ſkins of parchment. See Engrossing.

INGUEN, in anatomy, the ſame with what is otherwiſe called *groin*.

INGULPHUS, abbot of Croyland, and author of the hiſtory of that abbey, was born in London about A. D. 1030. He received the firſt part of his education at Weſtminſter; and when he viſited his father, who belonged to the court of Edward the Confeſſor, he was ſo fortunate as to engage the attention of queen Edgitha. That amiable and learned princeſs took a pleaſure in examining our young ſcholar on his progreſs in grammar, and in diſputing with him in logic; nor did ſhe ever diſmiſs him without ſome preſent as a mark of her approbation. From Weſtminſter he went to Oxford, where he applied to the ſtudy of rhetoric, and of the Ariſtotelian philoſophy, in which he made greater proficiency than many of his contemporaries. When he was about 21 years of age, he was introduced to William duke of Normandy (who viſited the court of England, A. D. 1051), and made himſelf ſo agreeable to that prince, that he appointed him his ſecretary, and carried him with him into his own dominions. In a little time he became the prime favourite of his prince, and the diſpenſer of all preferments, humbling ſome, and exalting others, at his pleaſure; in which difficult ſtation, he confeſſeth, he did not behave with a proper degree of modeſty and prudence. This excited the envy and hatred of many of the courtiers; to avoid the effects of which, he obtained leave from the duke to go in pilgrimage to the Holy Land, which was then become faſhionable. With a company of 30 horſemen, he joined Sigfrid duke of Mentz, who, with many German nobles, biſhops, clergy, and others, was preparing for a pilgrimage to Jeruſalem. When they were all united, they formed a company of no fewer than 7000 pilgrims. In their way they ſpent ſome time at Conſtantinople, performing their devotions in the ſeveral churches. In their paſſage through Lycia, they were attacked by a tribe of Arabs, who killed and wounded many of them, and plundered them of a prodigious maſs of money. Thoſe who eſcaped from this diſaſter, at length reached Jeruſalem, viſited all the holy places, and bedewed the ruins of many churches with their tears, giving money for their reparation. They intended to have bathed in Jordan; but being prevented by the roving Arabs, they embarked on board a Genoeſe fleet at Joppa, and landed at Brunduſium, from whence they travelled through Apulia to Rome. Having gone through a long courſe of devotions in this city, at the ſeveral places diſtinguiſhed for their ſanctity, they ſeparated, and every one made the beſt of his way into his own country. When Ingulph and his company reached Normandy, they were reduced to 20 half-ſtarved wretches, without money, cloaths, or horſes: A faithful picture of the fooliſh diſaſtrous journeys into the Holy Land, ſo common in thoſe times. Ingulph was now ſo much diſguſted with the world, that he reſolved to forſake it, and became a monk in the abbey of Fontenelle in Normandy; in which, after ſome years, he was advanced to the office of prior. When his old maſter was preparing for his expedition into England, A. D. 1066, he was ſent by his abbot, with 100 merks in money, and 12 young men, nobly mounted and completely armed, as a preſent from their abbey. Ingulph having found a favourable opportunity, preſented his men and money to his prince, who received him very graciouſly; ſome part of the former affection for him reviving in his boſom. In conſequence of this he raiſed him to the government of the rich abbey of Croyland in Lincolnſhire, A. D. 1076, in which he ſpent the laſt 34 years of his life, governing that ſociety with great prudence, and protecting their poſſeſſions from the rapacity of the neighbouring barons by the favour of his royal maſter. The lovers of Engliſh hiſtory and antiquities are much indebted to this learned abbot, for his excellent hiſtory of the abbey of Croyland, from its foundation, A. D. 664, to A. D. 1091, into which he hath introduced much of the general hiſtory of the kingdom, with a variety of curious anecdotes that are no where elſe to be found. Ingulph died of the gout, at his abbey, A. D. 1109, in the 79th year of his age.

INHALER, in medicine, a machine for breathing in warm ſteams into the lungs, recommended by Mr Mudge in the cure of the catarrhous cough. The body of the inſtrument holds about a pint; and the handle, which is fixed to the ſide of it, is hollow. In the lower part of the veſſel, where it is ſoldered to the handle, is a hole, by means of which, and three others on the upper part of the handle, the water, when it is poured into the inhaler, will riſe to the ſame level in both. To the middle of the cover a flexible tube about five or ſix inches long is fixed, with a mouth-piece of wood or ivory. Underneath the cover there is a valve fixed, which opens and ſhuts the communication between the upper and internal part of the inhaler and the external air. When the mouth is applied to the end of the tube in the act of inſpiration, the air ruſhes into the handle, and up through the body of warm water, and the lungs become, conſequently, filled with hot vapours. In expiration, the mouth being ſtill fixed to the tube, the breath, together with the ſteam on the ſurface of the water in the inhaler, is forced up through the valve in the cover. In this manner, therefore, the whole act of reſpiration is performed through the inhaler, without the neceſſity, in the act of expiration, of either breathing through the noſe, or removing the pipe from the mouth.

INHERITANCE, a perpetual right or intereſt in lands, inveſted in a perſon and his heirs. See Descent.

INHIBITION, a writ to inhibit or forbid a judge from farther proceeding in a cauſe depending before him.

Sometimes prohibition and inhibition are put together, as of the ſame import; but inhibition is moſt commonly a writ iſſuing out of a higher court-chriſtian

Inhumation, Injection.

to a lower; and prohibition out of a higher court to an inferior court.

Inhibition, in Scots law, a diligence obtained at the ſuit of a creditor againſt his debtor, prohibiting him from ſelling or contracting debts upon his eſtate to the creditor's prejudice.

INHUMATION, in chemiſtry, a method of digeſting ſubſtances, by burying the veſſel in which they are contained in horſe-dung or earth.

INJECTION, the forcibly throwing certain liquid medicines into the body by means of a ſyringe, tube, clyſter-pipe, or the like.

Injection, in ſurgery, the throwing in ſome liquor or medicine into a vein opened by inciſion. This practice, and that of transfuſion, or the conveying the arterial blood of one man, or other animal, into another, were once greatly practiſed, but are now laid aſide.

Anatomical Injection, the filling the veſſels of a human, or other animal body, with ſome coloured ſubſtance, in order to make their figures and ramifications viſible.

I. The beſt account of the method of injecting the *ſanguiferous* veſſels of animals, is that by the late Dr Monro, publiſhed in the medical Eſſays, vol. i. p. 79.

"The inſtrument with which the liquor is commonly thrown into the veſſels is a tight eaſy going ſyring of braſs, to which ſeveral ſhort pipes are fitted, and can be fixed by ſcrews, the other extremities of theſe pipes being of different diameters without any ſcrew, that they may ſlide into other pipes, which are ſo exactly adapted to them at one end, that when they are preſſed a little together, nothing can paſs between them: and becauſe their coheſion is not ſo great as to reſiſt the puſhing force of the injection, which would drive off this ſecond pipe, and ſpoil the whole operation; therefore the extremity of this ſecond ſort of pipes, which receives the firſt kind, is formed on the outſide into a ſquare, bounded behind and before by a riſing circle, which hinders the key that cloſely graſps the ſquare part from ſliding backwards or forwards; or a bar of braſs muſt ſtand out from each ſide of it to be held with the fingers. The other extremity of each of theſe ſecond ſort of pipes is of different diameter; and near it a circular notch, capable of allowing a thread to be ſunk into it, is formed; by this, the thread tying the veſſel at which the injection is to be made, will not be allowed to ſlide off.

"Beſides this form deſcribed, common to all this ſecond ſort of pipes, we ought to have ſome of the larger ones, with an additional mechaniſm, for particular purpoſes; as, for inſtance, when the larger veſſels are injected, the pipe faſtened into the veſſel ought either to have a valve or a ſtop-cock, that may be turned at pleaſure, to hinder any thing to get out from the veſſel by the pipe; otherwiſe, as the injection, in ſuch a caſe, takes time to coagulate, the people employed in making the injection muſt either continue all that while in the ſame poſture; or, if the ſyringe is too ſoon taken off, the injected liquor runs out, and the larger veſſels are emptied. When the ſyringe is not large enough to hold at once all the liquor neceſſary to fill the veſſels, there is a neceſſity of filling it again. If, in order to do this, the ſyringe was to be taken off from the pipe fixed in the veſſel, ſome of the injection would be loſt, and what was expoſed to the air would cool and harden; therefore ſome of the pipes ought to have a reflected curve tube coming out of their ſide, with a valve ſo diſpoſed, that no liquor can come from the ſtraight pipe into the crooked one, but, on the contrary, may be allowed to paſs from the crooked to the ſtraight one: the injector then, taking care to keep the extremity of the reflected pipe immerſed in the liquor to be injected, may, as ſoon as he has puſhed out the firſt ſyringeful, fill it again by only drawing back the ſucker; and, repeating this quickly, will be able to throw ſeveral ſyringefuls into the veſſels.

Injection

"All theſe different ſorts of pipes are commonly made of braſs.

"The liquors thrown into the veſſels, with a deſign to fill the ſmall capillary tubes, are either ſuch as will incorporate with water, or ſuch as are oily; both kinds have their advantages and inconveniences; which I ſhall mention in treating of each, and ſhall conclude with that which I have found by experience to ſucceed beſt.

"All the different kinds of glue, or ichthyocolla, ſyths, common glue, &c. diſſolved and pretty much diluted, mix eaſily with the animal-fluids, which is of great advantage, and will paſs into very ſmall veſſels of a well-choſen and prepared ſubject, and often anſwer the intention ſufficiently, where the deſign is only to prepare ſome very fine membrane, on which no veſſels can be expected to be ſeen ſo large as the eye can diſcover whether the tranſverſe ſections of the veſſels would be circular, or if their ſides are collapſed. But when the larger veſſels are alſo to be prepared, there is a manifeſt diſadvantage to the uſefulneſs and beauty of the preparation; for if nothing but the glutinous liquor is injected, one cannot keep a ſubject ſo long as the glue takes of becoming firm; and therefore, in diſſecting the injected part, ſeveral veſſels will probably be cut and emptied. To prevent this, one may indeed either ſoak the part well in alcohol, which coagulates the glue; but then it becomes ſo brittle, that the leaſt handling makes it crack; and if the preparation is to be kept, the larger veſſels appear quite ſhrivelled, when the watery part of the injection is evaporated: or the efflux of the injection may be prevented, by carefully tying every veſſel before we are obliged to cut it; ſtill, however, that does not hinder the veſſels to contract when the glue is drying. If, to obviate theſe difficulties, the glutinous liquor ſhould firſt be injected in ſuch quantity as the capillary veſſels will contain, and the common oily or waxy injection is puſhed in afterwards to keep the large veſſels diſtended, the wax is very apt to harden before it has run far enough; the two ſorts of liquors never miſs to mix irregularly, and the whole appears interrupted and broken by their ſoon ſeparating from each other; which is ſtill more remarkable afterwards, when the watery particles are evaporated.

"Spirits of wine coloured mixes with water and oils, and ſo far is proper to fill the ſmaller veſſels with: but, on the other hand, it coagulates any of our liquor it meets, which ſometimes blocks up the veſſels ſo much, that no more injection will paſs; then it ſcarce will ſuſpend ſome of the powders that prove the moſt durable colours; and as it entirely evaporates, the veſſels muſt become very ſmall; and the ſmall quantity of powder left, having nothing to ſerve for connecting its particles together, generally is ſeen ſo interrupted, that the ſmall ramifications of veſſels rather have the appearances of random ſcratches of a pencil, than of regular continued canals.

"Melted tallow, with a little mixture of oil of turpentine, may ſometimes be made to fill very ſmall veſſels, and keep the larger ones at a full ſtretch; but where any quantity of the animal liquors are ſtill in the veſſels, it is liable to ſtop too ſoon, and never can be introduced into numbers of veſſels which other liquors enter; and it is ſo brittle, that very little handling makes it crack, and thereby renders the preparation very ugly (A).

"The method I have always ſucceeded beſt with, in making what may be called *ſubtile* or *fine injections*, is, firſt to throw in coloured oil of turpentine, in ſuch a quantity as might fill the very ſmall veſſels; and, immediately after, to puſh the common coarſe injection into the larger ones. The oil is ſubtile enough to enter rather ſmaller capillary tubes than any colouring can; its reſinous parts, which remain after the ſpirituous are evaporated, give a ſufficient adheſion to the particles of the ſubſtance with which it is coloured, to keep them from ſeparating, and it intimately incorporates with the coarſer injection; by which, if the injection is rightly managed, it is impoſſible for the ſharpeſt eye to diſcover that two ſorts have been made uſe of (B).

"All the liquors with which the veſſels of animals are artificially filled, having very faint, and near the ſame colours, would not all appear in the very ſmall veſſels becauſe of their becoming entirely diaphanous, without a mixture of ſome ſubſtance to impart its colour to them; and where ſeveral ſorts of even the largeſt veſſels of any part were filled, one ſort could not be diſtinguiſhed from another, unleſs the colour of each was different; which has likewiſe a good effect in making preparations more beautiful. Wherefore anatomiſts have made uſe of a variety of ſuch ſubſtances, according to their different fancies or intentions; ſuch as gamboge, ſaffron, ink, burnt ivory, &c. which can be eaſily procured from painters. My deſign being only to conſider thoſe that are fit to be mixed with the injecting liquors propoſed to fill capillary veſſels, which is ſcarce ever to be done in any other, except the branches of the arteries and of ſome veins, I ſhall confine myſelf to the common colours employed to theſe laſt named two ſorts of veſſels, which colours are red, green, and ſometimes blue, without mentioning the others, which require very little choice.

"Anatomiſts have, I imagine, propoſed to imitate the natural colours of the arteries and veins in a living creature, by filling the arteries with a red ſubſtance, and the veins with a blue or green: from which, however, there are other advantages, ſuch as the ſtrong reflection which ſuch bodies make of the rays of light, and the unaptneſs moſt ſuch bodies have to tranſmit theſe ſame rays, without at leaſt a conſiderable reflection of the rays peculiar to themſelves; or, in other words, their unfitneſs to become completely pellucid; without which, the very fine veſſels, after being injected, would ſtill be imperceptible. The animal or vegetable ſubſtances made uſe of for colouring injections, ſuch as cochineal, laque, *rad. auchuſæ*, brazil-wood, indigo, &c. have all one general fault of being liable to run into little knots which ſtop ſome of the veſſels; their colour fades ſooner when kept dry; they more eaſily yield their tincture when the parts are preſerved in a liquor; and rats, mice, and inſects, will take them for food: for which reaſons, though I have frequently ſucceeded in injecting them, I rather prefer the mineral kind, ſuch as minium or vermilion for red; of which this laſt is, in my opinion, the beſt, becauſe it gives the brighteſt colour, and is commonly to be bought finely levigated. The green-coloured powder generally uſed is verdigreaſe; but I rather chooſe that preparation of it called *diſtilled verdigreaſe*; becauſe its colour is brighter, and it does not ſo often run into ſmall knots as the common verdigreaſe, but diſſolves in the oily liquors.

"The method of preparing the injection compoſed of theſe materials, is to take for the fine one, a pound of clear oil of turpentine, which is gradually poured on three ounces of vermilion, or diſtilled verdigreaſe finely powdered, or rather well levigated by grinding on marble; ſtir them well with a ſmall wooden ſpatula till they are exactly mixed, then ſtrain all thro' a fine linen rag. The ſeparation of the groſſer particles is, however, rather better made, by pouring ſome ounces of the oil upon the powder, and, after ſtirring them together ſtrongly, ſtop rubbing with the ſpatula for a ſecond or ſo, and pour off into a clean veſſel the oil with the vermilion or verdigreaſe ſuſpended in it; and continue this ſort of operation till you obſerve no more of the powder come off; and all that remains is granulated. The coarſer injection is thus prepared: Take tallow, 1 pound; wax, bleached white, 5 ounces; ſallad oil, 3 ounces; melt them in a ſkillet put over a lamp: then add Venice turpentine, 2 ounces; and as ſoon as this is diſſolved, gradually ſprinkle in of vermilion or verdigreaſe prepared, 3 ounces; then paſs all through a clean, dry, warmed linen-cloth, to ſeparate all the groſſer particles; and, when you deſign to make it run far into the veſſels, ſome oil of

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(A) Rigierus (*Introduct. in notitiam rerum natur*, &c. *4to*, *Hagae*, 1743 *titul. Balſamum*) gives Ruyſch's method of injecting and preſerving animals, which, he ſays, Mr Blumentroſt, preſident of the Peterſburgh academy, aſſured him was copied from the receipt given in Ruyſch's own hand-writing to the Czar. According to this receipt, melted tallow, coloured with vermilion, to which, in the ſummer, a little white wax was added, was Ruyſch's injecting *ceracia materies*.

(B) Mr Ranby's injecting matter, as publiſhed by Dr Hales, (*Hæmaſt.* Ex. 21.), is white roſin and tallow, of each two ounces, melted and ſtrained through linen; to which was added three ounces of vermilion, or finely ground indigo, which was well rubbed with eight ounces of turpentine varniſh.

of turpentine may be added immediately before it is uſed.

"The next thing to be conſidered, and indeed what chiefly contributes to the ſucceſs of injections, is the choice and preparation of the ſubject whoſe veſſels are to be filled.

"In chooſing a fit ſubject, take theſe few general rules; 1. The younger the creature to be injected is, the injection will, *cæteris paribus*, go fartheſt, and *vice verſa*. 2. The more the creature's fluids have been diſſolved and exhauſted in life, the ſucceſs of the operation will be greater. 3. The leſs ſolid the part deſigned to be injected is, the more veſſels will be filled. 4. The more membranous and tranſparent parts are, the injection ſhows better; whereas, in the ſolid very hard parts of a rigid old creature, that has died with its veſſels full of thick ſtrong blood, it is ſcarce poſſible to inject great numbers of ſmall veſſels.

"Therefore, in preparing a ſubject for injecting, the principal things to be aimed at, are, To diſſolve the fluids, empty the veſſels of them, relax the ſolids, and prevent the injection's coagulating too ſoon. To anſwer all theſe intentions, authors have propoſed to inject tepid or warm water by the arteries, till it returns clear and untinged by the veins, and the veſſels are thereby ſo emptied of blood, that all the parts appear white; after which, they puſh out the water by forcing in air; and, laſtly, by preſſing with their hands, they ſqueeze the air alſo out. After this preparation, one can indeed inject very ſubtilely; but generally there are inconveniences attend it. For in all the parts where there is a remarkable *tunica celluloſa*, it never miſſes to be full of the water, which is apt to ſpoil any parts deſigned to be preſerved either wet or dry; and ſome particles of the water ſeldom miſs to be mixed in the larger as well as ſmaller veſſels with the oily injection, and make it appear diſcontinued and broken: wherefore it is much better to let this injection of water alone, if it can be poſſibly avoided, and rather to macerate the body or part to be injected a conſiderable time in water, made ſo warm (c) as one can hold his hand eaſily in it; taking care to keep it of an equal warmth all the time, by taking out ſome of the water as it cools, and pouring in hot water in its place; by which the veſſels will be ſufficiently ſoftened and relaxed, the blood will be melted down, and the injection can be in no danger of hardening too ſoon; whereas, if the water is too hot, the veſſels ſhrink, and the blood coagulates. From time to time we ſqueeze out the liquids as much as poſſible at the cut veſſel by which the injection is to be thrown in (d). The time this maceration is to be continued, is always in proportion to the age of the ſubject, the bulk and thickneſs of what we deſign to inject, and the quantity of blood we obſerve in the veſſels, which can only be learned by experience; at leaſt, however, care ought to be taken, that the whole ſubject, or part macerated, is perfectly well warmed all through; and that we continue the preſſure with our hands till no more blood can be brought away, whatever poſition we put the ſubject in.

When the ſyringe, injections, and ſubject, are all in readineſs, one of the ſecond ſort of pipes is choſen, as near to the diameter of the veſſel by which the injection is to be thrown as poſſible; for if the pipe is too large, it is almoſt needleſs to tell it cannot be introduced. If the pipe is much ſmaller than the veſſel, it is ſcarce poſſible to tie them ſo firmly together, but, by the wrinkling of the coats of the veſſel, ſome ſmall paſſage will be left, by which part of the injection will ſpring back on the injector in the time of the operation, and the neareſt veſſels remain afterwards undiſtended, by the loſs of the quantity that oozes out. Having choſen a fit pipe, it is introduced at the cut orifice of the veſſel, or at an inciſion made in the ſide of it; and then a waxed thread being brought round the veſſel, as near to its coats as poſſible, by the help of a needle, or a flexible eyed probe, the ſurgeon's knot is made with the thread, and it is drawn as firmly as the thread can allow; taking care that it ſhall be ſunk into the circular notch of the pipe all round, otherwiſe it will very eaſily ſlide off, and the pipe will be brought out probably in the time of the operation, which ruins it.

"If there have been large veſſels cut, which communicate with the veſſels you deſign to inject, or if there are any others proceeding from the ſame trunk, which you do not reſolve to fill, let them be all carefully now tied up, to ſave the injected liquor, and make the operation ſucceed better in the view you then have.

"When all this is done, both ſorts of injections are to be warmed over a lamp, taking care to ſtir them conſtantly, leſt the colouring powder fall to the bottom and burn (e). The oil of turpentine needs be made no warmer than will allow the finger to remain in it, if the ſubject has been previouſly well warmed in water; when the maceration has not been made, the oil ought to be ſcalding hot, that it may warm all the parts which are deſigned to be injected. The coarſe injection ought to be brought near to boiling. In the mean time, having wrapt ſeveral folds of linen round the parts of the ſyringe which the operator is to gripe, and ſecured the linen with thread, the ſyringe is to be made very hot by ſucking boiling water ſeveral times up (f), and the pipe within the veſſel is to be warmed by applying a ſponge dipped in boiling water to it (g).

"After all is ready, the ſyringe being cleared of the water, the injector fills it with the finer injection;

(c) Ruyſch orders a previous maceration for a day or two in cold water; which muſt have a better effect in melting the blood than warm water has.

(d) When Ruyſch intended to inject the whole body, he put one pipe upwards, and another downwards, in the deſcending aorta.

(e) Ruyſch melts his tallow by the heat of warm water, into which he puts the veſſel containing the injection.

(f) He warms his ſyringe by laying it on hot coals.

(g) He warms his pipe, by putting the body, after the pipe is fixed in the veſſel, into hot water. When this and then introducing the pipe of the ſyringe into that in the veſſel, he preſſes them together, and either with one hand holds this laſt pipe firm, with the other gripes the ſyringe, and with his breaſt puſhes the ſucker; or, giving the pipe in the veſſel to be held by an aſſiſtant, in any of the ways mentioned in the deſcription of theſe ſorts of pipes, he gripes the ſyringe with one hand, and puſhes the ſucker with the other, and conſequently throws in the injection, which ought to be done ſlowly, and with no great force, but proportioned to the length and bulk of the part to be injected and ſtrength of the veſſels. The quantity of this fine injection to be thrown in is much to be learned by uſe. The only rule I could ever fix to myſelf in this matter was to continue puſhing till I was ſenſible of a ſtop which would require a conſiderable force to overcome. But this will not hold where all the branches of any veſſel are not injected; as for inſtance, when the veſſels of the thorax only are to be injected: for the aorta bears too great a proportion to the branches ſent from it, and therefore leſs fine injection is requiſite here. As ſoon as that ſtop is felt, the ſucker of the ſyringe is to be drawn back, that the neareſt large veſſels may be emptied. Then the ſyringe is taken off, emptied of the fine injection, and filled with the coarſer, which is to be puſhed into the veſſels quickly and forcibly, having always regard to the ſtrength and firmneſs of the veſſels, bulk, &c. of the part. Continue to thruſt the ſucker, till a full ſtop, or a ſort of puſh backwards, is felt, when you muſt beware of thruſting any more, otherwiſe ſome of the veſſels will be burſted, and the whole, or a conſiderable ſhare of the preparation you deſigned, will be ſpoiled by the extravaſation, but rather immediately ſtop the pipe by the turn-cock, and take out the ſyringe to clean it, and allow ſufficient time for the coarſe injection to coagulate fully, before any part is diſſected. Ruyſch, immediately after throwing in the injection, put the body into cold water, and ſtirred it continually for ſome time, to prevent the vermilion from ſeparating from the tallow."

II. The injection of the *lymphatic* ſyſtem is much more difficult than that of the ſanguiferous, on account of the extreme ſmallneſs of the veſſels; ſo that till very lately it was almoſt quite impracticable. Methods indeed had been attempted for this purpoſe; but by reaſon of the improper form of the inſtruments, and the inferior ſkill of anatomiſts in former times, we may juſtly look upon this as one of the moſt modern improvements in anatomy.

The firſt thing to be conſidered, when the lymphatics are to be injected, is a proper method of diſcovering them; for this is by no means an eaſy matter, on account of their ſmallneſs and tranſparency.—To find out theſe veſſels, the ſubject muſt be viewed in a proper place, where the light is neither very ſtrong nor very weak. Mr Sheldon, who has written a treatiſe upon this ſubject, recommends a winter forenoon from ten to two; it being chiefly in the winter ſeaſon that anatomical preparations are made, and becauſe at that time of the day the light is more clear and ſteady. He ſays alſo from his own experience, that the light paſſing through the glaſs of a window is better for this purpoſe than the open air, as the veſſels are more diſtinctly ſeen. The injecting of the veſſels is likewiſe rendered more difficult in the open air by the eaſe with which the humidity is evaporated from them. It will likewiſe be neceſſary to incline the part in various ways to the light, as ſome of the veſſels are moſt eaſily diſcoverable in one poſition and ſome in another. The lacteal trunks under the peritoneal coats of the inteſtines, and the lymphatics on the external ſurface of the liver, &c. particularly require this method. He diſcommends the uſe of magnifying glaſſes. "I am perſuaded (ſays he), that thoſe who attempt to find them through this medium, will not acquire that *viſus eruditus* which is obtained to a ſurpriſing degree by thoſe who have been much experienced in injecting lymphatic veſſels. A lateral light is likewiſe preferable to an horizontal, or even to an oblique ſky-light.

"The ſubjects muſt be laid upon a table of ſufficient height, which might be contrived with a ledge fixed to the table in ſuch a manner as to be water proof; which would be uſeful for preventing the quickſilver, which is almoſt always neceſſary for injecting theſe veſſels, from being loſt. The ſurface of the table ſhould likewiſe be hollowed, ſo that the mercury which falls may be collected in the middle, where an hole with a ſtopper may be made to take out occaſionally the quickſilver which collects. Such a table would alſo be convenient for holding water for the purpoſe of ſteeping membranous parts which are frequently to be injected; and which, from being expoſed to the air, become dry; which alſo it is inconvenient and hazardous to move into water during the time of operation. Even a common table with a hole cut in the middle may anſwer the purpoſe: the hole may be round or ſquare according to the fancy of the anatomiſt, but the table muſt be conſtructed of ſuch materials as are not liable to warp in warm water. Should the anatomiſt not be provided with either of theſe tables, the parts muſt be laid in a tray or earthen diſh, that the quickſilver may be ſaved."

The materials for injecting theſe veſſels are only quickſilver, and the ceraceous or *coarſe* injection of anatomiſts; the former being always uſed in injecting the lymphatics, and lacteals, it being almoſt impoſſible to fill them with another fluid in the dead body. The ceraceous injection is chiefly uſed for the thoracic duct; and in ſome particular inſtances, where the lymphatic trunks have been found larger than the ordinary ſize, a coarſe injection has been made uſe of.

Injections of the lymphatics may be made even while the animal is alive, and that without any great cruelty, by feeding it with milk previous to its being ſtrangled. Of all the barbarous methods of opening the animal while alive, the moſt uſeful ſeems to be that of Mr Hunter, who directs to perforate the ſmall inteſtines, and throw in ſtarch-water with ſolutions of muſk, or indigo and ſtarch-water. "In a word (ſays Mr Sheldon), any gelatinous fluids rendered opaque with ſuch colours as will be abſorbed, are extremely uſeful for experiments of this kind; for much more may be ſeen by examining the veſſels diſtended with a coloured fluid from natural abſorption, than by anatomical

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this to be is done, a cork ought to be put into the pipe, to prevent the water getting into the veſſel that is to be injected.

tomical injection practiſed in the dead body." Liberkuhn firſt diſcovered the ampullulæ by feeding children in whom the lacteal glands were oſtructed previous to their death with milk; by which means not only the lacteal trunks became diſtended with chyle, but likewiſe the ampullulæ. Thus abſorbing mouths of the lacteal veſſels were diſcovered by Liberkuhn; and in a ſimilar manner Aſellius diſcovered the lacteals themſelves. Thus alſo Euſtachius diſcovered the thoracic duct in a horſe; and Mr Hewſon traced the lacteal veſſels, lymphatics, and thoracic duct, in birds, by making ligatures on the root of the meſentery, and other parts, which had been previouſly fed with barley. Mr Hunter likewiſe was enabled to obſerve the lacteals of a crocodile when diſtended with chyle.

The coarſe injection for the lymphatics is made of mutton-ſuet and yellow reſin, in the proportion of two thirds of reſin to one of ſuet. If required of a thicker conſiſtence, we may add a ſmall quantity of pure wax; if of a ſofter quality, we may augment the quantity of ſuet: Orpiment or king's yellow is generally made uſe of; though others are equally proper, provided they be fine enough.

The inſtruments neceſſary for injecting the lymphatic veſſels are the injecting tube and pipes, lancets, blow-pipes, knives, ſciſſars, forceps, needles, and thread. The old injecting tube has been found in a manner entirely uſeleſs, the pipe being fixed in a glaſs tube two or three feet long; which is one of the reaſons why, before the time of Hewſon, ſo little of the lymphatic ſyſtem could be injected. Tubes of ſuch a length are entirely unmanageable by one perſon, and it is impoſſible to perform the operation properly with two. To perform it in the beſt manner. the inſtrument ſhould be held in the hand like a pencil or pen. The inſtruments uſed by our author are tubes made either of glaſs or of braſs; which, when filled with mercury, may be held in the hand like a pen: a glaſs tube, however, is preferable to the metallic one. It is ſomewhat in the ſhape of a trumpet; ſix inches and an half in length, an inch and an half broad where broadeſt, and three eighths of an inch where narroweſt. A collar of ſteel half an inch broad and three quarters of an inch long is cemented to this pipe, and a ſmaller tube of the ſame metal is ſcrewed upon the end of the collar; the whole terminating in a capillary tube about an inch in length. This laſt is the moſt difficult part of the whole work to execute; it ſhould be drilled out of a ſolid piece of metal, and not made of a thin bit of plate ſoldered, as theſe are apt to turn ragged in the edges, and the ſolder is alſo liable to be deſtroyed by the mercury. Thoſe uſed by Mr Sheldon were made by drilling a ſmall hole lengthwiſe through a bit of well-tempered wire. It is cleaned by means of a very ſmall piece of ſteel-wire capable of paſſing through the bore of the tube. This ought to be annealed leſt it ſhould break; in which caſe the broken bit could not eaſily be got out. Very ſmall tubes may be made of glaſs drawn out as fine as we chooſe; and though very apt to break, they are eaſily repaired. They ought to be very thin, that they may be eaſily melted. Sometimes it has heen found convenient to fit the collar with a ſteel ſtop-cock.

The braſs tube repreſented by our author is about nine inches and an half in length, and half an inch wide where wideſt. The collar is a full quarter of an inch broad, and three quarters of an inch long; a ſteel piece and capillary tube being ſcrewed to it as in the other.

The lancets are to be exquiſitely ſharp, in order to cut into the lymphatic veſſels. The latter are eaſily inflated by the ſmall ſilver blow-pipes uſually put up in the diſſecting caſes by the London mathematical inſtrument makers: diſſecting knives, fine-pointed ſciſſars, accurately made diſſecting forceps, with ſtraight or crooked needles, are likewiſe ſubſtituted with advantage, as not being affected by the quickſilver.

We muſt next conſider the proper ſubjects for injection. Mr Sheldon recommends, that they ſhould be as free from fat as poſſible; he has always found in the human ſubject thoſe who died univerſally dropſical, or of an aſcites or anaſarca, to be the beſt, for the following reaſons, *viz.* in ſuch there is little or no animal oil, and but a very ſmall quantity of red blood; both of which, when they occur in great abundance, very much impede the diſcovery of the lymphatic veſſels; but when the cellular veſſels are loaded with water, the abſorbents are more readily traced, and with leſs riſk of wounding them in diſſection: the preparations alſo, particularly the dried ones, are more laſting. This circumſtance is found to be of moſt conſequence in preparing the abſorbent veſſels of the trunk and extremities of the human ſubject. Of all the viſcera in young ſubjects, only the liver and lungs can be injected with ſucceſs; and theſe may be ſucceſsfully injected even in the fœtus. It will be moſt proper to begin the operation upon the ſubject immediately after death, as lymph or chyle will then be more readily found in the veſſels, than when we wait a longer time. In preparing the lacteals, previouſly diſtended with milk in the living ſubject, it is proper to have the inteſtines and meſentery plunged (with the ligature upon the root of the latter) into rectified ſpirit of wine. This proceſs will coagulate the chyle; and the fluid being opaque, the veſſels will be beautifully ſeen when we mean to prepare the parts, by preſerving them in proof-ſpirit as wet ſpecimens: "In this way (ſays Mr Sheldon) I have made in the dog one of the moſt natural preparations that can be ſeen of the lacteals injected from their orifices by the natural abſorption." We may alſo prepare the lacteals by the method uſed by Mr Hunter, already mentioned; by which they will be very conſpicuous, by the indigo abſorbed from the cavity of the inteſtines. By tying the thoracic duct near its inſertion into the angle formed between the ſubclavian and jugular veins on the left ſide, or by tying theſe veins on both ſides, we may diſtend almoſt all the abſorbents of the animal. Thus we are enabled to purſue theſe veſſels in many parts where they have not yet been diſcovered, where they can ſcarcely be traced by injection, and even in ſome parts where it is utterly impoſſible for the injections to reach them.

Another method ſometimes ſucceſsfully uſed by our author, was firſt practiſed by Malpighi. In this the part is to be ſteeped in water, and the liquid changed as long as it appears tinged with blood; ſuffering the parts afterwards to remain in the ſame water till the putrefaction begins. As ſoon as this begins to take place, the air which is extricated will diſtend the lymphatics, ſo that they may be eaſily ſeen, and then injected with quickſilver. It is, however, remarkable, that this method will not in general anſwer ſo well in the human ſpecies as in quadrupeds; the air having never paſſed by putrefaction into the human lacteals in any of the ſubjects which Mr Sheldon tried, though it will take place in thoſe of the horſe or aſs, and many other animals: drawing of the lacteals may likewiſe be made in this method to very great advantage. In ſome parts of the human body alſo, this method may be employed to advantage; as the liver, heart, &c. It may likewiſe be uſeful to make ligatures on the large trunks of the veſſels previous to the maceration, that thus the air may be confined as ſoon as it is extricated from the coats by putrefaction. Our author adds, that if ligatures were made upon the wriſts and legs in *articulo mortis*, or immediately after death, the lymph would be ſtopped in the veſſels, the latter would become diſtended, and might be injected with the greateſt facility by the common method after taking off the ligature. Mr Sheldon in ſuch a caſe recommends the tourniquet. "I have reaſon (ſays he) to believe, that abſorption goes on as long as muſcular irritability remains; which laſt continues a conſiderable time after the general life of the animal is loſt." On this, however, we cannot forbear to remark, that making ligatures for ſuch purpoſes upon a human creature in *articulo mortis*, or even immediately after death, ſavours ſo much of *barbarity*, that we cannot think it will be often practiſed. In ſome caſes, even in the dead ſubject, ligatures are uſeful; as when we are ſearching for the lymphatics in the fingers and toes. In theſe it is uſeful to ſtroke up the parts with the finger, by which means the ſmall quantity of lymph remaining in the veſſels will be forced upwards, and ſtopped by the ligature; after which the veſſels may be eaſily injected with quickſilver, as already mentioned.

To inject the veſſels, we muſt open one or more of them, directing the point of the lancet almoſt always towards the trunk or trunks of the veſſels, and taking care not to carry the inciſion through the oppoſite ſide. If the veſſels happen to lie under the peritoneum as the lacteals, or under the pleura as the lymphatics of the lungs, we may cut into their cavity through theſe membranes. In injecting thoſe of the extremities, however, and in many other parts of the body, it is abſolutely neceſſary to diſſect the veſſels we deſign to fill away from the fat and reticular ſubſtance before we attempt to open them with the lancet. The tube with the pipe affixed to it is previouſly to be filled with mercury: the anatomiſt then inflates the veſſel by means of the blow-pipe, takes the tube from the aſſiſtant, and introduces the ſmall tube into the puncture. In this operation it will be found neceſſary not to carry the tube farther into the veſſel than is ſufficient to give the mercury a free paſſage; for if we introduce it farther, the paſſage of the mercury will be impeded by the pipe being puſhed againſt the ſide of the veſſel. Should not the fluid be able to effect a paſſage, it will then be neceſſary to preſs upon the ſurface of it in the tube with our fingers. If it deſcend freely, and without any of it paſſing between the ſide of the veſſel and ſmall pipe, we have only to fill up the tube with mercury as the latter deſcends; but if it gets out, we muſt then tie the veſſel. This, however, ſhould always be avoided if poſſible; becauſe, if not very dexterouſly performed, the operator will be apt to ſeparate the tube from the veſſel; and on this account the puncture ought always to be very ſmall, no larger indeed than is neceſſary to allow the pipe to get in with difficulty. As the injection proceeds, the preſſure upon the ſurface of the quickſilver muſt be carried on higher and higher in the courſe of the lymphatic, till we come near the gland or glands into which the veſſels terminate; otherwiſe we ſhall ſeldom get the cells of the glands, or the veſſels emerging from the oppoſite ſide of the glands, well injected. In injecting the lymphatic veſſels of the extremities, it will be uſeful to raiſe the part where the pipe is inſerted higher than the other end of the limb, and to make the aſſiſtant preſs with his hands along the ſkin in the courſe of the veſſels, which will favour the progreſs of the injection. When the veſſels are ſufficiently filled, which may be known by the ſwelling of them, and by the reſiſtance the mercury meets with, the aſſiſtant paſſes a ligature about the veſſel and ties it above the puncture before the anatomiſt withdraws the injection-pipe.

The method of injecting the larger trunks or thoracic duct with the coarſe injection is exactly ſimilar to that already deſcribed for the ſanguiferous veſſels. Mr Sheldon, however, recommends the uſe of ſome pipes of a particular conſtruction invented by himſelf. The improvement conſiſts in ſhaping the ends of the pipes like a pen; taking care to make the edges and point blunt, to avoid cutting the veſſel when we introduce them Thus much larger tubes than thoſe commonly in uſe may be admitted; and there is no occaſion to make any bulb or riſing near the extremity of theſe ſmall pipes to prevent the thread from ſlipping off: for this will certainly hinder us from inſerting pipes of ſuch diameter as might otherwiſe be done.

Having thus ſhown the method of injecting the lymphatics, our author next proceeds to deſcribe the method of diſſecting and preparing them either for immediate demonſtration, or for preſervation for any length of time. In the diſſection, great care is requiſite, on account of the exquiſite thinneſs of their coats: but if this ſhould happen by accident, it will then be neceſſary to introduce the pipe at the ruptured part; and having ſecured it above and below with ligatures, to fill it again as before directed. Our author recommends, for the purpoſe of diſſection, ſuch knives as are made uſe of by the Germans and French in tracing the nerves. They muſt be made thin in the blade like lancets, and not much larger. A variety of different ſhaped blades, ſome ſingle and others double-edged, will be neceſſary for various parts of the body; the fault of the common diſſecting knives being that they are too thick in the blade, which makes them ſoon blunt, and occaſions the trouble of perpetual grinding, which is not the caſe with thoſe juſt recommended. A ſharp-pointed forceps is neceſſary, in order to lay faſt hold of the ſmalleſt portion of cellular ſubſtance; but they ought not to be ſo ſharp as to endanger the puncturing of the veſſels: nor ſhould they by any means be bowed or ſtiff in the ſpring, to prevent the fingers of the operator from being wearied in the operation. They ſhould alſo be made in ſuch a manner as to hold large as well as ſmall portions of reticular ſubſtance. For diſſections of this kind, fine-pointed ſciſſars and lancets fixed in handles are ſometimes neceſſary; and it is frequently of uſe to plunge the parts into water, in order to looſen the reticular membrane connected with the outſide of the coats of the veſſels; by which means they may be diſſected more eaſily, and with leſs danger of wounding them. The blood may be extracted by frequently changing the water. After being injected with quickſilver, the parts ſhould not be allowed to remain long in the water, becauſe the volatile alkali formed by putrefaction is apt to change the colour of the mercury.

The diſſection being performed, the preparation is then to be preſerved either in a wet or dry ſtate, according to its nature. Preparations of the larger parts, as the trunk or extremities, ſhould be preſerved dry; and to dry them effectually, they ſhould be expoſed to a free current of air, but not to the rays of the ſun; and the veſſels ſhould be diſplayed in their natural ſituation. When fully dried, they ought then to be varniſhed over with tranſparent ſpirit or copal varniſh; which will not only preſerve them from inſects, but render them more beautiful, and the veſſels more conſpicuous. They ſhould then be incloſed in glaſs caſes, where they are to be placed in a horizontal poſition, and handled as little as poſſible.

To make preparations of the thoracic duct, we muſt in the firſt place fill the aorta, vena cava ſuperior, and vena azygos or intercoſtalis, with coarſe injection; then fill, with the ſame, the veſſels below the right crus or little muſcle of the diaphragm. The duct is ſometimes prepared with quickſilver; but Mr Sheldon recommends to anatomiſts to make drawings of any thing new or remarkable in their preparations of the lymphatic veſſels with quickſilver; as moſt of thoſe ſpecimens, particularly ſuch as are dried, become at laſt totally uſeleſs by reaſon of the drying of the veſſels and the eſcape or blackening of the mercury; or from the varniſh growing more and more opaque with age. The quickſilver injection, however, in ſome caſes is very uſeful. Thus, for inſtance, if we wiſh to demonſtrate the valves in the thoracic duct, or any other large abſorbent veſſel, we need only inject the veſſels with quickſilver, diſſect and dry them, then cut them open, and let the mercury run out; after which the valves will appear by making ſections in the coats of the veſſels. This may be done ſtill better by varniſhing the veſſels three or four times before the ſections are made; becauſe the varniſh will ſtrengthen the ſides of the veſſel. In wet preparations the valves in the cavities of theſe parts may likewiſe be demonſtrated by opening them; or by inverting the veſſels and ſuſpending them in proof malt-ſpirits. Thus the valves that cover the terminations of the thoracic duct on the inſide of the angle formed between the jugular and ſubclavian veins on the left ſide, and thoſe which terminate the lymphatics on the right ſide of the neck, arm, and lungs, may be beautifully demonſtrated. Specimens of the lacteal veſſels, of the abſorbents of the heart, lungs, liver, ſpleen, diaphragm, kidneys, &c. may be kept wet or dry, according to the particular nature of the preparation or view of the anatomiſt. Some preparations are the better for being dried and afterwards immerſed in vials full of oil of turpentine; by which means the fleſh will be rendered tranſparent, the parts diſtinctly ſeen, and the veſſels appear extremely beautiful. The only diſadvantage of this method is, that the parts on which the veſſels paſs, do not at all preſerve their natural bulk by reaſon of their ſhrinking up; and as the wet preparations are free from this inconvenience, Mr Sheldon does not heſitate at aſſigning them a decided ſuperiority over the dry ones.—Sometimes it is neceſſary to fix the preparations upon ſtiff paper or paſteboard, on account, of their weight after being injected with mercury. The paper or paſteboard on which they are faſtened ought to be of various colours, according to the nature of the preparation, in order to form a proper ground for ſhowing the lymphatic veſſels. Such ſmall preparations as are preſerved in ſpirits, or oil of turpentine, may be kept in bottles well cloſed with ſtoppers; and the larger in common preparation glaſſes. Our author deſcribes a ſimple method of ſtopping the mouths of theſe preparation glaſſes, by which means the ſtopper is rendered nearly as durable as the glaſs itſelf. "In order to execute it, let the anatomiſt take care to have the upper ſurface of his bottles made plane, by deſiring the workmen at the glaſs-houſe to flatten them in the making. This they will eaſily do in forming the round ones, but the flat bottles are attended with conſiderable difficulty. The right way to make them, I believe, would be to blow them in moulds of various ſizes; the workman ſhould likewiſe form the bottoms of the bottles perfectly flat, that they may ſtand upright and ſteady. Bottles of this form being provided for the larger preparations, we grind the upper ſurface of them on a plain plate of lead, about a quarter of an inch thick, and two feet in diameter; firſt with fine emery and water, then with powdered rotten ſtone, or putty firſt wet with water and at laſt dry; ſo that the ſurface may be reduced to an exact horizontal plane, and of as fine a poliſh as plate-glaſs. This will ſoon be done, as the manoeuvre requires but little dexterity; and the anatomiſt ſhould be provided with a conſiderable number of theſe glaſſes prepared as above directed. To the top of each bottle a piece of plate glaſs, cut by a diamond, is to be adapted ſo as completely to cover, but not project over, the edge of the bottle. When theſe two ſmooth ſurfaces are put upon each other, with a drop of water between, the attraction of coheſion is ſo conſiderable, that it requires great force to ſeparate them."

Many preparations of the lymphatics, and other parts preſerved in bottles, do not require any ſtrings to ſuſpend them; particularly when fixed on paſteboard or paper: ſuch as require ſuſpenſion ſhould be tied to ſtrings fixed to the preparation below, and to ſmall holes drilled in the ſubſtance of the glaſs at the bottom of the neck; or to ſmall bits of glaſs that may be fixed on the inſide of the ſame part. The preparation is thus ſuſpended in limpid proof malt-ſpirit, the bottle being almoſt completely filled; the upper and poliſhed ſurface of the bottle, and the plate of glaſs, are to be wiped clean and dry; a drop of ſolution of gum arabic is to be put on the poliſhed ſurface of the bottle, the top ſtrongly and ſteadily preſſed upon it, ſo as to bring the two ſurfaces into as cloſe contact as poſſible; after which the bottle is to be placed in a cool airy place to dry. A piece of wet ox-bladder, freed from fat, and ſoaked in water till it becomes mucilaginous, is then to be placed over the top, the air preſſed out from between it and the glaſs; after which it muſt be tied with a pack-thread dipped in the ſolution of gum arabic. The bladder being cut off neatly under the laſt turn of the thread, is then to be dried, the ſtring taken cautiouſly off, and the top and neck painted with a compoſition of lamp-black mixed with japanners gold ſize: this ſoon dries, and leaves a fine ſmooth gloſſy ſurface, from which the dirt can at any time be as readily wiped off as from a mirror. By this method large bottles are as eaſily and effectually ſecured as ſmall ones; and it is found to anſwer as well as the hermetical ſealing of glaſſes, which in large veſſels is altogether impracticable. If the bottoms have any inequalities which prevent them from ſtanding ſteady, they may be eaſily made perfectly flat by grinding them with emery on the plate abovementioned. The tops, if well gummed, will even remain perfectly fixed on the glaſſes without the bladder; though in the common upright ones it may be adviſable to put it on as a defence. Our author informs us, that ſince his making this diſcovery, he has uſed glaſs ſaucers; with flat tops gummed on. In theſe veſſels the preparations, by reaſon of their horizontal poſture, appear to great advantage. Thus he has exhibited very early abortions in their membranes, and ſome other preparations that cannot be ſuſpended or viewed conveniently in the perpendicular direction. Some very delicate preparations, particularly thoſe intended to be viewed with the microſcope, thoſe of the ampullulæ lacteæ of Liberkuhn, and of the valves of the abſorbents, may be preſerved either in ſpirits or dry in tubes cloſed in the manner juſt mentioned, and will appear to great advantage. Some of the dry ones may alſo be advantageouſly placed in ſquare oblong boxes, made of pieces of plate or white glaſs neatly gummed together, with narrow ſlips of white or coloured paper, and the objects may be conveniently viewed in this manner. With reſpect to the ſtopper bottles, which are very convenient for holding ſmall preparations, our author adviſes the ſtoppers to be perfectly well ground; that they paſs rather lower down than the neck of the bottle for the convenience of drilling two holes obliquely through the inferior edge of the ſubſtance of the ſtopper, oppoſite to each other, for the convenience of fixing threads to hold the ſubject; for if the threads paſs between the neck and ſtopper, a ſpace will be left; or if the ſtopper be well ground, the neck of the bottle will be broken in endeavouring to preſs it down. On the other hand, if any ſpace be left, the thread, by its capillary attraction, will act from capillary attraction, raiſe the ſpirits from the bottle, and cauſe evaporation, which will likewiſe take place from the chink between the ſtopper and neck.

INISTIOGE, a poſt town of Kilkenny, in the province of Leinſter; 63 miles from Dublin. It is alſo a borough, and returns two members to parliament: patronage in the repreſentative of Sir William Fownes.—It has two fairs.

INITIATED, a term properly uſed in ſpeaking of the religion of the ancient heathens; where it ſignifies being admitted to the participation of the ſacred myſteries. The word comes from the Latin *initiatus*, of *initiare*, *initiari*; which properly ſignifies to begin ſacrificing, or to receive or admit a perſon to the beginning of the myſteries, or of ceremonies of leſs importance.

The ancients never diſcovered the deeper myſteries of their religion, nor even permitted ſome of their temples to be open, to any but thoſe who had been initiated. See MYSTERY.

INJUNCTION, in Engliſh law, a writ generally grounded upon an interlocutory order or decree out of the court of chancery or exchequer, ſometimes to give poſſeſſion to the plantiff, for want of the defendant's appearance; ſometimes to the king's ordinary court, and ſometimes to the court-chriſtian, to ſtop proceedings in a cauſe, upon ſuggeſtion made, that the rigour of the law, if it take place, is againſt equity and conſcience in that caſe, that the complainant is not able to make his defence in theſe courts, for want of witneſſes, &c. or that they act erroneouſly, denying him ſome juſt advantage, The writ of injunction is directed not only to the party himſelf, but to all and ſingular his counſellors, attornies, and ſolicitors; and if any attorney, after having been ſerved with an injunction, proceeds afterwards contrary to it, the court of chancery will commit the attorney to the Fleet for contempt. But if an injunction be granted by the court of chancery in a criminal matter, the court of king's bench may break it, and protect any that proceed in contempt of it.

INJURY, any wrong done to a man's perſon, reputation, or goods. See ASSAULT.

INK, a black liquor uſed in writing, generally made of an infuſion of galls, copperas, and gum-arabic.

The properties which this liquor ought to have, are. 1. To flow freely from the pen, and ſink a little into the paper, that the writing be not eaſily diſcharged. 2. A very deep black colour, which ſhould be as deep at firſt as at any time afterwards. 3. Durability, ſo that the writing may not be ſubject to decay by age. 4. Ink ſhould be deſtitute of any corroſive quality, that it may not deſtroy the paper, or go through it in ſuch a manner as to render the writing illegible. No kind of ink, however, hath yet appeared which is poſſeſſed of all theſe qualities. The ink uſed by the ancients was poſſeſſed of the ſecond, third, and fourth qualities abovementioned, but wanted the firſt. Dr Lewis hath diſcovered its compoſition from ſome paſſages in ancient authors. "Pliny and Vitruvius (ſays he) expreſsly mention the preparation of ſoot, or what we now call *lamp-black*, and the compoſition of writing ink from lamp-black and gum. Dioſcorides is more particular, ſetting down the proportions of the two ingredients, *viz.* three ounces of the ſoot to one of the gum. It ſeems the mixture was formed into cakes or rolls; which being dried in the ſun, were occaſionally tempered with water, as the cakes of Indian ink are among us for painting.

In Mr Delaval's Treatiſe on Colours, p. 37. he acquaints us, that with an infuſion of galls and iron filings, he had not only made an exceedingly black and durable ink, but by its means, without the addition of any acid, dyed ſilk and woollen cloth of a good and laſting black. This kind of ink, however, though the colour is far ſuperior to that of any other, hath the inconvenience of being very eaſily diſcharged, either by the ſmalleſt quantity of any acid, or even by ſimple water; becauſe it doth not penetrate the paper in ſuch a manner as is neceſſary to preſerve it from the inſtantaneous action of the acid or of the water. During the action of the infuſion of galls upon the iron in making this kind of ink, a very conſiderable effervеſcence takes place, and a quantity of air is diſcharged, the nature of which hath not yet been examined.

The materials uſually employed for the making of ink are, common green vitriol, or copperas and galls; but almoſt all of them are deficient in durability, which is a property of ſuch importance, that Dr Lewis hath thought the ſubject of ink-making not unworthy of his attention. From experiments made by that author, he infers, that the decay of inks is chiefly owing to a deficiency of galls; that the galls are the moſt periſhable ingredient, the quantity of theſe, which gives the greateſt blackneſs at firſt (which is about equal parts with the vitriol), being inſufficient to maintain the colour: that, for a durable ink, the quantity of galls cannot be much leſs than three times that of the vitriol; that it cannot be much greater without leſſening the blackneſs of the ink: that by diminiſhing the quantity of water, the ink is rendered blacker and more durable; that diſtilled water, rain water, and hard ſpring-water, have the ſame effects; that white-wine produces a deeper black colour than water; that the colour produced by vinegar is deeper than that by wine; that proof-ſpirit extracts only a reddiſh brown tinge; that the laſt-mentioned tincture ſinks into, and ſpreads upon, the paper; and hence the impropriety of adding ſpirit of wine to ink, as is frequently directed, to prevent mouldineſs or freezing: that other aſtringents, as oak-bark, biſtort, ſloe-bark, &c. are not ſo effectual as galls, nor give ſo good a black, the colour produced by moſt of theſe, excepting oak-bark, being greeniſh: that the juice of ſloes do not produce a black colour with martial vitriol; but that, nevertheleſs, the writing made with it becomes black, and is found to be more durable than common ink: that inks made with ſaturated ſolutions of iron in nitrous, marine, or acetous acids, in tartar, or in lemon-juice, were much inferior to the ink made with martial vitriol: that the colour of ink is depraved by adding quicklime, which is done with an intention of deſtroying any ſuperabundant acid which may be ſuppoſed to be the cauſe of the loſs of the colour of ink: that the beſt method of preventing the effects of this ſuperabundant acid is probably by adding pieces of iron to engage it; and that this conjecture is confirmed by an inſtance the author had heard, of the great durability of the colour of an ink in which pieces of iron had been long immerſed: and laſtly, that a decoction of logwood uſed inſtead of water, ſenſibly improves both the beauty and deepneſs of the black, without diſpoſing it to fade. The ſame author obſerves, that the addition of gum-arabic is not only uſeful, by keeping the colouring matter ſuſpended in the fluid, but alſo by preventing the ink from ſpreading, by which means a greater quantity of it is collected on each ſtroke of the pen. Sugar, which is ſometimes added to ink, is found to be much leſs effectual than gums, and to have the inconvenience of preventing the drying of the ink. The colour of ink is found to be greatly injured by keeping the ink in veſſels made of copper or of lead, and probably of any other metal, excepting iron, which the vitriolic acid can diſſolve.

The foregoing experiments point out for the beſt proportions of the ingredients for ink, One part of green vitriol, one part of powdered logwood, and three parts of powdered galls. The beſt menſtruum appears to be vinegar or white-wine, though for common uſe water is ſufficient. If the ink be required to be of a full colour, a quart, or at moſt three pints, of liquor, may be allowed to three ounces of galls, and to one ounce of each of the other two ingredients. Half an ounce of gum may be added to each pint of the liquor. The ingredients may be all put together at once in a convenient veſſel, and well ſhaken four or five times each day. In 10 or 12 days the ink will be fit for uſe, though it will improve by remaining longer on the ingredients. Or it may be made more expeditiouſly, by adding the gum and vitriol to a decoction of galls and logwood in the menſtruum. To the ink, after it has been ſeparated from the feculencies, ſome coarſe powder of galls, from which the fine duſt has been ſifted, together with one or two pieces of iron, may be added, by which its durability will be ſecured.

In ſome attempts made by the Doctor to endow writing ink with the great durability of that of the ancients, as well as the properties which it has at preſent, he firſt thought of uſing animal-glues, and then of oily matters. “I mixed both lamp-black (ſays he) and ivory-black with ſolution of gum arabic, made of ſuch conſiſtence as juſt to flow ſufficiently from the pen. The liquors wrote of a fine black colour; but when dry, part of the colour could be rubbed off, eſpecially in moiſt weather, and a pencil dipped in water waſhed it away entirely.

“I tried ſolutions of the animal-glues with the ſame event. Iſinglaſs or fiſh-glue being the moſt difficultly diſſoluble of theſe kinds of bodies, I made a decoction of it in water, of ſuch ſtrength that the liquor concreted into a jelly before it was quite cold: with this jelly, kept fluid by ſufficient heat, I mixed ſome ivory-black: characters drawn with this mixture on paper bore rubbing much better than the others, but were diſcharged without much difficulty by a wet pencil.

“It was now ſuſpected, that the colour could not be ſufficiently fixed on paper without an oily cement. As oils themſelves are made miſcible with watery fluids by the intervention of gum, I mixed ſome of the ſofter painters varniſh, after mentioned, with about half its weight of a thick mucilage of gum arabic, working them well together in a mortar till they united into a ſmooth uniform maſs: this was beaten with lamp-black, and ſome water added by little and little, the rubbing being continued till the mixture was diluted to a due conſiſtence for writing. It wrote freely, and of a full browniſh-black colour: the characters could not be diſcharged by rubbing, but water waſhed them out, though not near ſo readily as any of the foregoing. Inſtead of the painters varniſh or boiled oil, I mixed raw linſeed oil in the ſame manner with mucilage and lamp-black; and on diluting the mixture with water, obtained an ink not greatly different from the other.

“Though theſe oily mixtures anſwered better than thoſe with ſimple gums, or glues, it was apprehended that their being diſchargeable by water would render them unfit for the purpoſes intended. The only way of obviating this imperfection appeared to be, by uſing a paper which ſhould admit the black liquid to ſink a little into its ſubſtance. Accordingly I took ſome of the more ſinking kinds of paper, and common paper made damp as for printing; and had the ſatiſfaction to find, that neither the oily nor the ſimple gummy mixtures ſpread upon them ſo much as might have been expected, and that the characters were as fixed as could be deſired, for they could not be waſhed out without rubbing off part of the ſubſtance of the paper itſelf.

"All theſe inks muſt be now and then ſtirred or ſhaken during the time of uſe, to mix up the black powder, which ſettles by degrees to the bottom: thoſe with oil muſt be well ſhaken alſo, though not uſed, once a-day, or at leaſt once in three or four days, to keep the oil united with the water and gum; for if once the oil ſeparates, which it is apt to do by ſtanding at reſt for ſome days, it can no longer be mixed with the thin fluid by any agitation. But though this imperfect union of the ingredients renders theſe inks leſs fit for general uſe than thoſe commonly employed, I apprehend there are many occaſions in which theſe kinds of inconveniences will not be thought to counterbalance the advantage of having writings which we may be aſſured will be as laſting as the paper they are written upon. And indeed the inconvenience may be in a great meaſure obviated by uſing cotton in the inkſtand, which, imbibing the fluid, prevents the ſeparation of the black powder diffuſed through it.

"All the inks, however, made on the principle we are now ſpeaking of, can be diſcharged by waſhing, unleſs the paper admits them to ſink into its ſubſtance. The ancients were not inſenſible of this imperfection: and ſometimes endeavoured to obviate it, according to Pliny, by uſing vinegar, inſtead of water, for tempering the mixture of lamp-black and gum. I tried vinegar, and found it to be of ſome advantage, not as giving any improvement to the cement, but by promoting the ſinking of the matter into the paper. As this waſhing out of the ink may be prevented by uſing a kind of paper eaſy enough to be procured, it is ſcarcely to be conſidered as an imperfection; and indeed, on other kinds of paper, it is an imperfection only ſo far as it may give occaſion to fraud, for none of theſe inks are in danger of being otherwiſe diſcharged than by deſign. The vitriolic inks themſelves, and thoſe of printed books and copperplates, are all diſchargeable; nor can it be expected of the ink-maker to render writings ſecure from frauds.

"But a further improvement may yet be made, namely, that of uniting the ancient and modern inks together; or uſing the common vitriolic ink inſtead of water, for tempering the ancient mixture of gum and lamp-black. By this method it ſhould ſeem that the writings would have all the durability of thoſe of former times, with all the advantage that reſults from the vitriolic ink fixing itſelf in the paper. Even where the common vitriolic mixture is depended on for the ink, it may in many caſes be improved by a ſmall addition of the ancient compoſition, or of the common Indian ink which anſwers the ſame purpoſe: when the vitriolic ink is dilute, and flows ſo pale from the pen, that the fine ſtrokes, on firſt writing, are ſcarcely viſible, the addition of a little Indian ink is the readieſt means of giving it the due blackneſs. By this admixture it may be preſumed alſo that the vitriolic ink will be made more durable, the Indian ink in ſome meaſure covering it, and defending it from the action of the air. In all caſes, where Indian ink or other ſimilar compoſitions are employed, cotton ſhould be uſed in the inkſtand, as already mentioned, to prevent the ſettling of the black powder."

Since the invention of printing much leſs attention than formerly has been paid to the making of ink, ſo that now the art ſeems to be in a great meaſure loſt. This will appear from the compariſon of ſome ancient manuſcripts with the writings of modern times. It being of the utmoſt importance, however, that public records, wills, and other valuable papers, which cannot admit of being printed, ſhould be written with ink of a durable quality, this inattention ſeems to have been very culpable, and a reſtoration of the method of making writing ink a very valuable acquiſition. "The neceſſity (ſays Mr Aſtle *) of paying greater attention to this matter may readily be ſeen, by comparing the rolls and records that have been written from the 15th century to the end of the 17th, with the writings we have remaining of various writings from the 5th to the 12th centuries. Notwithſtanding the ſuperior antiquity of the latter, they are in excellent preſervation; but we frequently find the former, though of more modern date, ſo much defaced that they are ſcarcely legible."

Our author agrees with Dr Lewis in the opinion that the ancient inks were compoſed of ſoot or ivory black inſtead of the galls, copperas, and gums, which form the compoſition of ours. Beſides their black inks, however, the ancients uſed various other colours, as red, gold and ſilver, purple, &c. Green ink was frequently uſed in Latin manuſcripts, eſpecially in the latter ages; and it was frequently employed in ſignatures by the guardians of the Greek emperors till their wards were of age. Blue or yellow ink was ſeldom uſed except in manuſcripts; but (ſays Mr Aſtle) "the yellow has not been much in uſe, as far as we can learn, theſe 600 years." Some kinds of characters, particularly the metallic, were burniſhed. Wax was uſed by the Latins and Greeks as the varniſh, but eſpecially by the former, and particularly in the 9th century. It continued a long time in vogue.

A treatiſe upon inks was publiſhed by Peter Caniparius profeſſor of medicine at Venice; of which an edition was printed at London in 1660. It is divided into ſix parts. The firſt treats of inks made from pyrites, ſtones, and metals; the ſecond of ſuch as are made from metals and calces; the third from ſoots and vitriols; the fourth of the different kinds of inks uſed by the librarii or book-writers, by printers, and engravers: likewiſe of ſtaining or writing upon marble, ſtucco, or ſcaliolia, and of encauſtic modes of writing; alſo of liquids for painting or colouring leather and linen or woollen cloths; reſtoring inks that had been decayed by time; together with many methods of effacing writing, reſtoring decayed paper, and different modes of ſecret writing. The fiſth treats of writing inks made in different countries from gums, woods, the juices of plants, &c. as well as of different kinds of varniſhes. The ſixth treats of the different methods of extracting vitriol, and the chemical uſes of it.

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* *Origin of Alphab. Writing.*

Weckerus de Secretis, a treatiſe printed at Baſil in 1612, contains a number of curious particulars concerning ink. He gives alſo receipts for making gold and ſilver inks, compoſed both with theſe metals and without them; directions for making inks for ſecret writing, and for defacing them; though in this laſt part there are many particulars bordering too much on the marvellous.

In the Philoſophical Tranſactions for 1787, Dr Blagden gives ſome account of a method of reſtoring decayed inks ſo as to render them legible. His experiments originated from a converſation with Mr Aſtle already quoted, on the queſtion whether the inks made eight or ten centuries ago, and which are found to have preſerved their colour very well, were made of the ſame materials now employed or not? In order to decide the queſtion, Mr Aſtle furniſhed the Doctor with ſeveral manuſcripts on parchment and vellum from the 9th to the 15th centuries incluſively. Some of theſe were ſtill very black; others of different ſhades, from a deep yellowiſh brown to a very pale yellow, in ſome parts ſo faint that it could ſcarcely be ſeen. This was tried with ſimple and phlogiſticated alkalies, the mineral acids, and infuſion of galls. From theſe experiments it appeared that the ink anciently employed was of the ſame nature as at preſent: the letters turned of a reddiſh or yellowiſh brown with alkalies became pale, and were at length obliterated by the dilute mineral acids. The drop of acid liquor, which had been put upon a letter, changed to a deep blue or green on the addition of phlogiſticated alkali; with an infuſion of galls, in ſome caſes the letters acquired a deep tinge, in others a ſlight one. "Hence (ſays the Doctor) it is evident, that one of the ingredients was iron, which there is no reaſon to doubt was joined with the vitriolic acid; and the colour of the more perfect MSS. which in ſome was a deep black, and in others a purpliſh black, together with the reſtitution of that colour in thoſe which had loſt it by the infuſion of galls, ſufficiently proved that another of the ingredients was aſtringent matter, which from hiſtory appears to have been that of galls. No trace of a black pigment of any ſort was diſcovered; the drop of acid, which had completely extracted a letter, appearing of an uniform pale and ferruginous colour, without an atom of black powder, or other extraneous matter floating in it."

As this account differs very materially from the former extracted from Mr Aſtle's writings, ſo the reaſon given for the continuance of the colour differs no leſs. This, according to Dr Blagden, "ſeems to depend very much on a better preparation of the material upon which the writing was made, namely the parchment or vellum; the blackeſt letters being generally thoſe which had ſunk into it the deepeſt. Some degree of efferveſcence was commonly to be perceived when acids were in contact with the ſurface of theſe old vellums. I was led, however, to ſuſpect, that the ancient inks contained rather a leſs proportion of iron than the more modern: for, in general, the tinge of colour produced by the phlogiſticated alkali in the acid laid upon them, ſeemed leſs deep; which, however, might depend in part upon the length of time they had been kept: and perhaps more gum was uſed in them, or they were waſhed over with ſome kind of varniſh, tho' not ſuch as gave any gloſs."

Among the ſpecimens with which our author was favoured by Mr Aſtle, there was one which differed very materially from the reſt. It was ſaid to be a manuſcript of the 15th century: the letters were of a full engroſſing hand, angular without any fine ſtrokes, broad, and very black. None of the chemical ſolvents abovementioned ſeemed to produce any effect. Moſt of them ſeemed rather to make the letters blacker, probably by cleaning the ſurface; and the acids, after having been rubbed ſtrongly upon the letters, did not ſtrike any deeper tinge with the phlogiſticated alkali. Nothing could obliterate theſe but what took off part of the vellum; when ſmall rolls of a dirty matter were to be perceived. "It is therefore unqueſtionable (ſays the Doctor) that no iron was uſed in this ink; and, from its reſiſtance to the chemical ſolvents, as well as a certain clotted appearance in the letters when examined cloſely, and in ſome places a ſlight degree of gloſs, I have little doubt that they were formed of a ſooty or carbonaceous powder and oil, probably ſomething like our preſent printer's ink; and am not without ſuſpicion that they were actually printed.

On examining this MS. more fully, our author was convinced that it was really a part of a very ancient printed book. In conſidering the methods of reſtoring the legibility of decayed writings, our author obſerves, that perhaps one of the beſt may be to join phlogiſticated alkali with the calx of iron which remains; becauſe the precipitate formed by theſe two ſubſtances greatly exceeds that of the iron alone. On this ſubject Dr Blagden diſagrees with Mr Bergmann; but to bring the matter to a teſt, the following experiments were made.

1. The phlogiſticated alkali was rubbed in different quantities upon the bare writing. This, in general, produced little effect: though, in a few inſtances, it gave a bluiſh tinge to the letters, and increaſed their intenſity; "probably (ſays the Doctor) where ſomething of an acid nature had contributed to the diminution of their colour." 2. By adding, beſides the alkali, a dilute mineral acid to the writing, our author found his expectations fully anſwered; the letters then changing quickly to a very deep and beautiful blue. It is but of little conſequence whether the acid or phlogiſticated alkali be firſt added; though upon farther conſideration the Doctor inclined to begin with the alkali. The reaſon is, that when the alkali is firſt put on, the colour ſeems to ſpread leſs, and thus not to hurt the legibility of the writing ſo much as would otherwiſe be done. His method is to ſpread the alkali thin over the writing with a feather, then to touch it as gently as poſſible upon or nearly over the letters with the diluted acid by means of a feather or bit of ſtick cut to a blunt point. The moment that the acid liquor is applied, the letters turn to a fine blue, beyond compariſon ſtronger than the original trace of the letter; and by applying a bit of blotting-paper to ſuck up the ſuperfluous liquid, we may in a great meaſure avoid the ſtaining of the parchment: for it is this ſuperfluous liquor which, abſorbing part of the colouring matter from the letters, becomes a dye to whatever it touches. Care ought, however, to be taken

not to allow the blotting paper to come in contact with the letters, becauſe the colouring matter may eaſily be rubbed off while ſoft and wet. Any one of the three mineral acids will anſwer the purpoſe effectually: Dr Blagden commonly uſes the marine. But whichever of the three is uſed, it ought to be diluted ſo far as not to be in danger of corroding the parchment; after which the degree of ſtrength ſeems not to be a matter of great nicety.

Another method of reſtoring the legibility of old writings is by wetting them with an infuſion of galls in white wine: but this is ſubject to the ſame inconvenience with the former, and is beſides leſs efficacious. The Doctor is of opinion that the acid of the galls by itſelf would be better for the purpoſe than the infuſion of the whole ſubſtance of them; and he thinks alſo that a preferable kind of phlogiſticated alkali might be prepared either by purifying the common kind from iron as much as poſſible, or by making uſe of the volatile alkali inſtead of the fixed. Mr Aſtle mentions a method of reſtoring the legibility of decayed writings; but ſays that it ought not to be hazarded leſt a ſuſpicion of deceit ſhould ariſe.

In the Monthly Review of this volume of the Tranſactions, we find a method propoſed of preventing ink from decaying, which ſeems very likely to anſwer the purpoſe. It conſiſts in waſhing over the paper to be written upon with the colouring matter of Pruſſian blue, which will not deprave it in colour or any other reſpect. By writing upon it with common ink afterwards, a ground of Pruſſian blue is formed under every ſtroke; and this remains ſtrong after the black has been decayed by the weather, or deſtroyed by acids. Thus the ink will bear a larger proportion of vitriol at firſt, and will have the advantage of looking blacker when firſt written.

Indian INK, a valuable black for water-colours, brought from China and other parts of the Eaſt Indies, ſometimes in large rolls, but more commonly in ſmall quadrangular cakes, and generally marked with Chineſe characters. Dr Lewis, from experiments made on this ſubſtance, hath ſhown that it is compoſed of fine lamp-black and animal-glue: and accordingly, for the preparation of it, he deſires us to mix the lamp-black with as much melted glue as is ſufficient to give it a tenacity proper for being made into cakes; and theſe when dry, he tells us, anſwered as well as thoſe imported from the Eaſt Indies, both with regard to the colour and the freedom of working. Ivory-black, and other charcoal blacks, levigated to a great degree of fineneſs, anſwered as well as the lamp-black; but in the ſtate in which ivory-black is commonly ſold, it proved much too gritty, and ſeparated too haſtily from the water.

Printing INK, is totally different from Indian ink, or that made uſe of in writing. It is an oily compoſition, of the conſiſtence of an ointment: the method of preparing it was long kept a ſecret by thoſe whoſe employment it was to make it, and who were intereſted in concealing it; and even yet is but imperfectly known. The properties of good printing ink are, to work clean and eaſily, without daubing the types, or tearing the paper; to have a fine black colour; to waſh eaſily off the types; to dry ſoon; and to preſerve its colour without turning brown. This laſt, which is a moſt neceſſary property, is effectually obtained by ſetting fire to the oil with which the printing ink is made for a few moments, and then extinguiſhing it by covering the veſſel (A). It is made to waſh eaſily off the types, by uſing ſoap as an ingredient; and its working clean depends on its having a proper degree of ſtrength, which is given by a certain addition of roſin. A good deal, however, depends on the proportion of the ingredients to each other; for if too much ſoap is added, the ink will work very foul, and daub the types to a great degree. The ſame thing will happen from uſing too much black, at the ſame time that both the ſoap and black hinder the ink from drying; while too much oil and roſin tear the paper, and hinder it from waſhing off.—The following receipt has been found to make printing ink of a tolerable good quality. "Take a Scots pint of linſeed oil, and ſet it over a pretty briſk fire in an iron or copper veſſel capable of holding three or four times as much. When it boils ſtrongly, and emits a thick ſmoke, kindle it with a piece of paper, and immediately take the veſſel off the fire. Let the oil burn for about a minute; then extinguiſh it by covering the veſſel; after it has grown pretty cool, add two pounds of black roſin, and one pound of hard ſoap cut into thin ſlices. If the oil is very hot when the ſoap is added, almoſt the whole mixture will run over the veſſel. The mixture is then to be ſet again over the fire; and when the ingredients are thoroughly melted, a pound of lamp-black, previouſly put through a lawn ſieve, is to be ſtirred into it. The whole ought then to be ground on a marble ſtone, or in a mill like the levigating mill deſcribed under the article CHEMISTRY, n° 599."

Though the above receipt is greatly ſuperior to any that hath been hitherto publiſhed, all of which are capitally deficient in not mentioning the neceſſary ingredients of roſin and ſoap; yet it muſt be acknowledged, that ink made in this manner is inferior in point of colour, and is likewiſe more apt to daub the types and make an indiſtinct impreſſion, than ſuch as is prepared by ſome of thoſe who make the manufacture of this commodity their employment; ſo that either a variation in the proportion of the ingredients, a nicety in the mixture, or ſome additional ingredient, ſeems neceſſary to bring it to the requiſite perfection.

INK for the Rolling Preſs, is made of lintſeed oil burnt in the ſame manner as that for common printing-ink, and then mixed with Francfort-black, and finely ground. There are no certain proportions which can be determined in this kind of ink; every workman adding oil or black to his ink as he thinks proper, in order to make it ſuit his own taſte.—Some, however, mix a portion of common boiled oil, which has never been burnt: but this muſt neceſſarily be a bad practice, as ſuch oil is apt to go through the paper; a fault very common in prints, eſpecially if the paper is

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(A) This is mentioned by Dr Lewis in his Philoſophical Commerce of Arts; but he ſeems not to have been acquainted with the method of giving it the other neceſſary properties.

is not very thick. No ſoap is added; becauſe the ink is not cleared off from the copperplates with alkaline ley as in common printing, but with a bruſh dipped in oil.

Ink is alſo an appellation given to any coloured liquor uſed in writing, whether red, yellow, green, &c. Many different kinds of theſe inks may be prepared by the directions given under the article *Colour-Making*, which it would be ſuperfluous here to repeat.

Sympathetic Ink, a liquor with which a perſon may write, and yet nothing appear on the paper after it is dry, till ſome other means are uſed, ſuch as holding the paper to the fire, rubbing it over with ſome other liquor, &c.

Theſe kinds of ink may be divided into ſeven claſſes, and that with reſpect to the means uſed to make them viſible; viz. 1. Such as become viſible by paſſing another liquor over them, or by expoſing them to the vapour of that liquor. 2. Thoſe that do not appear ſo long as they are kept cloſe, but ſoon become viſible on being expoſed to the air. 3. Such as appear by ſtrewing or ſifting ſome very fine powder of any colour over them. 4. Thoſe which become viſible by being expoſed to the fire. 5. Such as become viſible by heat, but diſappear again by cold or the moiſture of the air. 6. Thoſe which become viſible by being wetted with water. 7. Such as appear of various colours, red, yellow, blue, &c.

I. The firſt claſs contains four kinds of ink, viz. ſolutions of lead, biſmuth, gold, and green vitriol. The firſt two become viſible in the ſame manner, viz. by the contact of ſulphureous liquids or fumes. For the firſt, a ſolution of common ſugar of lead in water will anſwer as well as more troubleſome preparations. If you write with this ſolution with a clean pen, the writing when dry will be totally inviſible: but if it be wetted with a ſolution of *hepar ſulphuris*, or of orpiment, diſſolved by means of quicklime; or if it be expoſed to the ſtrong vapours of theſe ſolutions, but eſpecially to the vapour of volatile tincture of ſulphur; the writing will appear of a brown colour, more or leſs deep according to the ſtrength of the ſulphureous fume.

By the ſame means, what is wrote with the ſolution of biſmuth in ſpirit of nitre will appear of a deep black.

The ſympathetic ink prepared from gold depends on the property by which that metal precipitates from its ſolvent on the addition of a ſolution of tin. If you write with a ſolution of gold in aqua regia, and let the paper dry gently in the ſhade, nothing will appear for the firſt ſeven or eight hours. Dip a pencil or a ſmall fine ſponge in the ſolution of tin, and drawing it lightly over the inviſible characters, they will immediately appear, of a purple colour.

Characters wrote with a ſolution of green vitriol carefully depurated, will likewiſe be inviſible when the paper is dry; but if wetted with an infuſion of galls, they will immediately appear as if wrote with common ink. If, inſtead of this infuſion, a ſolution of the phlogiſticated alkali, impregnated with the colouring matter Pruſſian blue is made uſe of, the writing will appear of a very deep blue.

II. To the ſecond claſs belong the ſolutions of all thoſe metals which are apt to attract phlogiſton from the air, ſuch as lead, biſmuth, ſilver, &c. The ſympathetic ink of gold already mentioned belongs alſo to this claſs; for if the characters wrote with it are long expoſed to the air, they become by degrees of a deep violet colour, nearly approaching to black. In like manner, characters wrote with a ſolution of ſilver in aquafortis are inviſible when newly dried, but being expoſed to the ſun, appear of a grey colour like ſlate. To this claſs alſo belong ſolutions of lead in vinegar; copper in aquafortis; tin in aqua regia; emery, and ſome kinds of pyrites, in ſpirit of ſalt; mercury in aquafortis; or iron, in vinegar. Each of theſe has a particular colour when expoſed to the air; but they have the diſagreeable property of corroding the paper, ſo that after ſome time the characters appear like holes cut out of the paper.

III. The third claſs of ſympathetic inks contains ſuch liquids as have ſome kind of glutinous viſcoſity, and at the ſame time are long a drying; by which means, though the eye cannot diſcern the characters wrote with them upon paper, the powders ſtrewed upon them immediately adhere, and thus make the writing become viſible. Of this kind are urine, milk, the juices of ſome vegetables, weak ſolutions of the deliqueſcent ſalts, &c.

IV. This claſs, comprehending all thoſe that become viſible by being expoſed to the fire, is very extenſive, as it contains all thoſe colourleſs liquids in which the matter diſſolved is capable of being reduced, or of reducing the paper, into a ſort of charcoal by a ſmall heat. A very eaſily procured ink of this kind is oil of vitriol, diluted with as much water as will prevent it from corroding the paper. Letters wrote with this fluid are perfectly inviſible when dry, but inſtantly appear as black as if wrote with the fineſt ink on being held near the fire. Juice of lemons or onions, a ſolution of ſal-ammoniac, green vitriol, &c. will anſwer the ſame purpoſe, though not ſo eaſily, or with ſo little heat.

V. The fifth claſs comprehends only ſolutions of regulus of cobalt in ſpirit of ſalt; for the properties of which, ſee Chemistry, n° 822.

VI. This claſs comprehends ſuch inks as become viſible when characters wrote with them are wetted with water. They are made of all ſuch ſubſtances as depoſit a copious ſediment when mixed with water, diſſolving only imperfectly in that fluid. Of this kind are dried alum, ſugar of lead, vitriol, &c. We have therefore only to write with a ſtrong ſolution of theſe ſalts upon paper, and the characters will be inviſible when dry; but when we apply water, the ſmall portion of dried ſalt cannot again be diſſolved in the water. Hence the inſoluble part becomes viſible on the paper, and ſhows the characters wrote in white, grey, brown, or any other colour which the precipitate aſſumes.

VII. Characters may be made to appear of a fine crimſon, purple, or yellow, by writing on paper with ſolution of tin in aqua regia, and then paſſing over it a pencil dipt in a decoction of cochineal, Brazil-wood, logwood, yellow wood, &c.—For an account of the nature of all theſe ſympathetic inks, however, and the principles on which they are made, ſee the articles Chemistry and Colour-*Making*, *paſſim*.

Ink Stones, a kind of ſmall round ſtones of a white, red, grey, yellow, or black, colour, containing a quantity of native martial vitriol, whence they derive the property of making ink, and from thence their name. They are almoſt entirely ſoluble in water, and beſides their other ingredients, contain alſo a portion of copper and zinc.

INLAND, a name for any part of a country at a diſtance from the ſea.

Inland Navigation. See Canal and *(Inland)* Navigation.

Inland Trade, that kind of trade carried on between the different parts of the ſame kingdom or ſtate, whether over land, or by means of inland navigation.

INLAYING. See Veneering, Mosaic, and Marquetry.

INLEASED, in old writers, ſignifies entangled or enſnared. It is uſed in the champion's oath.

INLISTING, in a military ſenſe. See Listing.

INMATES, ſuch perſons as are admitted for their money, to live in the ſame houſe or cottage with another man, in different rooms, but going in at the ſame door; being uſually ſuppoſed to be poor, and not able to maintain a whole houſe themſelves. In England, theſe are inquirable in a court-leet.—No owner or occupier of a cottage ſhall ſuffer any inmates therein, or more families than one to inhabit there, on pain of forfeiting 10s. per month to the lord of the leet.

INN, a place appointed for the entertainments and relief of travellers.

Blackſt. Comment.

Inns are licenſed and regulated by juſtices of the peace, who oblige the landlord to enter into recognizances for keeping good order. If a perſon who keeps a common inn, refuſes to receive a traveller into his houſe as a gueſt, or to find him victuals and lodging on his tendering a reaſonable price for them, he is liable to an action of damages, and may be indicted and fined at the king's ſuit. The rates of all commodities ſold by inn-keepers, according to the ancient laws, may be aſſeſſed: and inn-keepers not ſelling their hay, oats, beans, &c. and all manner of victuals at reaſonable prices, without taking any thing for litter, may be fined and impriſoned, &c. by 21 Jac. I. c. 21. Where an inn-keeper harbours thieves, perſons of infamous character, or ſuffers any diſorders in his houſe, or ſets up a new inn where there is no need of one, to the hindrance of ancient and well-governed inns, he is indictable and fineable: and by ſtatute, ſuch inn may be ſuppreſſed. Action upon the caſe lies againſt any inn-keeper, if a theft be committed on his gueſt by a ſervant of the inn, or any other perſon not belonging to the gueſt; though it is otherwiſe where the gueſt is not a traveller, but one of the ſame town or village, for there the inn-keeper is not chargeable; nor is the maſter of a private tavern anſwerable for a robbery committed on his gueſt: it is ſaid, that even tho' the travelling gueſt does not deliver his goods, &c. into the inn-keeper's poſſeſſion, yet if they are ſtolen, he is chargeable. An inn-keeper is not anſwerable for any thing out of his inn, but only for ſuch as are within it; yet, where he of his own accord puts the gueſt's horſe to graſs, and the horſe is ſtolen, he is anſwerable, he not having the gueſt's orders for putting ſuch horſe to graſs. The inn-keeper may juſtify the ſtopping of the horſe, or any other thing of his gueſt, for his reckoning, and may retain the ſame till it be paid. Where a perſon brings his horſe to an inn, and leaves him in the ſtable, the inn-keeper may detain him till ſuch time as the owner pays for his keeping; and if the horſe eats out as much as he is worth, after a reaſonable appraiſement made, he may ſell the horſe and pay himſelf: but when a gueſt brings ſeveral horſes to an inn, and afterwards takes them all away except one, this horſe ſo left may not be ſold for payment of the debt for the others; for every horſe is to be ſold, only to make ſatisfaction for what is due for his own meat.

Inns. Colleges of municipal or common law profeſſors and ſtudents, are called *inns*: the old Engliſh word for houſes of noblemen, biſhops, and others of extraordinary note, being of the ſame ſignification with the French word *hotel*.

Inns of Court are ſo called, as ſome think, becauſe the ſtudents there are to ſerve and attend the courts of judicature; or elſe, becauſe anciently theſe colleges received none but the ſons of noblemen, and better ſort of gentlemen, who were here to be qualified to ſerve the king in his court; as Forteſcue affirms. And, in his time, he ſays, there were about 2000 ſtudents in the inns of court and chancery, all of whom were *filii nobilium*, or gentlemen born. But this cuſtom has gradually fallen into diſuſe; ſo that in the reign of queen Elizabeth, Sir Edward Coke does not reckon above 1000 ſtudents, and the number at preſent is very conſiderably leſs; for which judge Blackſtone aſſigns the following reaſons. 1. Becauſe the inns of chancery, being now almoſt totally filled by the inferior branches of the profeſſion, are neither commodious nor proper for the reſort of gentlemen of any rank or figure; ſo that there are very rarely any young ſtudents entered at the inns of chancery. 2. Becauſe in the inns of court all ſorts of regimen and academical ſuperintendence, either with regard to morals or ſtudies, are found impracticable, and therefore entirely neglected. Laſtly, becauſe perſons of birth and fortune, after having finiſhed their uſual courſes at the univerſities, have ſeldom leiſure or reſolution ſufficient to enter upon a new ſcheme of ſtudy at a new place of inſtruction; wherefore few gentlemen now reſort to the inns of court, but ſuch for whom the knowledge of practice is abſolutely neceſſary in ſuch as are intended for the profeſſion.

Our inns of court, juſtly famed for the production of men of learning in the law, are governed by maſters, principals, benchers, ſtewards, and other officers: and have public halls for exerciſes, readings, &c. which the ſtudents are obliged to attend and perform for a certain number of years, before they can be admitted to plead at the bar. Theſe ſocieties have not, however, any judicial authority over their members; but inſtead of this they have certain orders among themſelves, which have by conſent the force of laws. For lighter offences perſons are only excommoned, or put out of commons; for greater, they loſe their chambers, and are expelled the college; and when once expelled out of one ſociety, they are never received by any of the others. The gentlemen in theſe ſocieties may be divided into benchers, outter-barriſters, inner-barriſters, and ſtudents.

The four principal inns of court, are the Inner Temple and Middle Temple, heretofore the dwelling of the Knights Templars, purchaſed by ſome profeſſors of the common law about 300 years ago; Lincoln's Inn, and Gray's Inn, anciently belonging to the earls of Lincoln and Gray. The other inns are the two Serjeants Inns.

Inns of Chancery were probably ſo called, becauſe anciently inhabited by ſuch clerks as chiefly ſtudied the forming of writs, which regularly belonged to the curſitors, who are officers of chancery.

The firſt of theſe is Thavies Inn, begun in the reign of Edward III. and ſince purchaſed by the ſociety of Lincoln's Inn. Beſide this, there are New Inn, Symond's Inn, Clement's Inn, Clifford's Inn, anciently the houſe of the Lord Clifford; Staple Inn, belonging to the merchants of the ſtaple; Lion's Inn, anciently a common inn with the ſign of the lion; Funnival's Inn, and Bernard's Inn.

Theſe were heretofore preparatory colleges for younger ſtudents; and many were entered here, before they were admitted into the inns of court. Now they are moſtly taken up by attornies, ſolicitors, &c.

They all belong to ſome of the inns of court, who formerly uſed to ſend yearly ſome of their barriſters to read to them.

INNATE Ideas, thoſe ſuppoſed to be ſtamped on the mind, from the firſt moment of its exiſtence, and which it conſtantly brings into the world with it: a doctrine which Mr Locke has taken great pains to refute.

INNERKEITHING. See Inverkeithing.

INNERLOCHY. See Inverlochy and Fort-William.

INNIS. See Inch.

INNISCLOCHRAN, or the Stoney Island, an iſland in Lough Ree, in the river Shannon, between the counties of Weſtmeath and Roſcommon, at which place a monaſtery was founded by St Dermod, about the beginning of the 6th century.

INNISFAIL (derived from *Inis Bheal*, that is, "the iſland of Bheal"), one of the ancient names of Ireland, ſo denominated from *Beal*, the principal object of adoration among the ancient inhabitants of the Britiſh iſles. Innisfail has been erroneouſly tranſlated the *Iſland of Deſtiny*, as *Bheal* was ſometimes taken for *Fate* or *Providence*.

INNISFALLEN, an iſland in the lake of Killarney, in the county of Kerry and province of Munſter: in it are the ruins of a very ancient religious houſe, founded by St Finian, the patron ſaint of theſe parts, and to him the cathedral of Aghadoe is alſo dedicated. The remains of this abbey are very extenſive, its ſituation romantic and retired. Upon the diſſolution of religious houſes, the poſſeſſions of this abbey were granted to Captain Robet Collam. The iſland contains about 12 acres, is agreeably wooded, and has a number of fruit trees. St Finian flouriſhed about the middle of the 6th century; he was ſirnamed in Iriſh *Lobhar*, his father's name was *Conail* the ſon of *Eſchod*; deſcended from *Kian* the ſon of *Alild*, king of Munſter. There was formerly a chronicle kept in this abbey, which is frequently cited by Sir J. Ware and other antiquaries under the title of the *Annals of Inniſfallen*. They contain a ſketch of univerſal hiſtory, from the creation of the world to the year 430 or thereabouts, but from thence the annaliſt has amply enough proſecuted the affairs of Ireland down to his own times. He lived to the year 1215. Sir J. Ware had a copy of them, whereof there is an imperfect tranſcript among the MSS. of the library of Trinity-College, Dublin. They were continued by another hand to the year 1320. Biſhop Nicholſon, in his Iriſh hiſtorical library, informs us, that the duke of Chandos had a complete copy of them down to 1320 in his poſſeſſion. Theſe annals tell us, that in the year 1180, the abbey, which had at that time all the gold and ſilver and richeſt goods of the whole country depoſited in it, as the place of greateſt ſecurity, was plundered by Mildwin ſon of Daniel O'Donoghoe, as was alſo the church of Ardfert, and many perſons were ſlain in the very cemetery by the McCartys; but God, as it is ſaid in this chronicle, puniſhed this impiety by the untimely end of ſome of the authors of it.

INNISHANNON, a town in the county of Cork and province of Munſter, 134 miles from Dublin; ſituated on the river Bandon, ſix miles from Kinſale. Here is a charter ſchool for above 30 boys. The linen manufacture has been much encouraged by the late Mr Adderly. The river is navigable to Collier's quay, about half a mile below the place. On the weſt ſide of the town is a ſtone bridge. This place was formerly walled, and of ſome note, as appears by the foundations of ſeveral caſtles and large buildings diſcovered in it. The town of Inniſhannon, together with its ferry, were granted to Philip de Barry by Hen. V. by letters patent, anno 1412. It has two fairs.

INNISHIRKAN, an iſland ſituated between Cape Clear Iſland and Baltimore Bay, in the county of Cork and province of Munſter. In this iſland ſtood the caſtle of Dunelong, poſſeſſed by the O'Driſcolls, which was ſurrendered after the defeat of the Spaniards to Captain Harvey on 23d Feb. 1602. There was afterwards a regular fortification erected on part of the iſland, which was garriſoned in Queen Ann's time, but it has been for ſeveral years diſmantled; about a mile to the ſouth are the remains of an ancient abbey, founded 1460, for Franciſcans, by Florence O'Driſcoll. This iſland has very good land, and is vaſtly preferable to that of Cape Clear iſlands. To the north-weſt of Inniſhirkan iſland lies Hare iſland, a large fruitful ſpot; and near it are four ſmall iſlands called the *Schemes*: alſo along the coaſt, in the following order from eaſt to weſt, are Horſe iſland, containing 100 acres; Caſtle iſland, containing 119 acres; Long iſland, containing 316 acres: and weſt of all theſe is a ſmall ſpot called Goat iſland. All theſe iſlands, together with the ancient coaſt, produce large crops of fine Engliſh barley.

INNISKILLING, a borough, market, fair, and poſt town of Ireland, in the county of Fermanach and province of Ulſter, lying between three lakes. It is about 24 miles eaſt of Ballyſhannon, and 79 north-weſt of Dublin. It ſends two members to parliament; patron Lord Inniſkilling, this place giving title of viſcount to the family of Cole. Its inhabitants diſtinguiſhed themſelves in ſeveral conſiderable engagements in the wars of Ireland at the revolution, out of which a regiment of dragoons, bearing the title of the *Inniſkilleners*, was moſtly formed. They form the 6th regiment of dragoons in the Britiſh army. It has a barrack for three companies of foot.

INNOCENT's Day, a feſtival of the Chriſtian church, obſerved on December 28th, in memory of the maſſacre of the innocent children by the command of Herod king of Judæa. See *Jeſus Chriſt*; and Jews, n° 24. par. *ult.* The Greek church in their kalendar, and the Abyſſinians of Ethiopia in their offices, commemorate 14,000 infants on this occaſion.

INNUENDO (of *innuo* "I nod or beckon"), is a word frequently uſed in writs, declarations, and pleadings, to aſcertain a perſon or thing which was named, but left doubtful, before: as, he (*innuendo* the plaintiff) did ſo and ſo; mention being before made of another perſon.—In common converſation or writing, an innuendo denotes an oblique hint or diſtant reference, in contradiſtinction to a direct and poſitive charge.

INO (fab. hiſt.), a daughter of Cadmus and Harmonia, who nurſed Bacchus. She married Athamas king of Thebes, after he had divorced Nephele, by whom he had two children Phryxus and Helle. Ino became mother of Melicerta and Learchus; and ſoon conceived an implacable hatred againſt the children of Nephele, becauſe they were to aſcend the throne in preference to her own. Phryxus and Helle were informed of Ino's machinations, and they eſcaped to Colchis on a golden ram. Juno, jealous of Ino's proſperity, reſolved to diſturb her peace; and more particularly becauſe ſhe was of the deſcendants of her greateſt enemy, Venus. Tiſiphone was ſent by order of Juno to the houſe of Athamas; and ſhe filled the whole palace with ſuch fury, that Athamas taking Ino to be a lioneſs and her children whelps, purſued her and daſhed her ſon Learchus againſt a wall. Ino eſcaped from the fury of her huſband; and from a high rock ſhe threw herſelf into the ſea with Melicerta in her arms. The gods pitied her fate; and Neptune made her a ſea deity, which was afterwards called Leucothoe. Melicerta became alſo a ſea god, known by the name of Palemon.

INOA, feſtivals in memory of Ino, celebrated yearly with ſports and ſacrifices at Corinth. An anniverſary ſacrifice was alſo offered to Ino at Megara, where ſhe was firſt worſhipped under the name of Leucothoe. —Another in Laconia, in honour of the ſame. It was uſual at the celebration to throw cakes of flour into a pond, which if they ſunk were preſages of proſperity, but if they ſwam on the ſurface of the waters they were inauſpicious and very unlucky.

INOCARPUS, in botany: A genus of the monogynia order, belonging to the decandria claſs of plants. The corolla is funnel-ſhaped, the calyx bifid; the ſtamina are placed in a double ſeries; the fruit is a monoſpermous plum.

INOCULATION, or budding, in gardening, is commonly practiſed upon all ſorts of ſtone-fruit; as nectarines, peaches, apricots, plums, cherries, as alſo upon oranges and jaſmines: and indeed this is preferable to any ſort of grafting for moſt ſorts of fruit. The method of performing it is as follows: You muſt be provided with a ſharp pen-knife with a flat haft, which is to raiſe the bark of the ſtock to admit the bud; and ſome ſound baſs-mat, which ſhould be ſoaked in water, to increaſe its ſtrength, and render it more pliable: then having taken off the cuttings from the trees you would propagate, you muſt chooſe a ſmooth part of the ſtock, about five or ſix inches above the ſurface of the ground, if deſigned for dwarfs; but if for ſtandards, they ſhould be budded ſix feet above-ground. Then with your knife make an horizontal cut acroſs the rind of the ſtock, and from the middle of that cut make a ſlit downwards, two inches in length, that it may be in the form of a T; but you muſt be careful not to cut too deep, leſt you wound the ſtock: then having cut off the leaf from the bud, leaving the foot-ſtalk remaining, you ſhould make a croſs cut, about half an inch below the eye, and with your knife ſlit off the bud, with part of the wood to it: this done, you muſt with your knife pull off that part of the wood which was taken with the bud, obſerving whether the eye of the bud be left to it or not; for all thoſe buds which loſe their eyes in ſtripping, are good for nothing: then having gently raiſed the bark of the ſtock with the flat haft of your penknife clear to the wood, thruſt the bud therein, obſerving to place it ſmooth between the rind and wood of the ſtock, cutting off any part of the rind belonging to the bud that may be too long for the ſlit made in the ſtock; and ſo having exactly fitted the bud to the ſtock, tie them cloſely round with baſs-mat, beginning at the under part of the ſlit, and ſo proceeding to the top, taking care not to bind round the eye of the bud, which ſhould be left open.

When your buds have been inoculated three weeks or a month, thoſe which are freſh and plump you may be ſure are joined; and at this time you ſhould looſen the bandage, which if it be not done in time, will injure if not deſtroy the bud. The March following cut off the ſtock ſloping, about three inches above the bud, and to what is left faſten the ſhoot which proceeds from the bud: but this muſt continue no longer than one year; after which the ſtock muſt be cut off cloſe above the bud. The time for inoculating is from the middle of June to the middle of Auguſt: but the moſt general rule is, when you obſerve the buds formed at the extremity of the ſame year's ſhoot, which is a ſign of their having finiſhed their ſpring-growth. The firſt ſort commonly inoculated is the apricot; and the laſt the orange-tree, which ſhould never be done till the latter end of Auguſt. And in doing this work, you ſhould always make choice of cloudy weather; for if it be done in the middle of the day, when the weather is hot, the ſhoots will perſpire ſo faſt, as to leave the buds deſtitute of moiſture.

Inoculation, in a phyſical ſenſe, is uſed for the tranſplantation of diſtempers from one ſubject to another, particularly for the engraftment of the ſmall-pox; which, though of ancient uſe in the Eaſtern countries, is but a modern practice among us, at leaſt under the direction of art.

It is well obſerved by Baron Dimſdale, that accident hath furniſhed the art of medicine with many valuable hints, and ſome of its greateſt improvements have been received from the hands of ignorance and barbariſm. This truth is remarkably exemplified in the practice of inoculation of the ſmall-pox: but to the honour of the Britiſh phyſicians, they meaſured not the value of this practice by the meanneſs of its origin, but by its real importance and utility; they patroniſed a barbarous diſcovery with no leſs zeal and affection than if it had been their own. Indeed the whole nation might be ſaid to have adopted the practice; for the greateſt encouraged it by becoming examples, and the wiſeſt were determined by the general event of the method.

As to the origin of the art of inoculating the ſmall-pox, as well as the time and place in which it was performed, they are equally unknown to all by whom the practice is adopted. Accident probably gave riſe to it. Pylarini ſays, that among the Turks it was not attended to except amongſt the meaner ſort. Dr Ruſſel informs us in the Philoſophical Tranſactions, vol. lviii. p. 142 that no mention is made of it by any of the ancient Arabian medical writers that are known in Europe; and the phyſicians who are natives in and about Arabia, aſſert, that nothing is to be found regarding it in any of thoſe of a more modern date. He farther ſays, that he engaged ſome of his learned Turkiſh friends to make enquiry; but they did not diſcover any thing on this ſubject of inoculation either in the writings of phyſicians, hiſtorians, or poets. Until the beginning of the 18th century, all the accounts we have of inoculating the ſmall-pox are merely traditional. The ſilence on this ſubject, obſerved amongſt writers in the countries where the practice obtained, Dr Ruſſel ſuppoſes, with great probability, to be owing to the phyſicians there never countenancing or engaging in it. It is alſo remarkable, that before Pylarini's letter to the Royal Society in 1701, nor yet for ſeveral years after, this practice is not noticed by any of the moſt inquiſitive travellers. On this Dr Ruſſel very juſtly obſerves, that cuſtoms, the moſt common in diſtant countries, are often the leaſt apt to attract the obſervation of travellers, who, engaged in other purſuits, muſt be indebted to accident for the knowledge of ſuch things as the natives ſeldom talk of, upon the belief that they are known to all the world.

The firſt accounts we have in the learned world concerning inoculation, are from two Italian phyſicians, *viz.* Pylarini and Timoni, whoſe letters on the ſubject may be ſeen in the Philoſoph. Tranſ. abr. vol. v. p. 370, &c. The firſt is dated A. D. 1701; the next is dated A. D. 1713. Whether our inquiries are extended abroad or confined to our own country, inoculation hath been practiſed under one mode or other time immemorial; in Great Britain, and its adjacent iſles we have well authenticated accounts, extending farther backward than any from the continent. Dr Williams of Haverfordweſt, who wrote upon inoculation in 1725, proves, that it had been practiſed in Wales, though in a form ſomewhat different, time out of mind. Mr Wright, a ſurgeon in the ſame place, ſays, that buying the ſmall-pox is both a common practice, and of long ſtanding in that neighbourhood. He ſays, that in Pembrokeſhire there are two large villages near the harbour of Milford, more famous for this cuſtom than any other, *viz.* St Iſhmael's and Marloes. The old inhabitants of theſe villages ſay, that it hath been a common practice; and that one William Allen of St Iſhmael's, who in 1722 was 90 years of age, declared to ſome perſons of good ſenſe and integrity, that this practice was uſed all his time; that he well remembered his mother telling him, that it was a common practice all her time, and that ſhe got the ſmall-pox that way; ſo that at leaſt we go back 160 years or more.

In the Highlands of Scotland and ſome of the adjacent iſles, Dr Alexander Monro ſenior informs us, that the cuſtom through ages paſt hath been, to put their children to bed with thoſe who laboured under a favourable ſmall-pox, and to tie worſted threads about their childrens wriſts, after having drawn them through various puſtules.

According to the reſult of Dr Ruſſel's inquiries, the Arabians aſſert, that the inoculation of the ſmall-pox has been the common cuſtom of their anceſtors, and that they have no doubt of its being as ancient as the diſeaſe itſelf. It is remarkable, that buying the ſmall-pox is the name univerſally applied in all countries to the method of procuring the diſeaſe: it is true that there are other terms; but in Wales and Arabia, as well as many other countries, this is the uſual appellation. From the ſameneſs of the name, and the little diverſity obſervable in the manner of performing the operation, it is probable that the practice of inoculation in theſe countries was originally derived from the ſame ſource. From its extenſive ſpread, it is probably of great antiquity too.

In the year 1717, Lady Mary Wortley Montague, wife of the Engliſh ambaſſador at Conſtantinople, had her ſon inoculated there at the age of ſix years; he had but few puſtules, and ſoon recovered. In April 1721, inoculation was ſucceſsfully tried on ſeven condemned criminals in London, by permiſſion of his majeſty. In 1722, Lady Mary Wortley Montague had a daughter of ſix years old inoculated in England ſoon after which, the children of the royal family that had not had the ſmall-pox were inoculated with ſucceſs; then followed ſome of the nobility, and the practice ſoon prevailed. And here we date the commencement of inoculation under the direction of art.

From the example of the royal family in England, the practice was adopted in Germany, particularly in Hanover, and its adjacent countries.

After Mr Maitland had ſucceeded with thoſe he had inoculated in and about London, he introduced the practice into Scotland in the year 1726.

Sweden ſoon followed the example of the Britiſh. Ruſſia has lately engaged one of the principal promoters and improvers of this art. And now there are not many countries that do not more or leſs practiſe it.

Different Modes af INOCULATION. The practice of inoculation having obtained in every part of the world, it may be grateful, at leaſt to curioſity, to have a general account of the different modes that are and have been adopted in that practice.

Inoculation with the blood of variolous patients hath been tried without effect: the variolous matter only produces the variolous diſeaſe.

The application of the variolous matter takes place in a ſenſible part only; the activity of the virus is ſuch, that the ſmalleſt atom, though imperceptible to any of our ſenſes, conveys the diſeaſe as well as the largeſt quantity. Hence the moſt obvious method is the prick of a needle or the point of a lancet dipped in the matter of a variolous puſtule.

Cotton or thread is uſed, that is previouſly rubbed with powdered variolous ſcabs; this thread is drawn with a needle through the cutis, but not left in. This is the method in ſome parts of the Eaſt Indies. The Indians paſs the thread on the outſide of the hand, between any of the fingers, or between the fore-finger and thumb. The Theſſalian women inoculate in the forehead and chin.

Some abrade the ſcarf-ſkin, and rub in the powdered dry ſcabs which fall from the puſtules of patients with the ſmall pox.

Many of the Greek women make an oblique puncture with a needle, on the middle of the top of the forehead, on each cheek, the chin, each metacarpus, and each metatarſus; then drop in each a little of the pus juſt taken warm from a patient, and brought in a ſervant's boſom. Others in Greece make ſeveral little wounds with a needle in one, two, or more places, in the ſkin, till ſome drops of blood enſue; then the operator pours a drop of warm pus freſh from a puſtule, and mixes it with the blood as it iſſues out; then the wound is covered by ſome with a bandage, by others with half a walnut ſhell placed with its concave ſide over each orifice.

The Chineſe convey a pellet of variolated cotton, with the addition of a little muſk, into the noſtrils of the patient; they collect dry puſtules, and keep them in a porcelain bottle well corked; and when they inoculate they mix a grain of muſk with three or four grains of the dry ſcales, and roll them in cotton. This method may be called *inodoration*.

About Bengal, in the Eaſt Indies, the perſon who intends to be inoculated, having found a houſe where there is a good ſort of the ſmall-pox, goes to the bed of the ſick perſon, if he is old enough; or if a child, to one of his relations, and ſpeaks to him as follows: "I am come to buy the ſmall-pox." The anſwer is, "Buy if you pleaſe." A ſum of money is accordingly given, and one, three, or five puſtules, for the number muſt always be odd, and not exceeding five, extracted whole, and full of matter. Theſe are immediately rubbed on the ſkin of the outſide of the hand between the fore-finger and the thumb; and this ſuffices to produce the diſeaſe. The ſame cuſtom obtains in Algiers, Tunis, Tripoli, and other countries.

Very ſimilar to the cuſtom amongſt the people about Bengal, &c. is that in Arabia, where on ſome fleſhy part they make ſeveral punctures with a needle imbrued in variolous matter, taken from a puſtule of a favourable kind. Here they buy the ſmall-pox too, as follows: the child to be inoculated carries a few raiſins, dates, ſugar-plums, or ſuch like; and ſhowing them to the child from whom the matter is to be taken, aſks how many pocks he will give in exchange? The bargain being made, they proceed to the operation: but this buying, though ſtill continued, is not thought neceſſary to the ſucceſs of the operation. The Arabs ſay that any fleſhy part is proper; but generally they inſert the matter between the fore-finger and thumb on the outſide of the hand.

The Georgians inſert the matter on the fore-arm.

The Armenians introduce the matter on the two thighs. In Wales the practice may be termed infriction of the ſmall pox. There ſome of the dry puſtules are procured by purchaſe, and are rubbed hard upon the naked arm or leg.

The practice in ſome places is to prick the ſkin between ſome of the fingers by means of two ſmall needles joined to one another; and after having rubbed a little of the matter on the ſpot, a circle is made by means of ſeveral punctures of the bigneſs of a common puſtule, and matter is again rubbed over it. The operation is finiſhed by dreſſing the wound with lint.—Another cuſtom is to mix a little of the variolous matter with ſugar, and give it to be drank in any agreeable liquor.

Inciſions have been made in the arms and legs, and thread, cotton, or lint, previouſly dipped in the variolous matter, was lodged in them. The practice of ſome is to bathe the feet in warm water, and then ſecure lint dipped in the variolous matter on the inſtep, or other part of the foot, where the ſkin is thin. Others apply a ſmall bliſtering plaſter; and when the ſcarf-ſkin is elevated and ſlipped off, the variolous matter is applied to the ſurface of the true ſkin, and confined there by a little lint or plaſter. Scratching the ſkin with a pin or needle, and then rubbing the part with lint, previouſly dipped in variolous matter, is the cuſtom in ſome places.

In the Highlands of Scotland they rub ſome part of the ſkin with freſh matter, or dip worſted in variolous matter, and tie it about the childrens wriſts. They obſerve, that if freſh matter is applied a few days ſucceſſively, the infection is more certain than by one application.

Objections to INNCULATION *anſwered*. I. "' It is not lawful."

In anſwer to this, the Scriptures aſk, Is it lawful to ſave life, or to deſtroy it? Luke vi. 9. And as it is a difficulty with many ſerious people, whether to admit of this practice or not, this objection ſhould be conſidered in a religious view. We ſhould in this caſe remember, that as the fall of man brought the danger of diſeaſes into the world, ſo to evade, oppoſe, or deſtroy it, is not only his right, but duty, if in his power. And if events imply the cauſe, a long run of uninterrupted ſucceſs implies an efficacious remedy. Though ſome die under this management, it is ſufficient to prove the lawfulneſs of a remedy, that it is proper for and has by experience been found in moſt caſes effectual to the end for which it was uſed. When danger ſurrounds us, no conduct is more proper than to inquire into and purſue the means of eſcape. To neglect our ſafety is to ſink below the brutes, who by inſtinct avoid the evils to which they are expoſed. Inoculation is a means of ſaving life in many inſtances, and of moderating the ſeverity of affliction in more. Wilfully then to neglect the means of ſaving life is to be guilty of murder.

II. "It is bringing a diſtemper on ourſelves, and ſo uſurping the ſacred prerogative of God."

1. As to the firſt part of this objection, if by diſtempers are meant ſickneſs and pain, that is practiſed daily in other inſtances, in concurrence with the Scripture dictate, *viz.* of two evils chooſe the leaſt. But the ſuppoſition of objectors in this inſtance is not altogether true. For by inoculation, a diſeaſe is not properly ſaid to be communicated. It only excites and frees us from one, which, though latent, is already in us: or (which in effect is the ſame) inoculation, by an advantageous mode of infecting, &c. frees the patient in all inſtances from the uſual difficulties of the diſeaſe;

ſaves the life of moſt who ſubmit to it; and with the natural ſmall-pox it deſtroys that diſpoſition in the body, without which the diſeaſe cannot take place. It is owned that ſome hazard attends it: it is ſometimes mortal, and indeed it is fit it ſhould be ſo: it is generally ſucceſsful; that encourages us to proceed; it ſometimes, though rarely fails; hence we are cautious and careful, and led to act with a dependence on Him to whom belong the iſſues from death.

2. Reſpecting the offence given to God, a reliance on Providence does not imply that we are not to prevent or oppoſe the evils which we foreſee, and which we have in our power to guard againſt by prudent precautions. Would theſe objectors, in other inſtances, refuſe the means of leſſening the malignancy and danger of diſeaſe, than which the practice of inoculation is no more? Let theſe ſcrupulous perſons ſay, whether, when God permits the diſcovery of preſerving ourſelves, from an impending evil, he forbids our availing ourſelves of the diſcovery? If our Maker offers us a remedy, it is offending him to reject it.

III. "The decrees of God have fixed the commiſſion of every diſeaſe, and our precautions cannot prevent what he hath determined."

However true is it that our days are determined, &c. yet it is God's revealed will and not his ſecret purpoſes, which we are to regard as the rule of duty. God has required of us to have a tender regard to our lives; and thoſe who diſobey him herein are guilty of a degree of ſelf-murder, and will never be acquitted of that guilt by the ſecret determination of Heaven concerning them. Beſides, God who has ordained the end, has alſo determined the means leading to it. St Paul, in his dangerous voyage, had a ſpecial revelation to aſſure him, that all who were with him ſhould eſcape; and yet when the ſeamen were getting out of the ſhip, he declares that if they did not ſtay in it they could not be ſaved, Acts xxvii. 31. God purpoſed to preſerve them in the way whereby they were afterwards delivered.

IV. "We ſhould not do evil that good may come."

If inoculation is in its own nature a moral evil, it certainly ſhould be rejected, however great its advantages may ſeem to be. The proſpect of relief from any calamity in life ſhould not tempt us to offend God. But thoſe who make this objection proceed on a miſtake. Their principle is true with regard to moral evil, but is not ſo when applied to phyſical. It is certainly lawful to pull down a houſe to ſave a great number from being burnt; this is a phyſical evil, which can hardily take place without ſome degree of moral evil; and many other inſtances may be pointed out, where, for a greater good, a leſſer ill is ſubmitted to. And is the ſmall ill induced by inoculation to be compared with all thoſe evils which are tolerated and authoriſed by all laws?

V. "The patient may die; and then his laſt moments are diſtreſſed, and the future reflections of his friends are grievous."

This objection leads many to decline the practice of inoculation, even when they allow the theory of it to be reaſonable. They hope to eſcape the diſtemper in the natural way, and they have fears of dying in this; and thus they are prevented from going into it. But they ſhould conſider what grounds they have for either the one or the other, and what is to be advanced to balance the account, by examining the different degrees of probability that attend their hopes and fears in the uſe or neglect of inoculation. Dying is a ſerious thing: but if inoculation be a probable and lawful means of preſerving life in a time of danger, it is a duty to comply with it; and what more peaceful reflection than to die in the way of duty?

VI. "Fear is a dangerous paſſion in the ſmall-pox; but inoculation increaſes the cauſes of fear, by leſſening our faith and truſt in God."

When the ſmall-pox is left to nature, ſuch are its ravages, that not to fear would be to ſink beneath humanity: its conſequences are too grievous to be treated with neglect. But experience manifeſts the ſafety that attends receiving the diſeaſe by inoculation; it is therefore ſo far a remedy to that juſt fear which enhances the danger when the diſeaſe is left to itſelf. As to faith in God, none is deſirable but that which is agreeable to the Scripture; and a diſregard to calamities and dangers is never the effect of that. Inoculation is a means of ſafety; and it is as rational to conclude, that our lives ſhould be preſerved without eating and drinking, as that we ſhall be delivered from danger without a prudent care for our own ſafety. We are to depend on the care of Providence only in the way of duty. To boaſt of courage and truſt in God, while we omit the means of eſcaping danger which ſurrounds us, is not faith, but preſumption. Thus, when inoculation becomes a probable means by which to ſave life, it is a preſumption, and not truſt, to neglect it.

VII. "Inoculation does not exempt from future infection."

If by inoculation of the ſmall-pox the ſame diſeaſe is produced, the ſame effects may be expected from it when artificially produced as in the natural way. It is inconceivable, that a contagious ſubſtance, the very ſeminal matter of the ſmall-pox, ſhould propagate, inſtead of its own, another diſeaſe. De Haen is an acute phyſician, and was a violent oppoſer of inoculating the ſmall-pox; but he never ſuppoſed that the matter of the ſmall-pox will produce any diſeaſe but itſelf. Obſervation alone determined the opinion, that the natural ſmall-pox does not attack a ſecond time: the ſame ſtands good in favour of the artificial diſeaſe. And to this numberleſs trials have been made without effect, to reinfect thoſe in whom the ſmall-pox had taken place by inoculation.

VIII. "Other diſeaſes are communicated with the matter of the ſmall-pox, by inoculating it."

That careleſſneſs or wilfulneſs in the operator may in ſome inſtances give cauſe for this objection is true; but that by the matter of a variolous puſtule, any other diſeaſe hath been conveyed, is yet to be proved. As the confluent and malignant ſmall-pox have not yet been obſerved to produce their own degree and mode of this diſtemper when infuſed by inoculation, it is ſcarcely conceivable that they ſhould tranſmit another diſeaſe eſſentially different. The venereal diſeaſe is known to be as communicable as any; yet ſeveral have been inoculated from patients labouring under conſiderable degrees of the venereal diſeaſe, and no ill conſequences ever yet were known to follow, none to give the leaſt ſuſpicion of the kind. If the variolous matter may convey another diſeaſe in the artificial, it may do the ſame in the natural way; and even then, advantage is attendant on inoculation, for we can chooſe a healthy perſon to take the infection from; but no inſtance of the kind hath ever occurred.

IX. “ Perhaps the diſeaſe may never attack in the natural way.”

Such objectors ſhould be informed, that this diſtemper cannot be given to one who never would have it; for they only who are ſuſceptible of it can take it by inoculation, as is evident from numerous experiments made to verify this fact. Again, the ſmall-pox may be ſaid to be general; ſo few there are who are exempted from it, that they can hardly be conſidered as an exception to the general law: it is therefore worth while to inoculate, firſt, to aſcertain the ſafety of the individual from the diſeaſe; and, ſecondly, on account of the general advantages of this practice, in caſe he ſhould be ſuſceptible of the infection. On this ſubject Dr Jurin hath inſerted an ingenious paper in the Philoſophical Tranſactions; in which he obſerves, that it is difficult to aſcertain the exact number who die without having the ſmall-pox; but that, of all the children that are born, there will ſome time or other die of the ſmall-pox one in fourteen; and that of perſons of all ages taken ill of the ſmall-pox, there will die thereby two in eleven. From a table of burials it appears, that in Edinburgh and St Cuthbert's pariſh, during ten years, about one-tenth of the dead were killed by the ſmall-pox. Farther, as it cannot be known that any individual is exempted from the ſmall-pox, his hazard of dying of that diſtemper, being made up of the hazard of having it, and the hazard of dying of it if he has it, will be exactly the ſame, *viz.* that of one in eight or nine (whether the proportion of mankind that eſcape having the ſmall-pox be great or ſmall). In inquiry from houſe to houſe for the number of people with the ſmall-pox, in ſeveral towns, during one year, it appeared that near one in five died who had them; and that of eighty-two perſons who were inoculated in theſe places in the ſame year, not one died.

X. “ It requires much thought to know what we ſhould do with regard to inoculation.”

Not to dwell on the abſurdity of this objection, and of complaining that conſideration is a burden when it is neceſſary for the preſervation of life, it may ſuffice to point out, that a ſacred writer tells us, that “ a prudent man foreſeeth the evil, and hideth himſelf; but fools paſs on and are puniſhed.”

XI. “ It endangers others.”

Since very few of mankind now eſcape the ſmall-pox, it muſt ſooner or later come to every place; therefore, if it be true in fact that a much greater number loſe their lives by the natural than by the artificial infection, it is of more ſervice to introduce the ſmall-pox in a favourable way and ſeaſon, than paſſively to allow it to deſtroy multitudes. As to ſpreading the diſeaſe by introducing *inoculation*, it is but of little conſequence; for *inoculating* where the diſeaſe does not already exiſt, is differently circumſtanced from this practice, where it already prevails in the natural way; the quantity of the circumambient contagion is leſs, or the ſame extent of atmoſphere is leſs impregnated with the infectious principles from *inoculated* patients, than when it naturally prevails, or the ſame number of people received it in the natural way.

The moſt plauſible objector on this account is Dr Raſt, of Lyons, in France. From his review of the bills of mortality in and about London, he obſerves, “ that more have died by the ſmall-pox in London ſince the introduction of *inoculation*, than in the ſame time preceding that period, in conſequence of the diſeaſe thereby being more univerſally extended and propagated.” But to this, Dr Lettſom moſt ſatiſfactorily replies, “ That the late increaſe of burials cannot depend upon the practice of *inoculation*, under which, though it is a rare thing to hear of a fatal caſe, but rather upon an inovation introduced in the treatment of the natural ſmall-pox of expoſing the patients to the open air, and a leſs reſerved intercouſe amongſt the community. Add to this the improvements in medicine in various inſtances, the police of the city, &c. which by preſerving many lives occaſion more ſubjects for the ſmall-pox, and conſequently a proportional increaſe of deaths by this diſeaſe, many of thoſe who are preſerved by the above named improvements not being favoured with the advantage of *inoculation*. Beſides the care taken in and about London to prevent inconvenience from *inoculation*, &c. it ſhould be remembered, that the increaſing acceſſion of young perſons to the capital from the country, eaſily accounts for the increaſe of 19 deaths in 1000 more than formerly happened.” See a Defence of *Inoculation*, in Dr Lettſom's *Medical Memoirs*.

XII. “ The practice of *inoculation* comes from the devil.”

The beſt anſwers to this ſeem to be, firſt, that cavillers will never ceaſe from objecting; and oppoſitions will be made as long as there are men of wit to deviſe, or of ſophiſtry to invent. Secondly, that Job was afflicted by the devil with the ſmall-pox, is not a known fact. Thirdly, that if by what is ſaid the principal objections are removed, it is hoped that the reaſonable and the religious will be enabled to approve themſelves to God in the practice of *inoculation*. See a diſcuſſion of moſt of the preceding objections in an excellent pamphlet, entitled, “ *Inoculation* impartially conſidered, and proved to be conſiſtent with Reaſon and Revelation,” by the Rev. Mr David Some, publiſhed by Dr. Doddridge in 1750.

Advantages of Inoculation. Though no diſeaſe, after it is formed, baffles the powers of medicine more than the ſmall-pox, yet more may be done before-hand to render this diſeaſe favourable than in any other we know. The artificial method of producing the ſmall-pox hath almoſt ſtripped it of its terrors: in general, hath rendered its aſpect mild, its progreſs uniform, and nearly without hazard to the patient.

Mr Mudge, in his Diſſertation on the inoculated Small-pox, enumerates the following ſources of danger from this diſeaſe, viz. 1. The patient's conſtitution. 2. The propenſity of the patient to be infected. 3. The manner or mode of the infection being communicated. 4. The conſtitution of the air at the time of infection. And it is the advantage of *inoculation*, if prudently conducted, almoſt totally to exempt its ſubjects from the diſadvantages attendant on theſe ſources.

1. “ Reſpecting the habit of body, or ſtate of the patient's conſtitution at the time of infection.”

Inoculation.

Conſtitutional or habitual diſeaſes, in general, do not interfere with the courſe of the ſmall-pox, whether in its natural or its artificial progreſs; ſuch as ſcorbutic eruptions on the ſkin, ſtrumous complaints, itch, ſcabby eruptions, excoriated ears, &c. The variolous poiſon is therefore a thing *ſui generis*, and noways affected by theſe taints of the juices, or what is uſually called a bad habit of body; or at leaſt ſo inconſiderably, as not to deprive ſuch patients of any of the advantages of *inoculation*. But the caſe is much reverſed with reſpect to ſome accidental diſeaſes. *E. gr.* If on the attack of the ſmall-pox, the habit or its attending circumſtances tend to inflammation, or, on the contrary, to a putrid acrimony, the eruptive fever in theſe aggravated ſtates will load the body with variolous matter, or produce puſtules of a very unfavourable kind; in either of theſe caſes (not to enumerate more) the patient will moſt probably be ſeverely affected. But *inoculated* ſubjects may be infected when the conſtitution is in the beſt condition to combat with the diſeaſe; if either of thoſe indiſpoſitions are attendant, or any other which uſually endangers, they may ſoon be reſtrained or removed.

2. "The different degrees of propenſity in the patient, at different times, to be infected."

That different quantities of matter are produced in different perſons in the proceſs of the diſeaſe, we find true in fact; and there is the ſtrongeſt reaſon to believe, that, previous to infection, the quantity of the variolous matter, or rather that principle in the conſtitution which eventually produces it, ebbs and flows, is more or leſs vigorous at different times in the ſame ſubject, under various combinations of circumſtances. The inſtances are not uncommon, where the patient who hath withſtood at one time all the ordinary means of infection, nay, who hath induſtriouſly, but ineffectually, ſought it; yet at another hath had a ſmall-pox ſo malignant in appearance and effect, that the whole body hath been converted into an offenſive variolous putreſcence. If the degree of propenſity to receive infection was always the ſame, it would be inconceivable that any one could paſs unaffected when the ſmall-pox became epidemic. From whatever cauſes, however, this propenſity may ariſe, it is moſt reaſonable to aſſert, that the increaſe or decreaſe of this principle takes place according as the ſmall-pox is epidemic or not. During the continuance of any contagious epidemic diſeaſe, we always find that thoſe conſtitutions which are moſt congenial with that character, are peculiarly obnoxious to the correſpondent diſtemper. And we may reaſonably conclude, that when the conſtitution of a perſon not paſt the ſmall-pox is moſt ſaturated with the variolous principle, he is then more particularly ſubject to infection. Again, it is not only undoubted, that the variolous principle ſubſiſts in the conſtitutions of perſons not paſt the ſmall-pox, but it is more than probable that a part of this principle is produced by the eruptive fever, and the reſt of the variolous proceſs. Agreeably to what hath been ſaid, we find, that during the epidemic tendency, thoſe who have not paſſed the diſeaſe, are more open to contagion than in other conſtitutions of air, when the ſmall-pox is not epidemic, and is conſequently a rare diſeaſe. Many who have eſcaped infection from *inoculation* and other means of contagion, on removal into a ſituation where the ſmall-pox has been epidemic, have preſently after been ſeized with this diſorder. Events of this kind are ſo common, as to have given riſe to the ill grounded opinion, that any change of air is hazardous to thoſe who have not had the ſmall pox. If at a time when the propenſity to be affected is the greateſt, there ſhould be a concurrence of thoſe ſtates of the conſtitution above noticed, how aggravated will the condition of the patient be!

Reſpecting the evaſion of theſe inconveniences by *inoculation*, it is to be obſerved, that as the propenſity to the diſeaſe differs at different times in the ſame ſubject, it is reaſonable to ſuppoſe that the diſorder is produced by downright violence, when there ſubſiſts in the patient but little of that peculiarity of conſtitution ſo eſſential to the production of the diſeaſe (and ſo general, when the ſmall-pox is epidemical, or, in other words, when the body is indiſpoſed to be poiſoned. The conſideration, peculiar to the diſeaſe when artificially produced, appears to be the true cauſe of the ſmall quantity of pocky matter, and that general ſcarcity of puſtules, when compared to the natural ſmall-pox, which has ever accompanied *inoculation*, and is one of the grand advantages of the diſcovery. Farther, as it is very reaſonable to ſuppoſe, that this propenſity is the greateſt when there is an epidemic conſtitution of the air which favours the production of the diſeaſe; and if it be as probable that the ſeverity or mildneſs of the diſeaſe depends in a good degree upon the greater or leſſer propenſity of the ſubject to be infected; it will certainly be an eligible ſtep not to bring on the diſorder by *inoculation* during the continuance of an evidently prevailing tendency to the diſeaſe. Prudence in this caſe directs us to take advantage of the abſence of ſuch a prevailing tendency, when all the benefits of *inoculation* may be ſecured; and not to delay the operation, till ſuch a conſtitution of air prevails, as at once makes the operation neceſſary, and deprives it of ſome of its advantages. To conclude, we may add to this conſideration, that by the practice of expoſure to cold, the violence of the eruptive fever is ſo far moderated, as to prevent its forming an additional quantity of variolous matter, which, in a violent and unreſtrained ſtate, it would do, by aſſimilating the juices of the conſtitution into the nature of the variolous poiſon.

3. "The manner or mode of the infection being communicated."

In the natural ſmall-pox, the diſeaſe may be produced by accidental contagion, or an epidemic influence. Dr Mead ſays, that the air of Great Britain never produces the plague, ſmall-pox, or meaſles; and Dr Arbuthnot ſays, that the plague itſelf may be generated by ſome quality in the air, without any contagion. Be theſe opinions as they may, it is evident that contagion is ſometimes ſo languid, that it requires the agency of other cauſes to give it activity, ſo as to produce the tribe of diſeaſes to which it belongs, and which without this agency would never be brought forth; and though the ſtrongeſt epidemic tendency may not in Europe create the ſmall-pox, without the concurrence of contagious fomes, yet there is, by the agency of the former, ſuch an alteration made, and propenſity brought on the animal juices, as is eſſentially neceſſary to continue the exiſtence of the diſeaſe.

Variolous contagion produces its effects by the actual application of its poiſon, either externally, through the medium of the ſkin; or internally, to the gullet, ſtomach, and guts, in the act of deglutition; or laſtly, to the lungs, in the act of reſpiration. Though there may be a poſſible admiſſion of the poiſonous miaſmata into the conſtitution through the ſkin, from the principle of abſorption; yet the poiſon very ſeldom, if ever, exerts its influence upon the habit in this manner: poſſibly by a local actual application of the groſs matter lodged in the clothes, or otherwiſe conveyed, the diſtemper may ſometimes be produced by a kind of *inoculation*, and then the diſorder will probably be favourable. But when the poiſon, in a more dilute ſtate, only floats in or impregnates the air, it ſeldom enters the pores of the ſkin and poiſons by way of abſorption; for the degrees of activity in which this power is exerted, are moſt probably in proportion to the aids the conſtitution may ſtand in need of from it. However, it is more than probable that the ordinary mode of infection is by the lungs, which from their ſtructure they are well calculated to receive, to entangle, and to retain. When either the lungs or the ſtomach are firſt infected by the infectious effluvia, it is moſt reaſonable to believe, that theſe noble parts, together with the fauces, glottis, wind-pipe, and gullet, will frequently labour under a greater load of puſtules than the external ſurface of the body: for it is obſerved, that when the patient is infected artificially, the parts to which the poiſon is applied ſuffer in a greater degree than the more diſtant; and that the circumjacent ſkin, to ſome extent, is filled with puſtules. From this particular application of the morbid matter to the fauces, &c. it is probable, that the large diſcharge of ſaliva, &c. ariſes, which characteriſes the confluent ſmall-pox in adults; and as children ſwallow this ſaliva, it excites a diarrhœa, which in them anſwers to the ſpitting in thoſe more aged. When the internal parts are oppreſſed with puſtules, there is no interval between the eruptive and the ſubſequent ſymptomatic fever; and the ſuffering which the patient labours under from a generally inflamed ſkin, heightened by the diſeaſed condition of the nobler parts, perpetuates the firſt fever. This informs us that all is not ſo well within as otherwiſe the external appearances might have induced us to believe; but that the nobler parts are rendered unfit for the purpoſes of life, at leaſt are labouring and lagging behind in the proceſs, ſo that they have not kept pace with the apparent ſtate of the diſeaſe on the ſurface of the body: this ſome have ſuppoſed to be the true general cauſe of the ſecondary fever, under which the patient, if he ſinks, dies peripneumonic. Theſe conſequences frequently attend the infection received in the natural way; and if, ſuperadded to theſe, the unhappy ſituation of thoſe deſcribed under the firſt and ſecond ſources of danger attends the patient, the diſorder will be proportionably aggravated, and the chance of life leſſened.

But here again *inoculation* relieves: for by this mode the virus is applied to the external ſurface of the body, ſo that the whole conſtitution (excepting the part immediately ſurrounding the wound) being affected uniformly, the proceſs of the diſeaſe is regularly carried on; and the nobler parts not being particularly affected by a partial application of the variolous fomes to their ſurface, have no diſtreſs to proclaim by a ſecondary fever, which therefore is ſcarcely ever ſeen in *inoculated* patients.

4. "The conſtitution of the air at the time of infection."

A powerful ſource of difficulty and danger in the natural ſmall-pox is, the malignant influence of the air at ſome ſeaſons, and particularly if it happens at the time of receiving the infection. If this occurs with one or more of the other ſources, how dreadful the devaſtation! Whether this conſtitution of the air produces its deleterious effects by heightening the natural malignity of the infecting poiſon, or acts on the conſtitution itſelf ſo as to render the effects of contagion more peculiarly fatal, the conſequence of this ſtate of the air is the ſame. The general characters of a morbid ſtate of the air are the inflammatory and putrid; and it is uniformly obſerved, that whenever a perſon is attacked with a fever under either of theſe prevailing diſpoſitions, it never fails to impreſs its character upon the diſeaſe.

But here alſo *inoculation* affords the moſt benign influence. The judicious practitioner does not expoſe his patient to the pernicious effects of an air that can ſtamp its baneful character on the ſmall-pox, but chooſes the ſeaſon beſt calculated for the ſafety and welfare of his patient; and hence we rarely ſee the influence of this evil ſource attendant on the artificial diſeaſe.

Having ſeen, that from the influence of one or more of theſe four ſources of difficulty and danger, and that from their union will reſult a natural ſmall-pox, complicated with horrors not leſs to be dreaded than the plague; how ineſtimable muſt appear that favour of Providence, by which we are freed from the formidable attendants of this diſeaſe, viz. *inoculation*, by which the diſorder is rendered mild, and in general leſs hazardous than a common cold!

From attention to the above ſources of ill in the natural ſmall-pox, we perceive with ſufficient ſatisfaction the many inſtances of relief and ſecurity which generally we avail ourſelves of by *inoculation;* a part of which we have ſeen, and a few others follow.

1. As already obſerved, it ſaves the lives of moſt who are its ſubjects. From a general calculation it appears, that in the hoſpitals for ſmall-pox and *inoculation*, 72 die out of 400 patients having the diſtemper in the natural way, and only one out of this number when *inoculated*. 2. It leſſens the affliction from both the degree and the number of ill ſymptoms, even when it proves fatal. It leſſens the number of puſtules; and, by moderating the virulence of the diſeaſe, the marks on the face are not ſo deep. 3. It is extremely rare that the ſecondary fever attends it; a ſymptom productive of much ſuffering, if the patient is happy enough to eſcape with life. 4. It produces the diſeaſe under the feweſt diſadvantages, and favours with foreſight to prevent many ills not to be guarded againſt in the natural ſmall-pox. 5. Inſtead of communicating other diſorders with it, many diſorders ſubſequent to the natural are very rarely obſerved after the artificial ſmall-pox. 6. It effectually removes all juſt grounds of fear; a paſſion very injurious in this

diſeaſe. 7. Soldiers, ſailors, and all who would appear abroad, or in public offices, are freed from every anxiety and hazard attendant on the natural ſmall-pox. 8. Servants, women with children at their breaſts, pregnant women, magiſtrates, phyſicians, &c. are all freed from the moſt diſtreſſing embarraſſment, by conformity to *inoculation*. See Medicine.

INOSCULATION, in anatomy; the ſame with Anastomosis.

INPROMPTU, or Impromptu. See Impromptu.

INQUEST, in Scots law, the ſame with Jury.

INQUISITION, in the church of Rome, a tribunal in ſeveral Roman Catholic countries, erected by the popes for the examination and puniſhment of heretics.

This court was founded in the 12th century by father Dominic and his followers, who were ſent by Pope Innocent III. with orders to excite the Catholic princes and people to extirpate heretics, to ſearch into their number and quality, and to tranſmit a faithful account thereof to Rome. Hence they were called *inquiſitors*; and this gave birth to the formidable tribunal of the inquiſition, which was received in all Italy and the dominions of Spain, except the kingdom of Naples and the Low Countries.

This diabolical tribunal takes cognizance of hereſy, Judaiſm, Mahometaniſm, Sodomy, and polygamy; and the people ſtand in ſo much fear of it, that parents deliver up their children, huſbands their wives, and maſters their ſervants, to its officers, without daring in the leaſt to murmur. The priſoners are kept for a long time, till they themſelves turn their own accuſers, and declare the cauſe of their impriſonment; for they are neither told their crime nor confronted with witneſſes. As ſoon as they are impriſoned, their friends go into mourning, and ſpeak of them as dead, not daring to ſolicit their pardon, leſt they ſhould be brought in as accomplices. When there is no ſhadow of proof againſt the pretended criminal, he is diſcharged, after ſuffering the moſt cruel tortures, a tedious and dreadful impriſonment, and the loſs of the greateſt part of his effects. The ſentence againſt the priſoners is pronounced publicly, and with extraordinary ſolemnity. In Portugal, they erect a theatre capable of holding 3000 perſons; in which they place a rich altar, and raiſe ſeats on each ſide in the form of an amphitheatre. There the priſoners are placed; and over-againſt them is a high chair, whither they are called, one by one, to hear their doom, from one of the inquiſitors.

Theſe unhappy people know what they are to ſuffer by the clothes they wear that day. Thoſe who appear in their own clothes are diſcharged upon payment of a fine: thoſe who have a ſanto benito, or ſtrait yellow coat without ſleeves, charged with St Andrew's croſs, have their lives but forfeit all their effects: thoſe who have the reſemblance of flames, made of red ſerge, ſewed upon their ſanto benito, without any croſs, are pardoned, but threatened to be burnt if ever they relapſe: but thoſe who, beſides theſe flames, have on their ſanto benito their own picture, ſurrounded with figures of devils, are condemned to expire in the flames. The inquiſitors, who are eccleſiaſtics, do not pronounce the ſentence of death; but form and read an act, in which they ſay, that the criminal being convicted of ſuch a crime, by his own confeſſion, is with much reluctance delivered to the ſecular power to be puniſhed according to his demerits: and this writing they give to the ſeven judges who attend at the right ſide of the altar, who immediately paſs ſentence. For the concluſion of this horrid ſcene, ſee Act *of Faith*.

INSCRIBED, in geometry. A figure is ſaid to be inſcribed in another, when all its angles touch the ſide or planes of the other figure.

INSCRIPTION, a title or writing affixed to any thing, to give ſome farther knowledge of it, or to tranſmit ſome important truth to poſterity.

Antiquaries are very curious in examining ancient inſcriptions found on ſtones and other monuments of antiquity. Sanchoniathon, contemporary, as it is ſaid, with Gideon, drew moſt of the memoirs whereof his hiſtory is compoſed, from inſcriptions which he found in temples and on columns, both among the Heathens and the Hebrews.

It appears, indeed, that the ancients engraved upon pillars the principles of ſciences, as well as the hiſtory of the world. Thoſe mentioned by Herodotus ſhow, that this was the firſt way of inſtructing people, and of tranſmitting hiſtories and ſciences to poſterity. This is confirmed by Plato in his Hippias; wherein he ſays, that Piſiſtratus engraved on ſtone-pillars precepts uſeful for huſbandmen. Pliny aſſures us, that the firſt public monuments were made of plates of lead; and that the treaties of confederacy concluded between the Romans and the Jews were written upon plates of braſs; that (ſays he) the Jews might have ſomething to put them in mind of the peace and confederacy concluded with the Romans. The Greeks and Romans were great dealers in inſcriptions, and were extremely fond of being mentioned in them: and hence it is, that we find ſo many in thoſe countries of ancient learning, that large volumes have been compoſed as the collection of Gruter, &c. Since Gruter's collection, Th. Reineſius has compiled another huge volume of inſcriptions. M. Fabretty publiſhed another volume at Rome in 1699, wherein he has corrected abundance of errors which had eſcaped Gruter, Reineſius, and other antiquaries, &c. and added a great number of inſcriptions omitted by them.—Since all theſe, Grævius has publiſhed a complete collection of inſcriptions, in three volumes folio.

INSCRUTABLE, Unsearchable, in theology, is uſually underſtood of the ſecrets of Providence, and the judgments of God, which cannot be found out, or into which human reaſon cannot penetrate.

Academy of Inscriptions. See Academy.

INSECTS, insecta, in natural hiſtory, a ſmaller ſort of animals, commonly ſuppoſed to be exſanguinous; and diſtinguiſhed by certain inciſures, cuttings, or indentings in their bodies. The word is originally Latin, formed of *in*, and *ſeco* "I cut;" the reaſon of which is, that in ſome of this tribe, as ants, the body ſeems to be cut or divided into two; or becauſe the bodies of many, as worms, caterpillars, &c. are compoſed of different circles, or rings, which are a ſort of inciſuræ. See Zoology and Entomology.

Of the Kinds of Insects, *and where the Collector for the Cabinet may find them.* Inſects, in general, are known to moſt people, the ſyſtematic diſtinctions but to few; nor have we any Engliſh names for the greateſt part of them. The general denominations of beetles, butterflies, moths, flies, bees, waſps, and a few other common names, are all that our language ſupplies. It would, therefore, be in vain to enumerate the immenſe variety of genera and ſpecies to any perſon unſkilled in the ſcience of entomology: we may, however, give directions under general names where to find each kind.

The claſs of inſects is divided by Linnæus into ſeven orders. See ZOOLOGY and ENTOMOLOGY.

Lettſome's Naturaliſt's and Traveller's Companion.

I. The *Coleoptera* kind. Many of theſe (as the *ſcarabæus* or chaffer, *dermeſtes* or leather-eater, *hiſter* or mimick-beetle, *ſtaphylinus* or rove-beetle, &c.) are found in and under the dung of animals, eſpecially of cows, horſes, and ſheep. Some (as *lucanus* or ſtag-beetle, *cerambyx* or capricorn-beetle, *dermeſtes*, &c,) are found in rotten and half-decayed wood, and under the decayed bark of trees. Others (as *hiſter*, *ſilpha* or carrion-beetle, *ſtaphylinus*, &c.) on the carcaſes of animals that have been dead four or five days; on moiſt bones that have been gnawed by dogs or other animals; on flowers having a fetid ſmell; and on ſeveral kinds of fungous ſubſtances, particularly the rotten and moſt ſtinking. Others (as *byrrhus*, *curculio* or weevil, *bruchus* or ſeed-beetle, &c) may be found in a morning about the bottoms of perpendicular rocks and ſand-banks, and alſo upon the flowers of trees and herbaceous plants. Many kinds (as *gyrinus* or whirl-beetle, *dytiſcus* or water-beetle, &c.) may be caught in rivers, lakes, and ſtanding pools, by means of a thread-net, with ſmall meſhes, on a round wire-hoop, fixed at the end of a long pole. In the middle of the day, when the ſun ſhines hot, ſome (as the *coccinella* or lady-fly, *bupreſtis* or burn-cow, *chryſomela* or golden honey-beetle, *cantharis* or ſoft-winged-beetle, *elater* or ſpring-beetle, *necydalis* or clipt-winged beetle, &c.) are too be ſeen on plants and flowers, blighted trees and ſhrubs. Others (as *lampyris* or glow-worm, &c.) frequent moiſt meadows, and are beſt diſcovered at night, by the ſhining light which they emit. A great variety ſit cloſe on the leaves of plants, particularly of the burdock, elecampane, colts foot, dock, thiſtle, and the like, (as the *caſſida* or tortoiſe beetle, &c.); or feed on different kinds of tender herbs (as the *meloë* or bliſter-beetle.) Numbers (as the *tenebrio* or ſtinking-beetle,) may be found in houſes, dark cellars, damp pits, caves, and ſubterraneous paſſages; or on umbelliferous flowers, (as the *cerambyx*, *ptinus*, &c.)? or on the trunks as well as on the leaves of trees, in timber-yards, and in the holes of decayed wood. Some (as the *leptura* or wood-beetle, *cicindela* or gloſſy-beetle, &c.) inhabit wild commons, the margins of pools, marſhes, and rivulets; and are likewiſe ſeen creeping on flags, reeds, and all kinds of water-plants. Multitudes (as the *carabus* or ground-beetle) live under ſtones, moſs, rubbiſh, and wrecks near the ſhores of lakes and rivers. Theſe are found alſo in bogs, marſhes, moiſt places, pits, holes of the earth, and on ſtems of trees; and in an evening they crawl plentifully along path-ways after a ſhower of rain. Some (as the *forficula* or earwig) may be diſcovered in the hollow ſtems of decayed umbelliferous plants, and on many ſorts of flowers and fruits.

II. *Hemiptera*. Some of theſe (as the *blatta* or cockroach) are found about bake-houſes, &c.; others (as the *mantis* or camel-cricket, *gryllus* or locuſt, *fulgora cicada*, or flea-locuſt, *cimex* or bug, &c.) on graſs, and all kinds of field-herbage. Some (as *natonecta* or boat-fly, *nepa* or water-ſcorpion, &c), frequent rivers, lakes, and ſtanding pools.

III. *Lepidoptera*. In the day, when the ſun is warm, butterflies are ſeen on many ſorts of trees, ſhrubs, plants, and flowers. Moths may be ſeen in the day-time, ſitting on pales, walls, trunks of trees, in ſhades, out-houſes, dry holes, and crevices; on fine evenings, they fly about the places they inhabit in the day-time: ſome (as the *ſphinx* or hawk-moth) are ſeen flying in the day-time over the flowers of honey-ſuckles and other plants with tubular flowers. Inſects of this ſpecies ſeldom ſit to feed, but continue vibrating on the wing, while they thruſt their tongue or proboſcis into the flowers.

IV. *Neuroptera*. Of theſe, ſome (as the *myrmeleon*, *hemerobius* or pearl-fly, *raphidia* or camel-fly, &c.) are found in woods, hedges, meadows, ſand-banks, walls, pales, fruits, and umbelliferous flowers. Others (as *libellula* or dragon-fly, *ephemera* or may-fly, *phryganea* or ſpring-fly, &c.) fly about lakes and rivers in the day.

V. *Hymenoptera*. Theſe, including waſps, bees, &c. frequent hedges, ſhrubs, flowers, and fruits.

VI. *Diptera*. Flies of various kinds conſtitute this claſs; of which ſome (as *œſtras* or gad-fly, *muſca* or fly, *tabanus* or whame) fly about the tops of trees, little hills, horſes, cows, ſheep, ditches, dunghills, and every offenſive object. Others (as *tipula*, *conops*, *aſilus* or waſp-fly, &c.) are found on all ſorts of flowers, particularly thoſe of a fetid ſmell.

VII. *Aptera*, or thoſe without wings, comprehend ſcorpions, ſpiders, crabs, lobſters, &c.

Of Catching and Preſerving INSECTS *for Collections.* In the following directions, we ſhall relate the methods of killing them the moſt readily, and with the leaſt pain, as the purſuit of this part of natural hiſtory hath been often branded with cruelty; and however reaſonably the naturaliſt may exculpate himſelf by pleading the propriety of ſubmitting to an evil which leads to uſeful diſcoveries, yet for wanton cruelty there never can be a juſt pretext.

1. The firſt claſs, conſiſting of beetles (*coleoptera*), are hard-winged. Many kinds fly about in the day, others in the evening, ſome at night only. They may be caught with a gauze-net, or a pair of forceps covered with gauze. When they are taken, ſtick a pin through the middle of one of the hard wings, and paſs it through the body. They may be killed inſtantly, by immerſion in hot water, as well as in ſpirit of wine; then ſtick them on a piece of cork, and afterwards carefully place their legs in a creeping poſition, and let them continue expoſed to the air until all the moiſture is evaporated from their bodies. Beetles may alſo be preſerved in ſpirit of wine, brandy, or rum, cloſely corked up.

2. Inſects of the ſecond claſs (*hemiptera*) may be killed in the ſame manner as beetles, and likewiſe by means of a drop of the etherial oil of turpentine applied to the head; or in the manner to be deſcribed under the next claſs for killing moths.

3. The diviſion of butterflies and moths (*lepidoptera*),

ra), as well as all flies with membranaceous wings, ſhould be catched with a gauze net, or a pair of gauze forceps: when taken in the forceps, run a pin through the thorax or ſhoulders, between the fore-wings. After this is done, take the pin by the head, and remove the forceps, and with the other hand pinch the breaſt of the inſect, and it will immediately die: the wings of butterflies ſhould be expanded, and kept ſo by the preſſure of ſmall ſlips of paper for a day or two. Moths expand their wings when at reſt, and they will naturally take that poſition.

The larger kinds of theſe inſects will not ſo readily expire by this method, as by ſticking them upon the bottom of a cork exactly fitted to the mouth of a bottle, into which a little ſulphur had been put, and by gradually heating the bottle, till an exhalation of the ſulphur take place, when the inſect inſtantly dies, without injuring its colours or plumage.

The beſt method of having the moſt perfect butterflies is to find out, if poſſible, the larva or caterpillar of each, by examining the plants, ſhrubs, or trees, they uſually feed upon, or by beating the ſhrubs and trees with long poles, and thereby ſhaking the caterpillars into a ſheet ſpread underneath to receive them; to put them into boxes covered with thin canvas, gauze, or cat-gut, and to feed them with the freſh leaves of the tree or herb on which they are found; when they are full grown, they will go into the pupa or chryſalis ſtate, and require then no other care till they come out perfect butterflies, at which time they may be killed, as before directed. Sometimes theſe inſects may be found hanging to walls, pales, and branches of trees, in the chryſalis ſtate.

Moths might likewiſe be procured more perfect, by collecting the caterpillars, and breeding them in the ſame manner as butterflies. As the larvæ or caterpillars cannot be preſerved dry, nor very well kept in ſpirit, it would be ſatisfactory if exact drawings could be made of them while they are alive and perfect. It may be neceſſary to obſerve, that in breeding theſe kinds of inſects, ſome earth ſhould be put into the boxes, as likewiſe ſome rotten wood in the corners; becauſe, when the caterpillars change into the pupa or chryſalis ſtate, ſome go into the earth, and continue under ground for many months before they come out into the moth ſtate; and ſome cover themſelves with a hard ſhell, made up of ſmall pieces of rotten wood.

4. The fourth claſs of inſects *(neuroptera)* may be killed with ſpirit of wine, oil of turpentine, or by the fumes of ſulphur.

5. Thoſe of the next claſs *(hymenoptera)* may be killed in the ſame manner. A pin may be run through one of their wing-ſhells and body.

6. Inſects of the ſixth claſs *(diptera)* may likewiſe be killed by ſpirit, or by fumes of ſulphur.

7. Thoſe of the laſt diviſion *(aptera)* are in general ſubjects which may be kept in ſpirit.

When in ſearch of inſects, we ſhould have a box ſuitable to carry in the pocket, lined with cork at the bottom and top to ſtick them upon, until they are brought home. If this box be ſtrongly impregnated with camphor, the inſects ſoon become ſtupified, and are thereby prevented from fluttering and injuring their plumage. Beſides a ſmall forceps, the collector ſhould have a large muſqueto gauze-net, and alſo a pin-cuſhion with three or four different ſizes of pins to ſuit the different ſizes of inſects.

In hot climates inſects of every kind, but particularly the larger, are liable to be eaten by ants and other ſmall inſects; eſpecially before they are perfectly dry: to avoid this, the piece of cork on which our inſects are ſtuck in order to be dried, ſhould be ſuſpended from the ceiling of a room, by means of a ſlender ſtring or thread; beſmear this thread with bird-lime, or ſome adheſive ſubſtance, to intercept the rapacious vermin of thoſe climes in their paſſage along the thread.

After our inſects are properly dried, they may be placed in the cabinet or boxes where they are to remain: theſe boxes ſhould be kept dry; and alſo made to ſhut very cloſe, to prevent ſmall inſects from deſtroying them; the bottoms of the boxes ſhould be covered with pitch, or green wax, over which paper may be laid; or, which is better, lined with cork, well impregnated with a ſolution of corroſive ſublimate mercury in a ſaturated ſolution of crude ſal-ammoniac in water, an ounce of which will diſſolve 20 ſcruples of the ſublimate.

The fineſt collections have been ruined by ſmall inſects, and it is impoſſible to have our cabinets too ſecure. Such inſects as are thus attacked may be fumigated with ſulphur, in the manner deſcribed for killing moths; if this prove ineffectual, they may be immerſed in ſpirit of wine, without much injuring their fine plumage or colours, and afterwards let them be ſprinkled about their bodies and inſertions of the wings with the ſolution abovementioned. But baking the inſects in an oven, in the manner deſcribed for Birds (under that article), is the moſt effectual method of extirpating theſe enemies; however, the utmoſt caution is requiſite in this proceſs in regulating the heat of the oven.

N. B. All kinds of inſects having no wings, may be preſerved in ſpirits, brandy, or rum; except crabs, lobſters, and the like, which may conveniently be preſerved dry.

Insects giving Root to Plants. Of this we have an account, by Mr Fourgeroux, in the Memoirs of the Academy of Sciences for 1769. The plants, of which Mr Fourgeroux gives an account, are perfectly the reverſe of the worm-plant of China, deſcribed by Mr Reaumur in the year 1726. For, in that caſe, a worm fixes its ſnout into the extremity of the plant, and derives nouriſhment from it. But the plants, of which an account is here given, derive their nouriſhment from the animals.

The greateſt part of the animal-plants which he has ſeen, grow, he tells us, on the chryſalis of a ſpecies of cicada. The plant growing on theſe inſects has got the generic name of *clavaria,* becauſe its ſtalks and branches, when it has any, are terminated by tubercles, which give the appearance of little clubs. The root of this plant, in general, covers the body of the inſect, and ſometimes is even extended over its head. When theſe productions have for ſome time been preſerved in ſpirits, the plant and animal may be ſeparated from each other without hurting either. Small grooves, formed by the rings of the animal, may be obſerved running croſs the roots of the plant: but no veſtige can be found of the root's having any where penetrated the body of the inſect. Theſe plants produce fibres differing in length and number. The fibres are terminated by tubercles, which, before the plant arrives at maturity, are ſolid; but, after that period, they are found punctured, probably by worms which have ſuffered a metamorphoſis upon eſcaping from them.

According to Mr Fourgeroux, plants grow, not only on the chryſalis of the cicada, but upon the cicada itſelf. He ſaw one of this kind upon a cicada brought from Cayenne. The plant, in this caſe, differed from the clavaria already mentioned. It was a ſpecies of fucus, compoſed of long, white, ſilky fibres, covering the body of the inſect, and extending from ſeven to eight lines above and below its belly.

The author has found the clavaria growing upon worms. He has found it chiefly upon worms, which, ſuffering a metamorphoſis, become afterwards a ſmall ſpecies of May-bug. This chryſalis, he obſerves, is very different from that of the cicada; and, even in its worm-ſtate, may eaſily be diſtinguiſhed from it.

After deſcribing theſe different ſpecies of animal-plants, the author next proceeds to offer his opinion upon this ſubject. He firſt conſiders what had been ſaid by Dr Watſon, in the Philoſophical Tranſactions, concerning the vegetating-fly of the Caribbee iſlands.* Dr Watſon's account of theſe flies is, that they bury themſelves about the month of May, and begin to be metamorphoſed in June; and that the little plant which grows upon them reſembles a branch of coral, is about three inches in height, and carries ſmall protuberances, where worms are generated, which are again converted into flies. The author imagines, that, in this account, Dr Watſon has been deceived by the worms, which he has already obſerved will eat into the clavaria, and undergo a change in the holes which they have there made. Mr Fourgeroux is rather inclined to adopt the opinion of Dr Hill, founded upon obſervations made at Martinico. There the cicadæ are very frequent; and, during their chryſalis ſtate, bury themſelves among dead leaves, to wait their metamorphoſis. Dr Hill imagines, that the ſeeds of the clavaria are then attached to them, and are afterwards developed, much in the ſame manner as the *fungus ex pede equino* grows upon the hoofs of dead horſes.

It may appear aſtoniſhing, that the clavaria ſhould attach itſelf ſo conſtantly to the nymphæ of the cicadæ in America, as it is not obſerved to do ſo in other countries. For this Mr Fourgeroux attempts to account, from viewing the clavaria as a paraſite peculiar to this ſpecies of inſect; from the great number of the nymphæ of cicadæ which abound in America; and from the circumſtances of the climate and ſoil, which may render this phenomenon very common there, although it be not obſerved in Europe.

Insects blown from the Noſe. Of this we are furniſhed with many accounts in the works of medical authors. The fact is confirmed by Dr Monro ‡, who has received at different times ſome of theſe inſects from different perſons. They were all of the ſcolopendra kind, though not exactly anſwering to any deſcription of Linnæus. One of theſe he received from Mr Hill ſurgeon in Dumfries. It was an inch and a half long; and lived ſome hours after it was diſcharged, creeping about ſlowly on a table. It was then put into ardent ſpirits, ſoon after which it died.

Noxious Insects; Means of deſtroying them, or preventing their increaſe. The following remedies we find collected in the Gentleman's Magazine for October 1790.—Of thoſe ſubſtances which have been generally obſerved to be efficacious in driving away or in deſtroying inſects, mercury, and its various preparations, may be reckoned one of the moſt generally uſeful. Sulphur is alſo uſeful. Oils of all kinds have been often and deſervedly recommended. Tobacco is not leſs remarkable for its utility. Of the application of theſe in order.

1. Mercury is known to kill or drive away lice from the human body; and it may probably be of equal efficacy in ridding other animals of their inſects. For inſtance, ſheep having a ſmall quantity of mercurial ointment rubbed on their ſkins, on the ſides, between the fore-legs and the body, it may kill or drive away the inſect peculiar to them. Sulphur is recommended to be added to the mercurial ointment. Thus not only the inſect peculiar to them, but alſo the ſcab, may be cured: See the Tranſactions of the Society for the Encouragement of Arts, London. Vol. VII. VIII. p. 90. In the Tranſactions of the ſame Society, Vol. V. VI. p. 59. Mr Ailway directed that, in the winter, the walls, frames, &c. of his green and hot houſes ſhould be well waſhed with the following mixture: Take of corroſive ſublimate mercury four ounces, and diſſolve it in two gallons of water. Theſe houſes had been greatly infeſted with red-ſpiders and ants. After having been waſhed with the above mixture, neither were to be ſeen next ſummer. This waſh may be uſed on old garden walls, and to the roots of fruit-trees infeſted with inſects, if made weaker. It may deſtroy the tender leaves of plants, though not the roots. This waſh will effectually deſtroy that diſagreeable inſect the bug, and all other inſects of a tender cuticle; and it will not in the leaſt hurt the colour of bed-furniture or hangings. Care muſt be taken, that the waſh be applied into every crevice or folding of the furniture with a painter's bruſh. It will ſometimes be neceſſary to repeat the waſh, as ſome of the ova of bugs may remain concealed, notwithſtanding the utmoſt care.

Some of the Weſt India iſlands were much infeſted with large ants, which greatly hurt the ſugar-canes. The remedy was, to diſſolve corroſive ſublimate mercury in rum, in the proportion of two drams to a pint of ſpirits. This ſolution was poured on dry powdered ſugar; and when the ſugar was dried, it was laid in the paths of the ants. They eat it, and were deſtroyed. Might not this practice be imitated, by laying ſugar thus prepared on paper or pieces of thin boards near the roots of fruit-trees infeſted by inſects, eſpecially when the fruit is ripening? The papers or boards might be taken in during the night, or when it rained. The ſugar ſhould be coloured with indigo, or other ſubſtance, thereby to mark it as a ſubſtance to be avoided by curious idlers.

2. We are informed that a perſon, as an experiment, employed brimſtone in the following manner. Having cleared all round the roots of trees infeſted with caterpillars or other inſects, he ſtrewed ſome flour of brimſtone round the roots, and covered it with a thin ſprinkling of fine mould, that it might not be blown away by the wind, yet ſo that the ſun might operate through, and cauſe the brimſtone to fumigate Thus he deſtroyed the caterpillars. One pound he found

ſuf-

* See *Vegetable* Fly.

† *Ed. Med. Com.* ii. 312.

ſufficient for 200 trees. In hot climates the ſun may perhaps have that effect; but it ſcarcely will in cold. He alſo employed ſulphur in the following manner to drive inſects from tall trees. He ſplit the end of a pole, and put in the ſlit ſome matches, ſet them on fire, and held them under the parts of the trees chiefly affected. A pole thus armed, he found, would anſwer for three or four trees. Brimſtone thus mixed with damp ſtraw, and ſet on fire for inſtance, in hop-ground infeſted with the fly, might be of uſe to drive away the fly.

The itch is ſuppoſed to proceed from a very ſmall inſect which neſtles under the ſkin, and proceeds no farther into the habit; and is therefore attended with no dangerous conſequences. Brimſtone made into an ointment with hogs-lard is a ſure remedy.

Sheep are liable to an eruption on the ſkin, known by the name of the *ſcab*. The brimſtone, when added to the mercurial ointment recommended for that diſorder in the Tranſactions of the Society for the Encouragement of Arts, Vol. VII. p. 90, might perhaps render the application more efficacious and leſs dangerous.

3. The natives of hot countries are taught by experience, that an unctuous covering on their bodies prevents the bites of muſquitoes and all gnats. The white inhabitants in ſuch countries are not ſufficiently careful in preventing the leaſt ſtagnant water near their dwellings, in which the muſquitoes are bred; even in the waſte water thrown out they are produced. Dr Franklin, by a careful attention to this circumſtance, guarded his family in Philadelphia from ſuch inſects: one day ſeeing a number of muſquitoes in his library, he found on inquiry, that one of his ſervants had taken the cover off a tub placed near his window for receiving rain-water. On ſuch an occaſion the remedy is eaſy, viz. ſhutting the room up for the day, ſo that the muſquitoes cannot come at any water, in which time they die. Though this caution may ſeem trifling to thoſe who live in a mild climate, it is far otherwiſe in hot countries.

Oils being known to be moſt efficacious in deſtroying inſects, may not the uſe of it be extended to the deſtruction of worms in the bowels of horſes, where they may occaſion the violent pain they ſeem ſometimes to ſuffer? If the horſe was for ſome time kept faſting, and a large quantity of oil, ſuppoſe a pint, was given, if worms are the cauſe, the oil may in that caſe kill them.

Flowers, leaves, and fruit, on plants, are known to be devoured by caterpillars. Theſe are deſtroyed by oils, which cloſe the lateral pores by which they breathe. For this purpoſe it is adviſed, that, on the approach of ſpring, a cloth dipped in train oil be laid on ſuch parts of the tree in which there is the leaſt appearance of them.

We are informed, in the Memoirs of the Society of Agriculture at Paris, that oil of turpentine, when applied to animals which were covered with inſects, deſtroyed the inſects without hurting the animal. The author tried it on ſeveral trees, mixed with fine earth ſo as to incorporate them well, then adding water, ſtill ſtirring them carefully till the whole was brought to ſome degree of fluidity. In this mixture he dipped branches of fruit-trees on which there were inſects, and hereby deſtroyed not only the eggs but alſo the inſects, without hurting the leaves. This compoſition may be got off by waſhing, or the firſt heavy ſhower. From theſe experiments the author thinks, that oil of tupentine may with equal efficacy be employed for killing various kinds of lice on domeſtic animals.

We are informed, in the Tranſactions of the Society for the Encouragement of Arts, Vol. V. p. 45, that Mr Winter, among other experiments on turnip-ſeed, ſteeped the ſeed 24 hours in a ſufficient quantity of train oil. He then drained the oil from the ſeed, which he mixed with a quantity of fine ſifted earth, and immediately ſowed it in drils. When the plants began to appear on the ſurface, the ground was ſown with ſoot. He found that ſeed ſteeped in lintſeed oil anſwered equally well. The turnips the leaſt injured by the fly were thoſe that grew from ſeed ſteeped as above, which grew ſo luxuriantly as to produce rough leaves ſeveral days prior to the moſt flouriſhing of any of his other experiments, and were the better enabled to withſtand the fly's attack. The leaves of theſe turnips were of a darker green, and appeared twice as thick in bulk and luxuriancy as the other turnips, and were a conſiderable deal larger. The ſeed was drilled an inch and a half deep, and at a foot diſtance in the rows. Train oil is apt to kill the leaves of plants which have been injured by inſects, but lintſeed oil has not that effect, though equally deſtructive to the inſects. The train oil ſeems to act both as an oil, and by its diſagreeable ſmell it prevents inſects approaching it. In this reſpect it may be ſucceſsfully uſed to prevent field-mice or other vermin preying on acorns, cheſnuts, or other ſeeds ſteeped in it before they are ſown.

When thus giving directions for preventing the fly on turnips, a late experiment ſhould be mentioned by the diſcloſing of which a perſon gained a conſiderable reward. His ſecret was, running a roller over the ground early in the morning, while the dew remained on the ground, on the firſt appearance of the fly. The dew entangled the flies ſo much, that they could not make their eſcape, and were therefore cruſhed to death. As the roller may leave the ſurface of the earth too hard, ſome very properly adviſe to fix ſome boughs of elder in a grate or hurdle, to be drawn over the field; and if the boughs had been before fumigated with the ſmoke of tobacco, or tincture of aſafœtida, the ſucceſs would be the ſurer. The moſt certain method of preventing the hurt done by the fly is to raiſe the plants in a nurſery, and at a proper age to tranſplant them, being carried to the ground in a wheelbarrow filled with manure ſoftened with water ſo as to admit the plants. This method will ſecure their more ſpeedy growth. In the nurſery the attack of the fly may be prevented by ſprinkling ſoot or quicklime on the ground. The utility of tranſplanting turnips is evident by the practice of tranſplanting the turnip-rooted cabbage. They who are diſcouraged from this practice by the expence attending it, do not reflect that the hoeing is prevented, and the plants grow the better, being ſet in freſh earth.

4. Before proceeding to direct the uſe of the laſt means mentioned, viz. tobacco, for deſtroying inſects in turnips, it may be proper to mention an experiment made by Mr Green, of her majeſty's flower-garden at Kew, He contrived a pair of bellows, ſimilar to that employed in recovering people ſeemingly drowned. It has a

cavity in the nozzle, in which ſome tobacco is put, with a live coal over it. The bellows being then worked, the tobacco is ſet on fire, and the ſmoke is directed to any particular ſpot. A lady was fond of having the moſk-roſe in her dreſſing-room, but was prevented from having it on account of the green inſects which conſtantly adhere to that plant. To remedy this inconvenience, Mr Green had a box made large enough to contain a pot in which a plant of the moſk-roſe grew. In one end of the box was a hole, to admit the nozzle of the bellows; the bellows was worked, and the ſmoke was received into the box. When the tobacco was conſumed, the nozzle was withdrawn, and a cork being put into the hole, the box thus remained till morning, when the inſects were all laid dead on the earth. Being ſwept off, the plant was in a ſtate fit for a dreſſing room. Many plants thus infeſted with inſects may be too large, or otherwiſe ſo placed as not to be put into a box. In this caſe it occurred to the writer of theſe obſervations, that being ſprinkled with an infuſion of tobacco in water it might in ſome degree anſwer the ſame purpoſe. On trial he found it anſwer, and he thus freed other plants of their inſects. He alſo uſed it on trees of eaſy acceſs with advantage. Train oil is ſo inimical to tender plants or leaves, that it deſtroys them if inſects have in the leaſt hurt them; whereas the infuſion, inſtead of killing the leaves, promoted a freſh vegetation.

Fruit trees often become the prey of inſects. Thoſe againſt a wall, or in eſpaliers, being eaſily come at, much of the miſchief may be prevented by cutting off the leaves ſo ſoon as they are obſerved to be curled; for then freſh eggs are laid on them, probably by butterflies. If ſprinkled with the infuſion of tobacco, it will prevent their coming to life. After the fruit is formed, the infuſion muſt not be uſed, leſt the taſte and ſmell may remain. The ſciſſars are then the proper remedies, which ladies may employ as amuſement, and may thereby preſent fruit to their friends of their own preſerving. A lye of the aſh of plants ſprinkled on the leaves may have a good effect, as alſo on other pot-herbs, which are often the prey of caterpillars. As many inſects, beſides thoſe bred on the leaves or in the walls, may deſtroy the fruit, the ſugar with the corroſive ſublimate, as already deſcribed, may be laid in the way of other inſects, to all which it will prove a ſpeedy death. Diligent inſpection into their retreats is the moſt certain means of preventing the loſs ſuſtained by ſnails. Ants are prevented riſing up the trees, by laying round the roots powdered chalk, or any other ſubſtance which by entangling their feet prevents their croſſing it. Care ſhould be taken to deſtroy their neſts every where near the garden.

Hops are now become an article of ſo great conſequence, that it deſerves our particular attention. Early in its growth, when the vines begin to aſcend the poles, a black fly preys on its leaves, frequently in ſuch numbers, as, by deſtroying the leaves, to interrupt the vegetation, much of the food of plants being abſorbed by the leaves. The infuſion of tobacco deſtroys them, or at leaſt drives them away ſo effectually, that a plant almoſt totally ſtripped of its leaves has put out freſh leaves after the uſe of it. If care be not taken, they will again fall on the freſh leaves. As the flies lodge on the lower ſide of the leaves, they are protected from ſtorms of rain, and therefore the infuſion muſt be driven upwards by a forcing pump. As it is ſaid that the expence of tobacco is too great, perhaps lime-water, or even water by itſelf, driven ſtrongly againſt the leaves, might drive them away. The labour attending ſuch experiments in a large plantation diſcourages others, without reflecting that, if ſuch means are uſed early, the flies may more eaſily be got rid of. Free ventillation is undoubtedly beneficial to all plants; and hence perhaps the particular advantages of drilling corn in rows a little diſtant. If alleys ſomewhat larger than common were made in the plantations of hops, there might be ſufficient ſpaces left where the alleys croſs one another to admit of ſetting damp ſtraw, or other materials mixed with brimſtone, ſoot, &c. on fire. Smoke itſelf is ſaid to prevent the fly; and if ſo, it will ſtill act more powerfully when mixed with ſuch materials. It has been obſerved in Sweden, that the hops grow naturally among heaps of ſtones or fragments of rocks. They therefore adviſe to cover the ground round their roots with ſtones, which will prevent the inſects laying their eggs near the roots in the ground, where they lay them to be protected during the winter. The ſtones will alſo preſerve moiſture at the roots during the ſummer. A rope cannot be drawn acroſs a plantation of hops, as it can acroſs a field of corn, in caſe of mildew. Here water to waſh off the clammy juice that entices and feeds inſects ſeems to be the only remedy. The plantation being well ventilated, may at leaſt prevent the frequency of it. The forcing-pump will moſt effectually waſh off this exudation.

Cruelty to INSECTS. It does not appear upon what principle of reaſon and juſtice it is, that mankind have founded their right over the lives of every creature that is placed in a ſubordinate rank of being to themſelves. Whatever claim they may have in right of food and ſelf-defence (to which ought we to add the purpoſes of the naturaliſt, explained above?) did they extend their privilege no farther than thoſe articles would reaſonably carry them, numberleſs beings might enjoy their lives in peace, who are now hurried out of them by the moſt wanton and unneceſſary cruelties. It is ſurely difficult to diſcover why it ſhould be thought leſs inhuman to cruſh to death a harmleſs inſect, whoſe ſingle offence is that he eats that food which nature has prepared for his ſuſtenance, than it would be were we to kill any bulky creature for the ſame reaſon. There are few tempers ſo hardened to the impreſſions of humanity, as not to ſhudder at the thought of the latter; and yet the former is univerſally practiſed without the leaſt check of compaſſion. This ſeems to ariſe from the groſs error of ſuppoſing, that every creature is really in itſelf contemptible, which happens to be clothed with a body infinitely diſproportionate to our own, not conſidering that *great* and *little* are merely relative terms. But the inimitable Shakeſpeare would teach us, that

> ———the poor beetle that we tread upon,
> In corp'ral ſuff'rance, feels a pang as great
> As when a giant dies.———

And indeed there is every reaſon to believe that the ſenſations of many inſects are as exquiſite as thoſe of creatures of far more enlarged dimenſions, perhaps even more ſo. The millepede, for inſtance, rolls itſelf round upon the ſlighteſt touch, and the ſnail gathers in her horns upon the leaſt approach of our hand. Are not theſe the ſtrongeſt indications of *their* ſenſibility? and is it any evidence of *ours*, that we are not therefore induced to treat them with a more ſympathiſing tenderneſs?

Montaigne remarks, that there is a certain claim of kindneſs and benevolence which every ſpecies of creatures has a right to from us. It is to be regretted that this general maxim is not more attended to in the affair of education, and preſſed home upon tender minds in its full extent and latitude. We are far, indeed from thinking, that the early delight which children diſcover in tormenting flies, &c. is a mark of any *innate* cruelty of temper, becauſe this turn may be accounted for on other principles; and it is entertaining unworthy notions of the Deity, to ſuppoſe he forms mankind with a propenſity to the moſt deteſtable of all diſpoſitions; but moſt certainly by being unreſtrained in ſports of this kind, they may acquire by habit, what they never would have learned from nature, and grow up into a confirmed inattention to every kind of ſuffering but their own. Accordingly the ſupreme court of judicature at Athens thought an inſtance of this ſort not below its cognizance, and puniſhed a boy for putting out the eyes of a poor bird that had unhappily fallen into his hands.

It might be of ſervice, therefore, it ſhould ſeem, in order to awaken as early as poſſible in children an extenſive ſenſe of humanity, to give them a view of ſeveral ſorts of inſects as they may be magnified by the aſſiſtance of glaſſes, and to ſhow them that the ſame evident marks of wiſdom and goodneſs prevail in the formation of the minuteſt inſect, as in that of the moſt enormous leviathan: that they are equally furniſhed with whatever is neceſſary, not only to the preſervation, but the happineſs of their beings in that claſs of exiſtence to which Providence has aſſigned them; in a word, that the whole conſtruction of their reſpective organs diſtinctly proclaims them the objects of the divine benevolence, and therefore that they juſtly ought to be ſo of ours.

INSERTION, in anatomy, the cloſe conjunction of the veſſels, tendons, fibres, and membranes of the body with ſome other parts.

INSINUATION denotes a cunning and covert way of creeping into any perſon's favour.

Insinuation of a Will, among Civilians, is the firſt production of it, or the leaving it with the regiſter, in order to its probate. See Will.

INSIPID, tasteless, that which has nothing in it pungent enough to affect the palate, tongue, &c. and to occaſion that ſenſation we call *taſting*.

INSITION, Insitio, in botany, denotes the ſame with engrafting; viz. the act of inſerting and uniting a cyon, bud, or the like, in the ſubſtance of the ſtock.

INSOLATION, in pharmacy, a method of preparing certain fruits, drugs, &c. by expoſing them to the heat of the ſun's rays; either to dry, to maturate, or to ſharpen them; as is done in vinegar, figs, &c.—The word comes from the Latin verb *inſolare*, which is uſed by Pliny and Columella, and ſignifies *to expoſe to the ſun*.

INSOLVENT, a term applied to ſuch perſons as have not wherewithal to pay their juſt debts. A perſon dying, and not leaving eſtate ſufficient to diſcharge theſe, is ſaid to die inſolvent.

Trial by INSPECTION, or Examination, is when, for the greater expedition of a cauſe, in ſome point or iſſue, being either the principal queſtion, or ariſing collaterally out of it, but being evidently the object of ſenſe, the judges of the court, upon the teſtimony of their own ſenſes, ſhall decide the point in diſpute. For, where the affirmative or negative of a queſtion is matter of ſuch obvious determination, it is not thought neceſſary to ſummon a jury to decide it; who are properly called in to inform the conſcience of the court of dubious facts: and therefore, when the fact, from its nature, muſt be evident to the court either from ocular demonſtration or other irrefragable proof, there the law departs from its uſual reſort, the verdict of 12 men, and relies on the judgment of the court alone. As in caſe of a ſuit to reverſe a fine for non-age of the cognizor, or to ſet aſide a ſtatute or recognizance entered into by an infant; here, and in other caſes of the like ſort, a writ ſhall iſſue to the ſheriff, commanding him that he conſtrain the ſaid party to appear, that it may be aſcertained by the view of his body by the juſtices, whether he be of full age or not: *Ut per aſpectum corporis ſui conſtare poterit juſticiariis noſtris, ſi prædictus an ſit plenæ ætatis necne.* If, however, the court has, upon inſpection, any doubt of the age of the party (as may frequently be the caſe), it may proceed to take proofs of the party; and particularly may examine the infant himſelf upon an oath of *voir dire, veritatem dicere*; that is, to make true anſwers to ſuch queſtions as the court ſhall demand of him: or the court may examine his mother, his godfather, or the like.

INSPECTOR, a perſon to whom the care and conduct of any work is committed.

Inspectors, in the Roman law, were ſuch perſons as examined the quality and value of lands and effects, in order to the adjuſting or proportioning taxes and impoſitions to every man's eſtate.

The Jews alſo have an officer, in their ſynagogue, whom they call *inſpector*, חזן *hhazen*. His buſineſs conſiſts principally in inſpecting or overlooking the prayers and leſſons, in propoſing and ſhowing them to the reader, and in ſtanding by him to ſee he reads right; and, if he makes miſtakes, he is to correct him.

INSPIRATION, among divines, &c. implies the conveying of certain extraordinary and ſupernatural notices or motions into the ſoul, or it denotes any ſupernatural influence of God upon the mind of a rational creature, whereby he is formed to any degree of intellectual improvements, to which he could not, or would not, in fact have attained in his preſent circumſtances in a natural way. Thus the prophets are ſaid to have ſpoken by divine inſpiration.

Some authors reduce the inſpiration of the ſacred writers to a particular care of Providence, which prevented any thing they had ſaid from failing or coming to nought; maintaining, that they never were really inſpired either with knowledge or expreſſion.

According to M. Simon, inſpiration is no more than a direction of the Holy Spirit, which never permitted the ſacred writers to be miſtaken.

It is a common opinion, that the inſpiration of the Holy Spirit regards only the matter, not the ſtyle or words; and this ſeems to fall in with M. Simon's doctrine of direction.

Theological writers have enumerated ſeveral kinds of inſpiration: ſuch as an inſpiration of ſuperintendency, in which God does ſo influence and direct the mind of any perſon, as to keep him more ſecure from error in ſome various and complex diſcourſe, than he would have been merely by the uſe of his natural faculties; plenary ſuperintendent inſpiration, which excludes any mixture of error at all from the performance ſo ſuperintended; inſpiration of elevation, where the faculties act in a regular, and, as it ſeems, in a common manner, yet are raiſed to an extraordinary degree, ſo that the compoſure ſhall, upon the whole, have more of the true ſublime or pathetic, than natural genius could have given; and inſpiration of ſuggeſtion, when the uſe of the faculties is ſuperſeded, and God does, as it were, ſpeak directly to the mind, making ſuch diſcoveries to it as it could not otherwiſe have obtained, and dictating the very words in which ſuch diſcoveries are to be communicated, if they are deſigned as a meſſage to others. It is generally allowed that the New Teſtament was written by a ſuperintendent inſpiration; for without this the diſcourſes and doctrines of Chriſt could not have been faithfully recorded by the evangeliſts and apoſtles; nor could they have aſſumed the authority of ſpeaking the words of Chriſt, and evinced this authority by the actual exerciſe of miraculous powers: and beſides the ſacred writings bear many obvious internal marks of their divine original, in the excellence of their doctrines, the ſpirituality and elevation of their deſign, the majeſty and ſimplicity of their ſtyle, the agreement of their various parts, and their efficacy on mankind; to which may be added, that there has been in the Chriſtian church, from its earlieſt ages, a conſtant tradition, that the ſacred books were written by the extraordinary aſſiſtance of the Spirit, which muſt at leaſt amount to ſuperintendent inſpiration. But it has been controverted whether this inſpiration extended to every minute circumſtance in their writings, ſo as to be in the moſt abſolute ſenſe plenary. Jerom, Grotius, Eraſmus, Epiſcopius, and many others, maintain that it was not; whilſt others contend, that the emphatical manner in which our Lord ſpeaks of the agency of the Spirit upon them, and in which they themſelves ſpeak of their own writings, will juſtify our believing that their inſpiration was plenary, unleſs there be very convincing evidence brought on the other ſide to prove that it was not: and if we allow, it is ſaid, that there were ſome errors in the New Teſtament, as it came from the hands of the apoſtles, there may be great danger of ſubverting the main purpoſe and deſign of it; ſince there will be endleſs room to debate the importance both of facts and doctrines.

Among the Heathens, the prieſts and prieſteſſes were ſaid to be divinely inſpired, when they gave oracles.—The poets alſo laid claim to it; and to this end they always invoked Apollo and the Muſes at the beginning of any great work.

Inspiration, in phyſic, is underſtood of that action of the breaſt, by which the air is admitted within the lungs; in which ſenſe, inſpiration is a branch of reſpiration, and ſtands oppoſed to Exspiration.

This admiſſion of the air depends immediately on its ſpring or elaſticity, at the time when the cavity of the breaſt is enlarged by the elevation of the thorax and abdomen, and particularly by the motion of the diaphragm downwards: ſo that the air does not enter the lungs, becauſe they are dilated; but thoſe dilate, becauſe the air enters within them. Nor is it the dilatation of the breaſt which draws in the air, as is commonly thought, though this is a condition abſolutely neceſſary to inſpiration; but an actual intruſion of the air into the lungs. See Respiration.

INSPISSATING, in pharmacy, an operation whereby a liquor is brought to a thicker conſiſtence, by evaporating the thicker parts.

INSPRUCK, a city of Germany, in the circle of Auſtria, and capital of the county of Tyrol, received its name from the river Inn, which runs by it. It has a noble caſtle or palace, formerly the reſidence of the archdukes of the houſe of Auſtria, with a cathedral where they are buried. The houſes, though built in the German taſte, are rather handſomer; and the ſtreets, though narrow, are remarkably well paved. For the defence of this city the inhabitants can place but little confidence in their fortifications, which are very trifling. They ſeem rather to depend on the natural faſtneſſes of their country; which appear indeed to form a barrier, ſo perfectly inacceſſible to any enemy, that even the great Guſtavus Adolphus, after having over-run with his victorious arms the other parts of Germany, could never make any impreſſion upon this. It is ſeated in a pleaſant valley, in E. Long. 11. 27. N. Lat. 47. 3.

INSTALLATION, the act of giving viſible poſſeſſion of an order, rank, or office, by placing in the proper ſeat. See Instalment.

INSTALMENT, a ſettling or inſtating any perſon in a dignity. The word is derived from the Latin *in*, and *ſtallum*, a term uſed for a ſeat in church, in the choir, or a ſeat or bench in a court of juſtice, &c. Though Voſſius is of opinion the word is of German origin.

Instalment is chiefly uſed for the induction of a dean, prebendary, or other ecleſiaſtical dignitary, into the poſſeſſion of his ſtall, or proper ſeat, in the cathedral church to which he belongs. This is ſometimes alſo called *inſtallation*.

Instalment is likewiſe uſed for the ceremony, whereby the knights of the garter are placed in their rank, in the chapel of St George at Windſor.

INSTANT, a part of duration in which we perceive no ſucceſſion: or it is that which takes up the time only of one idea in our minds.

INSTAURATION, the re-eſtabliſhment, or reſtauration of a religion, a church, or the like, to its former ſtate. The word is by ſome derived from the old Latin *inſtaurum*, which ſignified the "ſtock" of things neceſſary for the tilling and managing of grounds; as cattle, tools, harneſs, &c. But the word *inſtaurum* is only of the middle age: *inſtauratio* is of much greater antiquity, and by ſome derived from *inſtar*, "like;" as importing a thing's being brought to its former likeneſs or appearance. See Restauration.

INSTEP, in the manege, is that part of a horſe's hind leg, which reaches from the ham to the paſtern-joint.

1 Definition.

INSTINCT, a certain power or diſpoſition of mind, by which, independent of all inſtruction or experience, without deliberation, and without having any end in view, animals are unerringly directed to do ſpontaneouſly (A) whatever is neceſſary for the preſervation of the individual or the continuation of the kind. Such in the human ſpecies is the inſtinct of ſucking exerted immediately after birth: and ſuch in the inferior creation is the inſtinct by which inſects invariably depoſit their eggs in ſituations moſt favourable for hatching and affording nouriſhment to their future progeny. Theſe operations are neceſſary for the preſervation of the individual and the continuation of the kind; but neither the infant nor the inſect knows that they are neceſſary: they both act without having any end in view, and act uniformly without inſtruction and without experience.

2 Different opinions reſpecting human inſtincts.

The actions of the inferior animals are generally directed by inſtinct; thoſe of man by reaſon. This at leaſt is the caſe with reſpect to men in a ſtate of civilization: in the ſavage ſtate they are probably little leſs the ſlaves of inſtinct than the brutes themſelves. Concerning *human* inſtincts, indeed, philoſophers differ widely in opinion; ſome maintaining that man is endowed with a greater number of inſtincts than any ſpecies of brutes; whilſt others deny that in human nature there is any power or propenſity at all which can properly be called inſtinctive.

3 The cauſe of that difference.

This diverſity of opinion may eaſily be traced to its ſource. There are not many original thinkers in the world. The greater part even of thoſe who are called philoſophers, implicitly adopt the opinions of certain maſters whoſe authority they deem ſufficient to ſupply the place of argument; and having choſen their reſpective guides, each maintains with zeal what his maſter taught, or is ſuppoſed to have taught. When Locke ſo ſucceſsfully attacked the doctrine of innate ideas and innate principles of ſpeculative truth, he was thought by many to have overturned at the ſame time all innate principles whatever; to have diveſted the human mind of every paſſion, affection, and inſtinct; and to have left in it nothing but the powers of ſenſation, memory, and intellect. Such, we are perſuaded, was not his intention; nor is there any thing in his immortal work which, when interpreted with candour, appears to have ſuch a tendency.

In our opinion, great part of the *Eſſay on Human Underſtanding* has been very generally miſunderſtood. Much of its merit, however, was ſoon diſcovered; and mankind, finding philoſophy diſencumbered of the barbarous jargon of the ſchools, and built upon a few ſelf-evident principles, implicitly embraced every opinion advanced, or which they *ſuppoſed* to be advanced, by the illuſtrious author; eſpecially if that opinion was contrary to any part of the ſcholaſtic ſyſtem which had ſo long been employed to perplex the underſtanding and to veil abſurdity. Hence aroſe many philoſophers of eminence both at home and abroad; who maintained, as they imagined, upon the principles of Locke, that in the human mind there are no inſtincts, but that every thing which had been uſually called by that name is reſolvable into aſſociation and habit. This doctrine was attacked by Lord Shafteſbury, who introduced into the theory of mind, as faculties derived from nature, a ſenſe of beauty, a ſenſe of honour, and a ſenſe of ridicule; and theſe he conſidered as the teſts of ſpeculative truth and moral rectitude. His lordſhip's principles were in part adopted by Mr Hutchiſon of Glaſgow, who publiſhed a ſyſtem of moral philoſophy, founded upon a ſenſe of inſtinct, to which he gave the name of the *moral ſenſe*; and the undoubted merit of his work procured him many followers.

Men generally run from one extreme to another. It being now diſcovered, or at leaſt ſuppoſed, that the human mind is endowed with inſtinctive principles of action, a ſect of philoſophers ſoon afterwards aroſe, who maintained with much vehemence that it is likewiſe endowed with inſtinctive principles of belief; and who built a ſyſtem of metaphyſics, if ſuch it may be called, upon a number of innate, diſtinct, and independent ſenſes. The riſe of this ſect is well known. Berkeley and Hume had adopted Locke's doctrine reſpecting the origin of our ideas; and had thence deduced conſequences ſuppoſed to be dangerous in themſelves, but which, it was thought, could not be denied without refuſing the principles from which they were inferred. The foundation of the inſtinctive ſyſtem being thus laid, the ſyſtem itſelf was rapidly carried to a height far beyond what ſeems to have been the intention of its excellent author; and reaſon was well nigh baniſhed from the regions of philoſophy. For ſuch a proceeding it is not difficult to aſſign the cauſe. The inſtinctive ſcheme requires much leſs labour of inveſtigation than the ſyſtems of Locke and the ancients; for upon the principles of it, when carried to its utmoſt extent, every phenomenon in human nature is thought to be ſufficiently accounted for, by ſuppoſing it the effect of a particular inſtinct implanted in the mind for that very purpoſe. Hence in ſome popular works of philoſophy we have a detail of ſo many diſtinct internal *ſenſes*, that it requires no ſmall ſtrength of memory to retain their very names: beſides the *mo-*

(A) As nothing is of greater importance in the philoſophy of mind than accurate definitions, it may not be improper to obſerve, that through the whole of this article the word *ſpontaneous* is to be taken in the ſenſe in which it is uſed in the following extracts from *Hale's Origin of Mankind*: "Many analogical motions in animals, though I cannot call them *voluntary*, yet I ſee them *ſpontaneous*: I have reaſon to conclude, that theſe are *not* ſimply *mechanical*." "The ſagacities and inſtincts of brutes, the *ſpontaneouſneſs* of many of their motions, are not explicable, without ſuppoſing ſome active determinate power connected to and inherent in their ſpirits, of a higher extraction than the bare natural modification of matter." If this be attended to, our definition of inſtinct will be found perfectly conſonant to that which has been given by the author of *Ancient Metaphyſics*. "Inſtinct (he ſays) is a determination given by Almighty Wiſdom to the mind of the brute, to act in ſuch or ſuch a way, upon ſuch or ſuch an occaſion, without intelligence, without knowledge of good or ill, and without knowing for what end or purpoſe he acts."

ral ſenſe, we have the ſenſe of *beauty*, the ſenſe of *deformity*, the ſenſe of *honour*, the *hoarding* ſenſe, and a thouſand others which it is needleſs here to mention.

This new ſyſtem, which converts the philoſophy of mind into mere hiſtory, or rather into a collection of facts and anecdotes, though it has made a rapid progreſs, is not yet univerſally received. It has been oppoſed by many ſpeculative men, and by none with greater ſkill than Dr Prieſtley; who maintains, with the earlieſt admirers of Locke, that we have from nature no innate ſenſe of truth, nor any inſtinctive principle of action; that even the action of ſucking in new-born infants is to be accounted for upon principles of mechaniſm; and that the deſire of the ſexes is merely aſſociation.

4 Inſtinct confounded with reaſon and with mechaniſm.

Whilſt men, eminent for candour as well as for ſcience, have thus been diſputing the limits between inſtinct and reaſon in the human mind, and endeavouring to aſcertain the actions which reſult from each, two writers of name, treating of that ſubject, have lately advanced opinions, which, if admitted as juſt, muſt render the diſpute henceforth ridiculous, and put an end for ever to all moral inquiries. Mr Smellie, in a work which he calls *The Philoſophy of Natural Hiſtory*, affirms, that between *inſtinctive* and *rational motives* no diſtinction exiſts, but that the reaſoning faculty itſelf is the neceſſary reſult of inſtinct; and Dr Read, in his *Eſſays on the Active Powers of Man*, by attributing to *inſtinct* the action of breathing, ſeems to confound that principle with mere mechaniſm.

5 Theſe three principles accurately diſtinguiſhed from each other.

That reaſon, inſtinct, and mechaniſm, are all eſſentially different from one another, has hitherto been univerſally allowed; and it appears not to be a taſk of much difficulty to point out in what reſpect each of them differs from the other two. Actions performed with a view to accompliſh a certain *end* are called *rational* actions, and the end in view is the *motive* to their performance. *Inſtinctive* actions have a *cauſe*, viz. the internal impulſe by which they are ſpontaneouſly performed; but they cannot be ſaid to have a *motive*, becauſe they are not done with any *view to conſequences*. Actions *automatic* have likewiſe a cauſe; but that cauſe is not internal impulſe, but *mere mechaniſm*, by which they are performed without any ſpontaneity of the agent. Thus, a man gives charity in order to relieve a perſon from want; he performs a grateful action as a duty incumbent on him; and he fights for his country in order to repel its enemies. Each of theſe actions is performed from a *motive*, and therefore they are all *rational* actions. An infant is impelled to ſuck the breaſt, but he knows not that it is neceſſary for his preſervation; a couple of young ſavages go together, for the firſt time, without any view to offſpring or any *determinate* idea of enjoyment. Theſe actions have *no* motive, and therefore are not rational: but as they are performed by a *ſpontaneous exertion* of the agents, they are not to be attributed to mere mechaniſm; they are therefore *inſtinctive* actions. A man breathes without any motive, without any ſpontaneous exertion of his own, and that as well when he is aſleep as when he is awake. The action of breathing therefore is neither rational nor inſtinctive, but merely *automatic* or *mechanical*. All this ſeems to be very plain. To talk of the motives of actions performed by inſtinct, in an argument intended to prove that between reaſon and inſtinct there is no difference, is either to beg the queſtion or to pervert language. If the author of the Philoſophy of Natural Hiſtory chooſes to call the *impulſe* which prompts the infant to ſuck by the name of *motive*, he only uſes an Engliſh word improperly; if it be his intention to affirm that ſuch a motive is not totally and eſſentially different from that which prompts a man to give charity or to fight for his country, he affirms what all mankind know to be falſe (B).

Having thus aſcertained what we mean by inſtinct, we ſhall now proceed to enquire, Whether or not there be any inſtinctive principles in man? But in order to proceed upon ſure grounds, it will be proper to conſider, in the firſt place, ſuch actions of the inferior animals as are *generally* allowed to be inſtinctive: for an attempt has lately been made to prove, that even theſe actions are the offspring of reaſon influenced by motives; and that *inſtinct*, as we have defined it, is a mere imaginary principle, which has no exiſtence either in man or brute.

6 Inſtances of inſtinct in animals.

It has been ſaid that caterpillars, when ſhaken off a tree in every direction, inſtantly turn round towards the trunk, and climb up, though they had never formerly been on the ſurface of the ground. This is a ſtriking inſtance of inſtinct. On the tree, and not upon the ground, the caterpillar finds its food. If therefore it did not turn and climb up the trunk, it would

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(B) The author of *Ancient Metaphyſics*, whoſe learned work contains more good ſenſe on this ſubject than any other book which we have ſeen, thus diſtinguiſhes between reaſon and inſtinct: "With reſpect to the mere animal, it is evident, that he purſues nothing but what is conducive either to the preſervation of the animal life or to the continuation of the kind. On the other hand, the object which the intellectual mind purſues, is the *fair* and the *handſome*; and its happineſs conſiſts in the contemplation of theſe. And though it purſue alſo what is *uſeful* and *profitable* for the being and well-being of the animal life, yet it is for the ſake, not of the animal life itſelf, but of the το καλον or *beautiful*; which therefore is the ultimate object of its purſuit in all things.

"Another material difference in practice betwixt the animal and intellectual mind is, that every action of intellect proceeds from an opinion formed concerning what is good or ill, beautiful or the contrary, in the action. When we do ſo, we are ſaid to act from *will*, which is always determined by ſome opinion formed of the kind I have mentioned: whereas, when we act from mere appetite or inclination, without deliberation or opinion formed, we act as the brute does always; for he has no *will*, but is prompted to action by natural impulſe, or ορμη, as the Greeks call it.

"A third very material difference is, that intellect, in all its operations, propoſes ends, and deviſes means to accompliſh theſe ends; whereas the inſtinct of the brute proceeds without conſideration either of ends or means."

would inevitably periſh: but ſurely the caterpillar knows not that ſuch an exertion is neceſſary to its preſervation; and therefore it acts not from motives, but from blind impulſe. The bee and the beaver are endowed with an inſtinct which has the appearance of foreſight. They build magazines, and fill them with proviſions; but the foreſight is not theirs. Neither bees nor beavers know any thing of futurity. The ſolitary waſp digs holes in the ſand, in each of which ſhe depoſits an egg. Though ſhe certainly knows not that an animal is to proceed from that egg, and ſtill leſs if poſſible that this animal muſt be nouriſhed with other animals, ſhe collects a few ſmall green worms, which ſhe rolls up in a circular form, and fixes in the hole in ſuch a manner that they cannot move. When the waſp-worm is hatched, it is amply ſtored with the food which nature has deſtined for its ſupport. The green worms are devoured in ſucceſſion; and the number depoſited is exactly proportioned to the time neceſſary for the growth and transformation of the waſp-worm into a fly; when it iſſues from the hole, and is capable of procuring its own nouriſhment. This inſtinct of the parent-waſp is the more remarkable, that ſhe feeds not upon fleſh herſelf. Birds of the ſame ſpecies, unleſs when reſtrained by peculiar circumſtances, uniformly build their neſts of the ſame materials, and in the ſame form and ſituation, though they inhabit very different climates; and the form and ſituation are always exactly ſuited to their nature, and calculated to afford them ſhelter and protection. When danger, or any other circumſtance peculiar to certain countries, renders a deviation from the common form or ſituation of neſts neceſſary, that deviation is made in an equal degree, and in the very ſame manner, by all the birds of one ſpecies; and it is never found to extend beyond the limits of the country where alone it can ſerve any good purpoſe. When removed by neceſſity from their eggs, birds return to them with haſte and anxiety, and ſhift them ſo as to heat them equally; and it is worthy of obſervation, that their haſte to return is always in proportion to the cold of the climate. But do birds reaſon, and all of the ſame ſpecies reaſon equally well, upon the nature and extent of danger, and upon the means by which it can beſt be avoided? Have birds any notion of equality, or do they know that heat is neceſſary for incubation? No: in all theſe operations men recognize the intentions of nature; but they are hid from the animals themſelves, and therefore cannot operate upon them as motives.

Of the inſtinct of animals we ſhall give one inſtance more in the elegant and perſpicuous language of Dr Reid. "every manufacturing art among men (ſays that able writer) was invented by ſome men, improved by others, and brought to perfection by time and experience. Men learn to work in it by long practice, which produces a habit. The arts of men vary in every age and in every nation, and are found only in thoſe men who have been taught them. The manufactures of animals differ from thoſe of men in many ſtriking particulars. No animal of the ſpecies can claim the invention; no animal ever introduced any new improvement, or any variations from the former practice; every one of the ſpecies has equal ſkill from the beginning, without teaching, without experience, and without habit; every one has its art by a kind of inſpiration. I do not mean that it is inſpired with the *principles* or *rules* of the art, but with the ability of *working* in it to perfection, without any knowledge of its principles, rules, or end. The work of every animal is indeed like the works of nature, perfect in its kind, and can bear the moſt critical examination of the mechanic or the mathematician, of which a honeycomb is a ſtriking inſtance.

7 Remarkable inſtance in the bee.

"Bees, it is well known, conſtruct their combs with ſmall cells on both ſides, fit both for holding their ſtore of honey and for rearing their young. There are only three poſſible figures of the cells, which can make them all equal and ſimilar, without any uſeleſs interſtices. Theſe are the equilateral triangle, the ſquare, and the regular hexagon. Of the three, the hexagon is the moſt proper, both for convenience and ſtrength. Bees, as if they knew this, make their cells regular hexagons. As the combs have cells on both ſides, the cells may either be exactly oppoſite, having partition againſt partition, or the bottom of a cell may reſt upon the partitions between the cells on the other ſide, which will ſerve as a buttreſs to ſtrengthen it. The laſt way is the beſt for ſtrength; accordingly the bottom of each cell reſts againſt the point where three partitions meet on the other ſide, which gives it all the ſtrength poſſible. The bottom of a cell may either be one plane, perpendicular to the ſide partitions; or it may be compoſed of ſeveral planes, meeting in a ſolid angle in the middle point. It is only in one of theſe two ways that all the cells can be ſimilar without loſing room. And for the ſame intention, the planes, of which the bottom is compoſed, if there be more than one, muſt be three in number, and neither more nor fewer. It has been demonſtrated, that by making the bottoms of the cells to conſiſt of three planes meeting in a point, there is a ſaving of material and labour no way inconſiderable. The bees, as if acquainted with theſe principles of ſolid geometry, follow them moſt accurately; the bottom of each cell being compoſed of three planes, which make obtuſe angles with the ſide partitions and with one another, and meet in a point in the middle of the bottom; the three angles of this bottom being ſupported by three partitions on the other ſide of the comb, and the point of it by the common interſection of theſe three partitions. One inſtance more of the mathematical ſkill diſplayed in the ſtructure of a honey-comb deſerves to be mentioned. It is a curious mathematical problem, *at what preciſe angle* the three planes which compoſe the bottom of a cell ought to meet, in order to make the greateſt poſſible ſaving of material and labour. This is one of thoſe problems belonging to the higher parts of mathematics, which are called problems of *maxima* and *minima*. The celebrated *M‘Laurin* reſolved it by a fluxionary calculation, which is to be found in the Tranſactions of the Royal Society of London, and determined preciſely the angle required. Upon the moſt exact menſuration which the ſubject could admit, he afterwards found, that it is the very angle in which the three planes in the bottom of the cell of a honey-comb do actually meet.

"Shall we aſk here, Who taught the bees the properties of ſolids, and to reſolve problems of *maxima* and *minima*? If a honey-comb were a work of human art, every man of common ſenſe would conclude, without heſitation, that he who invented the conſtruction muſt have underſtood the principles on which it was conſtructed. We need not ſay that bees know none of theſe things. They work moſt geometrically without any knowledge of geometry; ſomewhat like a child, who by turning the handle of an organ makes good muſic without any knowledge of muſic. The art is not in the child, but in him who made the organ. In like manner, when a bee makes its combs ſo geometrically, the geometry is not in the bee, but in that Great Geometrician who made the bee, and made all things in number, weight, and meaſure."

8
Which cannot be confounded with the operations of reaſon.

We have given a full detail of the ſtructure of a honey-comb, becauſe it is an effect of inſtinct which cannot be confounded with the operations of reaſon. The author of *The Natural Hiſtory of Animals*, juſtly offended with that theory which treats of *inſtinctive motives*, which repreſents the human mind as a *bundle* of inſtincts, and of which the object ſeems to be to degrade mankind to the level of brutes, has very laudably exerted his endeavours to detect its weakneſs, and to expoſe it to contempt. But in avoiding one extreme, he ſeems to have run into the other; and whilſt he maintains the rights of his own ſpecies, he almoſt raiſes the brutes to the rank of men. "It is better (he ſays) to ſhare our rights with others than to be entirely deprived of them." This is certainly true; and no good man will heſitate to prefer his theory to that of his antagoniſt; but we ſee no neceſſity for adopting either; the phenomena may be accounted for without degrading reaſon to the level of inſtinct, or elevating inſtinct to the dignity of reaſon.

9
On ſome occaſions the inferior animals reaſon; but they perform their natural operations by inſtinct.

We ſhall readily allow to Locke (c), that ſome of the inferior animals ſeem to have perceptions of particular truths, and within very narrow limits the faculty of reaſon: but we ſee no ground to ſuppoſe that their natural operations are performed with a view to conſequences; and therefore cannot perſuade ourſelves, with this hiſtorian of theirs, that theſe operations are the reſult of a train of reaſoning in the mind of the animal.

He acknowledges indeed, that their reaſoning and thinking powers are remarkably deficient when compared with thoſe of men; that they cannot take ſo full a review of the paſt, nor look forward with ſo penetrating an eye to the future; that they do not accumulate obſervation upon obſervation, or add to the experience of one generation that of another; that their manners do not vary nor their cuſtoms fluctuate like ours; and that their arts always remain the ſame, without degeneracy and without improvement. "The crow (he obſerves) always builds its neſt in the ſame way: every hen treats her young with the ſame meaſure of affection; even the dog, the horſe, and the ſagacious elephant, ſeem to act rather mechanically than with deſign. From ſuch haſty obſervations as theſe, it has been inferred (he ſays), that the brutes are directed in their actions by ſome myſterious influence, which impels them to employ their powers unintentionally in performing actions beneficial to themſelves, and ſuitable to their nature and circumſtances."

And are theſe obſervations indeed haſty? and is this inference ill founded? To us the matter appears quite otherwiſe. If the arts of brutes and other animals have

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(c) "For if they have any ideas at all, and are not machines, as ſome would have them, we cannot deny them to have ſome reaſon. It ſeems as evident to me, that ſome of them do, in certain inſtances reaſon, as that they have ſenſe; but it is only in particular ideas, juſt as they received them from the ſenſes. They are the beſt of them tied up within thoſe narrow bounds, and have not, as I think, the faculty to enlarge them by any kind of abſtraction." *Eſſay on Human Underſtanding*, Book II. chap. 11.

This is in part a juſt obſervation, and ſerves to account for many phenomena which later writers have derived from inſtinct. The author of The Philoſophy of Natural Hiſtory had "a cat that frequented a cloſet, the door of which was faſtened by a common iron latch. A window was ſituated near the door. When the door was ſhut, the cat gave herſelf no uneaſineſs. As ſoon as ſhe tired of her confinement, ſhe mounted on the ſole of the window, and with her paw dexterouſly lifted the latch and came out." This practice, which we are told continued for years, muſt have been the conſequence of what Locke calls reaſoning in particular ideas. It could not be the effect of inſtinct; for inſtinct is adapted only to a ſtate of nature, in which cats have neither latches to lift nor doors to open; and as it is not ſaid that the animal attempted to lift the latches of other doors, we are not authoriſed to infer that this particular action was the conſequence of reaſoning in ideas enlarged by abſtraction: the cat had repeatedly ſeen one door opened by an exertion which ſhe was capable of imitating. Yet that animals have no power of enlarging their ideas, is a poſition, of the truth of which, though it is advanced by Locke, we are by no means confident. It is well known that crows feed upon ſeveral kinds of ſhell-fiſh when within their reach; and that they contrive to break the ſhell by raiſing the fiſh to a great height, and letting it drop upon a ſtone or a rock. This may perhaps be conſidered as pure inſtinct directing the animal to the proper means of acquiring its food. But what is to be thought of the following fact, which was communicated to us by a gentleman whoſe veracity is unqueſtioned, and who being totally unacquainted with the theories of philoſophers, has of courſe no favourite hypotheſis to ſupport? In the ſpring of the year 1791, a pair of crows made their neſt in a tree, of which there are ſeveral planted round his garden; and in his morning-walk he had often been amuſed by witneſſing furious combats between them and a cat. One morning the battle raged more fiercely than uſual, till at laſt the cat gave way and took ſhelter under a hedge, as if to wait a more favourable opportunity of retreating to the houſe. The crows continued for a ſhort time to make a threatening noiſe; but perceiving that on the ground they could do nothing more than threaten, one of them lifted a ſtone from the middle of the garden and perched with it on a tree planted in the hedge, where ſhe ſat watching the motions of the enemy of her young. As the cat crept along have always remained the ſame without degeneracy, and without improvement; and if they be at the ſame time the reſult of reaſoning; they muſt either be ſo perfect that they cannot be improved, or ſo imperfect that they cannot degenerate. That the ſtructure of a honey-comb is imperfect, no man has ever imagined. We have ſeen, that, as far as we are capable of diſcerning the end which it is intended to ſerve, it is the moſt perfect ſtructure poſſible: and therefore, if it be the reſult of the reaſoning of the bee, the author muſt retract his aſſertion reſpecting the extent of the reaſoning and thinking powers of inferior animals; and inſtead of ſaying that they are remarkably deficient when compared with thoſe of men, affirm that they are infinitely more perfect. No human art has yet arrived at ſuch perfection as that it might not be improved; no architect has ever built a town, or conſtructed a magazine, which he could mathematically demonſtrate to be of the very beſt poſſible form for the end intended, and ſo abſolutely perfect as to be incapable of improvement.

10 The laſt mentioned poſition controverted.

But the ſame author proceeds to affirm, that "the laws of analogical reaſoning do not juſtify the idea that the brutes act, on any occaſion, abſolutely without deſign." Nay, he ſays, it ſeems more probable, "that the inferior animals, even in thoſe inſtances in which we *cannot diſtinguiſh* the motives which actuate them, or the views with which they proceed, yet act with deſign, and extend their views, if not a great way, yet at leaſt a certain length forward; than that they can be upon any occaſion, ſuch as in rearing of their young, building neſts, &c. actuated merely by feeling, or over-ruled by ſome myſterious influence, under which they are nothing but inſenſible inſtruments." This laſt phraſe is ambiguous. If by inſenſible inſtruments it be meant that the brutes are conſidered by the advocates for inſtinct as mere machines without the faculties of ſenſation and ſpontaneity, the author is combating a phantom of his own creation; for we believe an opinion ſo abſurd is not now maintained by any man, (ſee **Brute**). But if by inſenſible inſtruments be meant ſuch inſtruments as act ſpontaneouſly without being conſcious of the *end* to which their actions lead, he appears not only to be egregiouſly miſtaken in his conjecture reſpecting the deſign of brutes, but alſo to have advanced an hypotheſis contradictory and inconſiſtent.

11 Maintained.

If it be true, that the inferior animals act with *deſign*, even in thoſe inſtances in which we cannot diſtinguiſh their motives, their views may indeed extend but a little way when compared with infinity: but certainly they extend farther than ours; for there is no uſeful work of man conſtructed with ſuch ſkill, but that, after it is finiſhed, another man of equal education will be able to diſtinguiſh the general deſign of the artiſt. But if the inferior animals, on all occaſions, act with deſign, we ſhould be glad to know the deſign of the bees in forming the cells of their combs in the manner which we have ſo largely deſcribed. Do theſe little animals indeed know that a comb, conſiſting on both ſides of hexagonal cells, with the bottom of each compoſed of ſeveral planes meeting in a certain ſolid angle, and ſo formed as that the bottom of a cell on the one ſide ſhall reſt upon the partitions between the cells on the other ſide, is in all reſpects the moſt proper both for holding their ſtores of honey and for rearing their young? And do they likewiſe know, that its excellence ariſes from the preciſe figure and poſition of the cells, by which there is a very conſiderable ſaving of labour and materials, whilſt the comb at the ſame time has the greateſt poſſible ſtrength, and the greateſt poſſible capaciouſneſs? If they know all this, and act with a view to theſe ends, it muſt indeed be confeſſed that bees are rational creatures, and that their thinking and reaſoning powers far ſurpaſs thoſe of men; for they have from the earlieſt ages made diſcoveries in the higher mathematics, which there is reaſon to believe were altogether unknown to the human race till the beginning of the preſent century, and which at this moment are beyond the comprehenſion of nine-tenths of mankind in the moſt enlightened nation on earth. If this be a concluſion too abſurd to be admitted, there is no other alternative, but either to ſuppoſe that by this artificial ſtructure of their cells the bees have ſome other end in view, which we cannot diſtinguiſh; or to acknowledge, that they are over-ruled by ſome myſterious influence, under which they are nothing but ſpontaneous agents, unconſcious of the end to which their operations tend. Which of theſe concluſions is the moſt rational, we will not offer ſuch an inſult to the underſtanding of our readers, as to ſuppoſe the meaneſt of them capable of entertaining a doubt. That a honey-comb is conſtructed with deſign, we moſt readily admit; but the deſign is not in the bees, but in the Creator of the bees, who directs their operations to their own good, by what the author with great propriety terms a myſterious influence (D).

12 An objection to it.

But he thinks it an unanſwerable argument in ſupport

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along under the hedge, the crow accompanied her by flying from branch to branch and from tree to tree; and when at laſt puſs ventured to quit her hiding-place, the crow, leaving the trees and hovering over her in the air, let the ſtone drop from on high on her back. That the crow on this occaſion reaſoned, is ſelf-evident; and it ſeems to be little leſs evident, that the ideas employed in her reaſoning were enlarged beyond thoſe which ſhe had received from her ſenſes. By her ſenſes ſhe may have perceived, that the ſhell of a fiſh is broken by a fall; but could her ſenſes inform her, that a cat would be wounded or driven off the field by the fall of a ſtone? No; from the effect of the one fall preſerved in her memory, ſhe muſt have inferred the other by her power of reaſoning.

(D) Though this way of acting is undoubtedly myſterious, "yet it ſhould not appear extraordinary even to a man who is not a philoſopher, as we ſee examples of it daily in our own ſpecies: For a man under the direction of another of ſuperior underſtanding, will uſe means to accompliſh an end, without having any idea of either; and indeed in my opinion, by far the greater part of mankind are deſtined by God and nature to be governed in that way. *Ancient Metaphyſics*, Vol. III. p. 352.

port of his theory, that in the performance of thoſe actions, in which animals are ſaid to be guided by unerring inſtinct, different individuals diſplay different modes of conduct; and in his opinion, to talk of inſtinctive principles which admit of improvement, and accommodate themſelves to circumſtances, is merely to introduce new terms into the language of philoſophy; for he affirms, that no ſuch improvement or accommodation to circumſtances can ever take place without a compariſon of ideas, and a deduction of inferences. It is probable, that the author here alludes to thoſe animals which, in their moſt important operations, are known to act differently in different countries. Thus the oſtrich in Senegal, where the heat is exceſſive, neglects her eggs during the day, but ſits upon them in the night. At the Cape of Good Hope, however, where the degree of heat is leſs, the oſtrich, like other birds, ſits upon her eggs both day and night. In countries infeſted with monkeys, many birds, which in other climates build in buſhes and clefts of trees, ſuſpend their neſts upon ſlender twigs, and thus elude the rapacity of their enemies.

13
Obviated.

It may be thought, that a determination of the mind of the brute to act ſo variouſly upon different occaſions, can hardly be conceived without judgment or intelligence. But before our author had ſo confidently affirmed that ſuch accommodation to circumſtances can never take place without a compariſon of ideas and a deduction of inferences, he would have done well to conſider how nature acts in other organized bodies, ſuch as the vegetable. We ſee that a vegetable, reared in the corner of a dark cellar, will bend itſelf towards the light which comes in at the window; and if it be made to grow in a flower-pot, with its head downwards, it will turn itſelf into the natural poſition of a plant. Can it be ſuppoſed, that the plant, in either caſe, does what it does from any judgment or opinion that it is beſt, and not from a neceſſary determination of its nature? But, further, to take the caſe of bodies unorganized, how ſhall we account for the phenomena which chemiſtry exhibits to us? When one body unites with another, and then, upon a third being preſented to it, quits the firſt, and unites itſelf with it, ſhall we ſuppoſe that this preference proceeds from any predilection or opinion that it is better to cleave to the one than to the other, from any compariſon of ideas or deduction of inferences? Or ſhall we not rather ſay, that it proceeds from an original law of nature impreſſed upon it by that Being who mediately or immediately directs every motion of every the minuteſt atom in the univerſe? And if ſo, why may not inſtinct be an original determination of the mind of the animal, of which it is part of the nature or eſſence to accommodate itſelf to certain circumſtances, on which depends the preſervation of the individual, or the continuation of the kind? Indeed it cannot be otherwiſe, if we have defined inſtinct properly; for no man ever ſuppoſed, that when animals work inſtinctively, they act for no purpoſe. It is only affirmed that the purpoſe is not known to them. It is known, however, to the Author of inſtinct; who knows likewiſe that the ſame purpoſe muſt in different climates be promoted by different means, and who accordingly determines the operations of animals of the ſame ſpecies to be different under different circumſtances.

14
Inſtinct incapable of improvement.

But though we cannot agree with this author when he affirms that no accommodation to circumſtances can ever take place without a compariſon of ideas, we readily admit that no faculty which is capable of improvement by obſervation and experience can in propriety of ſpeech be termed inſtinct. Inſtinct being a poſitive determination given to the minds of animals by the Author of nature for certain purpoſes, muſt neceſſarily be perfect when viewed in connection with thoſe purpoſes: and therefore to talk, as Mr Smellie does, of the *improvement* of inſtinct, is to perplex the underſtanding by a perverſion of language. There is not, however, a doubt, but that reaſon may copy the works of inſtinct, and ſo far alter or improve them as to render them ſubſervient to other purpoſes than thoſe for which they were originally and inſtinctively performed. It was thus in all probability that man at firſt learned many of the moſt uſeful arts of life.

> "Thy arts of building from the bee receive,
> "Learn of the mole to plough, the worm to weave,
> "Learn of the little nautilus to ſail,
> "Spread the thin oar, and catch the driving gale."

But the arts thus adopted by men are no longer the works of inſtinct, but the operations of reaſon influenced by motives. This is ſo obviouſly and undeniably true, that it has compelled the author laſt mentioned to confeſs, in that very ſection which treats of inſtincts improveable by experience, that "what men or brutes learn by experience, though this experience be founded on inſtinct, cannot with propriety be called inſtinctive knowledge, but knowledge derived from experience and obſervation. Inſtinct (he ſays) ſhould be limited to ſuch actions as every individual of a ſpecies exerts without the aid either of experience or imitation." This is a very juſt diſtinction between inſtinct and experience; but how to reconcile it with the fundamental principle of the author's theory we know not. It would certainly be a very arduous taſk; but it is a taſk from which we are happily relieved, as his theory and ours have little reſemblance.

15
The queſtion, Whether there be any occaſions upon which man acts inſtinctively? examined.

Having thus proved, we hope to the ſatisfaction of our readers, that there is ſuch a principle as inſtinct in the inferior animals, and that it is eſſentially different from human reaſon; let us return to our own ſpecies, and inquire whether there be any occaſions upon which man acts inſtinctively, and what thoſe occaſions are. This is a queſtion of ſome difficulty, to which a complete and ſatisfactory anſwer will perhaps never be given, and to which we have not the vanity to think that ſuch an anſwer will be given by us. The principle of *aſſociation* (to be explained afterwards under the article METAPHYSICS) operates ſo powerfully in man, and at ſo early a period of life, that in many caſes it ſeems to be impoſſible to diſtinguiſh the effect of habit from the operations of nature. Yet there are a few caſes immediately connected with the preſervation of the individual and the propagation of the kind, in which by a little attention theſe things may be diſtinguiſhed. We have already given an inſtance in the ſucking of a child, which we believe to be an operation performed by inſtinct. Dr Prieſtley, however, thinks differently: "The action of ſucking (ſays he), I am confident, from my own obſervations, is not natural, but acquired." What obſervations they were which led him to this concluſion he has not told us, and we cannot imagine; but every obſervation which we ourſelves have made, compels us to believe that an *attempt* to ſuck is natural to children. It has been obſerved by the author of the Philoſophy of Natural Hiſtory, that the inſtinct of ſucking is not excited by any ſmell peculiar to the mother, to milk, or to any other ſubſtance; for that infants ſuck indiſcriminately every thing brought into contact with their mouths. He therefore infers, that the *deſire* of ſucking is innate, and coeval with the appetite for air. The obſervation is certainly juſt: but a diſciple of Dr Prieſtley's may object to the inference; for "in ſucking and ſwallowing our food, and in many ſuch inſtances, it is exceedingly probable (ſays the Doctor), that the actions of the muſcles are originally *automatic*, having been ſo placed by our Maker, that at firſt they are ſtimulated and contract mechanically whenever their action is requiſite." This is certainly the caſe with reſpect to the motion of the muſcles in the action of breathing; and if that action be of the ſame kind and proceed from the very ſame cauſe with the action of ſucking, and if a child never ſhow a deſire to ſuck but when ſomething is brought into contact with its mouth, Dr Prieſtley's account of this operation appears to us much more ſatisfactory than that of the authors who attribute it to inſtinct.

16 Inſtances of human actions undoubtedly inſtinctive.

But the actions of breathing and ſucking ſeem to differ eſſentially in ſeveral particulars. They are indeed both performed by means of air; but in the former, a child for many months exerts no ſpontaneous effort, whilſt a ſpontaneous effort ſeems to be abſolutely neceſſary for the performance of the latter. Of this indeed we could not be certain, were it true that infants never exhibit ſymptoms of a *wiſh* to ſuck but when ſomething is actually in contact with their mouths; for the mere *act* of ſucking *then* might well be ſuppoſed to be automatic and the effect of irritation: But this is not the caſe. A healthy and vigorous infant, within ten minutes of its birth, gives the plaineſt and moſt unequivocal evidence of a deſire to ſuck, before any thing be brought into actual contact with its mouth. It ſtretches out its neck. and turns its head from ſide to ſide apparently in queſt of *ſomething*; and that the object of its purſuit is ſomething which it may *ſuck*, every man may ſatisfy himſelf by a very convincing experiment. When an infant is thus ſtretching out its neck and moving its head, if any thing be made to touch any part of its face, the little creature will inſtantly turn to the object, and endeavour by quick alternate motions from ſide to ſide to ſeize it with its mouth, in the very ſame manner in which it always ſeizes the breaſt of its nurſe, till taught by experience to diſtinguiſh objects by the ſenſe of ſight, when theſe alternate motions, being no longer uſeful, are no longer employed. If this be not an inſtance of pure inſtinct, we know not what it is. It cannot be the reſult of aſſociation or mechaniſm; for when the ſtretching of the neck takes place, nothing is in contact with the child's mouth, and no aſſociation which includes the act of ſucking can have been formed. Aſſociations of ideas are the conſequences of ſimultaneous impreſſions frequently repeated; but when the child firſt declares, as plainly as it could do were it poſſeſſed of language, its wiſh to ſuck, it has not received a ſingle impreſſion with which that wiſh can poſſibly be aſſociated.

Were Dr Prieſtley to weigh theſe facts, of the truth of which we are certain, we doubt not that his well-known candor would make him retract the aſſertion, that *all* the actions which Dr Reid and others refer to inſtinct, are either automatic or acquired. The greater part of thoſe actions, as well as of the apparently inſtinctive principles of belief, we have no doubt are acquired: but we are perſuaded that a child ſucks its nurſe as a bee builds it cell, by inſtinct; for upon no other hypotheſis can we account for the ſpontaneous efforts exerted in both theſe operations; and we think it no diſgrace to our ſpecies, that in ſome few caſes we ſhould act from the ſame principle with the inferior creation, as nothing ſeems more true than that,

> Reaſon raiſe o'er inſtinct as we can;
> In this 'tis God that works, in that 'tis man.

We have ſaid, that, in the ſavage ſtate, the ſexes go together for the firſt time by inſtinct, without any view to offspring, and perhaps with no *determinate* idea of enjoyment. The opinion, we believe, has been generally maintained; but it is controverted by Dr Hartley. "Here (ſays he) we are to obſerve firſt, that when a general pleaſurable ſtate is introduced, either by direct impreſſions or by aſſociated influences, the organs of generation muſt ſympathize with this general ſtate, for the ſame reaſons as the other parts do. They muſt therefore be affected with vibrations in their nerves, which riſe above indifference, into the limits of pleaſure, from youth, health, grateful aliment, the pleaſures of imagination, ambition, and ſympathy, or any other cauſe which diffuſes grateful vibrations over the whole ſyſtem.—Secondly, as theſe organs are endued with a greater degree of ſenſibility than the other parts, from their make, and the peculiar ſtructure and diſpoſition of their nerves, whatever theſe be, we may expect that they ſhould be more affected by thoſe general pleaſurable ſtates of the nervous ſyſtem than the other parts.—Thirdly, the diſtenſion of the cells of the *veſiculæ ſeminales*, and of the *ſinuſes* of the *uterus*, which take place about the time of puberty, muſt make theſe organs more particularly irritable then." His fourth obſervation reſpects a ſtate widely different from that of nature, and therefore is nothing to the purpoſe: but his fifth is, that "the particular ſhame which regards the organs of generation, may, when conſidered as an aſſociated circumſtance, like other pains, be ſo far diminiſhed as to fall within the limits of pleaſure, and add conſiderably to the ſum total."

To this excellent and able writer we may allow the truth of theſe obſervations (though ſome of them might certainly be controverted); and yet deny his concluſion, that "they are ſufficient to account for the general deſires which are obſervable in young perſons, and that thoſe deſires are of a factitious nature." For ſuppoſing every thing which he mentions to take place by mere mechaniſm and aſſociation, that the organs of generation are irritated, and certain cells and ſinuſes diſtended; the only inference which can be fairly drawn from ſuch premiſes is, that at the age of puberty young men and women muſt from theſe cauſes experience certain feelings and wants which they knew not before; but ſurely mechaniſm and aſſociation cannot teach them the uſe of the organs of generation, or point out the only means by which their new feelings can be gratified;

fied: and therefore, as we ſee theſe means invariably purſued by all animals rational and irrational, without experience and without inſtruction, we muſt refer the mutual deſire of the ſexes to a higher principle than mere mechaniſm and aſſociation; and that principle can be nothing but inſtinct.

Beſides theſe, we think the action of eating may be attributed to inſtinct. It is certainly performed by a ſpontaneous exertion of the proper organs; and that exertion is firſt made at a time of life when we have no conception of the end which it ſerves to accompliſh, and therefore cannot be influenced by motives. It muſt indeed be confeſſed, that the firſt act of chewing is performed by a child, not for the purpoſe of maſticating food, but to quicken the operation of nature in the cutting of teeth: and perhaps it may be ſaid, that the pleaſing ſenſation of *taſte*, which is then firſt experienced, and afterwards remembered, prompts the child to continue at intervals the exertion of chewing after all its teeth are cut; ſo that though the act of eating is not performed with a *view* to the maſtication of food or the nouriſhment of the body, it may yet be performed, not from any inſtinctive impulſe, but merely from an early and deep rooted aſſociation. But in anſwer to this it is ſufficient to aſk, Who taught the infant that the act of chewing would quicken the operation of nature in the cutting of teeth? Not reaſon, ſurely, nor experience; for an infant knows nothing of teeth or the manner in which they grow: and if it be granted, that for this purpoſe it was originally impelled by ſome internal and myſterious influence to perform the action of chewing, we are not inclined to deny that the operation may be continued for other purpoſes by means of aſſociation.

> In human works though laboured on with pain,
> A thouſand movements ſcarce one purpoſe gain;
> In God's, one ſingle can its end produce,
> Yet ſerves to ſecond too ſome other uſe.

This is ſound philoſophy confirmed by obſervation and daily experience: but though in the works of God, one principle produces many conſequences, and though perhaps there is not a principle which falls under our cognizance more fruitful than that of aſſociation, yet if it be not ſufficient to account for the *firſt act* of chewing, we cannot refer to it alone as to the ſource of that operation. Should it be ſaid, that the gums of an infant are at the period of cutting teeth ſo irritable, that the moment any thing is applied to them the jaws perform a motion merely automatic, which we miſtake for the ſpontaneous effect of inſtinct; ſtill we would aſk, What prompts the child to apply every thing to its mouth? Does the irritation of the gums contract the muſcles of the arm? By a bigot for mechaniſm this might be ſaid, were it true that the arm of an infant like a piece of clock-work, is always ſo regularly moved as to bring its hand directly into contact with the gums; but this is far from being the caſe; an infant makes many unſucceſsful efforts to reach its mouth, and does not accompliſh its purpoſe till after repeated trials. Perhaps it may be alleged (for when men adopt a favourite hypotheſis they will allege any thing in its ſupport), that infants are taught to carry things to their mouths by the pleaſing ſenſation received from the application of their nurſes breaſts, and continue the practice from habit and aſſociation. But it is certain that they do not begin this practice till teeth are forming in their gums; and then they uſe ſuch things as they themſelves carry to their mouths very differently from the breaſts of their nurſe: they conſtantly chew and bite their rattles, though they very ſeldom bite their nurſes. As this practice cannot be begun from a principle of aſſociation, ſo it appears to us that it cannot be continued upon ſuch a principle. Were the ſenſation experienced by an infant when chewing a hard ſubſtance a pleaſing ſenſation, the remembrance of the pleaſure might as a motive prompt it to repeat the operation: but it is obvious, that by preſſing a gum, through which a tooth is making its way, againſt any thing hard, the infant muſt experience a painful ſenſation; and therefore the influence which impels it to continue this operation, muſt be ſomething more powerful than pleaſure or pain (A).

17
There may be other actions inſtinctive, which it is impoſſible to diſtinguiſh from the effects of habit.

Theſe three actions, then, by which infants ſuck, by which they chew their food, and by which mankind are propagated, have undeniably their origin in inſtinct. There may be many other human actions which derive their origin from the ſame ſource (D); but

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(A) A learned phyſician, to whom this article was ſhown in manuſcript, and to whoſe animadverſions it is indebted for great part of what merit it may poſſeſs, thinks that the pain ariſing from the cutting of teeth is *alleviated* by the chewing of hard ſubſtances, and that this is the cauſe of that inclination which infants have perpetually to chew. To give probability to an opinion which admits not of direct proof, he obſerves, that the violent pain in the *glans penis* occaſioned by a ſtone in the bladder, is certainly alleviated by *rubbing* the *glans* and pulling the prepuce, which is therefore a very frequent employment of all who are afflicted with that dreadful diſorder. Notwithſtanding the deference which we willingly pay to the judgment of our friend, we can perceive no analogy between theſe two caſes, which, to be of any uſe to his argument, ought to be not only analogous but ſimilar. It is well known that *rubbing* the *glans penis* will almoſt at any time give a pleaſing ſenſation; and it is eaſy to conceive how two oppoſite ſenſations, excited at once in the ſame place, may counterbalance each other, ſo as to leave the patient equally free from pleaſure and pain. But is it conceivable, that to preſs againſt a hard ſubſtance a gum in which a tooth is forming, ſhould excite a pleaſing ſenſation? If it be, our friend's opinion accounts better than ours for the *continuance* of the practice of chewing; but ſtill it muſt be *inſtinct*, which, on either ſuppoſition, *firſt* directs the infant to that operation, for it cannot be *begun* either from reaſon or experience.

(D) The reſtleſsneſs which perpetually accompanies the paſſage of a ſtone from the kidneys through the ureters, has by many been conſidered as the effect of inſtinct; and their opinion is not without a plauſible foundation. In a nephritic paroxyſm, a man riſes from his chair, throws himſelf down with violence, and riſes again but in a ſtate of civil ſociety it is very difficult, if not impoſſible, to diſtinguiſh them from the effects of early habit (E).

18
Actions erroneouſly attributed to inſtinct.

Such, however, is the preſent impatience of that labour without which effects cannot be traced to their cauſes, that every phenomenon in human nature, which to former philoſophers would have occaſioned difficulty, is now thought to be ſufficiently accounted for by referring it to ſome inſtinct as its particular cauſe; and he who can provide himſelf with a ſufficient number of theſe inſtincts, for the reality of which he offers no proof, ſeats himſelf in the philoſopher's chair, and dreams that he is dictating a ſyſtem of ſcience, whilſt he is only retailing a collection of anecdotes. A philoſopher of this ſchool has lately carried the doctrine of inſtinctive principles ſo far, as to attribute the ſuperiority of man over the other animals, chiefly to the great number of inſtincts with which his mind is endowed; and among theſe he reckons (not, we believe, as characteriſtic of our ſpecies in contradiſtinction to other animals, but as part of the inſtinctive bundle in the largeneſs of which our ſuperiority conſiſts) "the *voiding* of *urine* and *excrement*, *ſneezing*, *retraction* of the muſcles upon the application of any painful ſtimulus, the *moving* of the eye-lids and other parts of the body." Theſe (he ſays) are effects of original inſtincts, and eſſential to the exiſtence of young animals. With this writer inſtinct is ſometimes repreſented as looking into futurity, and acting upon motives which has hitherto been conſidered as the province of reaſon and the characteriſtic of man: here the ſame inſtinct is confounded with irritation and mechaniſm; and if this mode of philoſophiſing continue in faſhion, we ſhall not be ſurpriſed to find men, beaſts, birds, and vegetables, conſidered by ſome other writer as nothing more than different ſpecies of the ſame genus of beings, that are all actuated by the great and univerſal principle of inſtinct. If ſneezing and the retraction of the muſcles upon the application of any painful ſtimulus be actions of inſtinct, there cannot be a doubt, upon the received principles of philoſophy, but that the contraction of the leaves of the ſenſitive plant upon the application of any ſtimulus proceeds likewiſe from inſtinct: nay, a piece of leather muſt be endowed with inſtinct; for it too retracts upon the application of the painful ſtimulus of fire. All theſe are evidently ſimilar effects produced by the ſame or ſimilar cauſes; for in the operations of ſneezing and retracting the muſcles upon any painful application, there is not the leaſt ſpontaneous exertion on our part, no co-operation of mind more than in the contraction of the leather and the plant. With reſpect to the voiding of urine and excrement, it is obvious, that at firſt theſe operations are performed without any effort of ſpontaneity; and that a voluntary power over the muſcles which are ſubſervient to them is very gradually acquired. Urine and excrement irritate the bladder and guts, which are ſupplied with branches of the ſame nerves that ſupply the abdominal muſcles. But it is well known that the irritation of one branch of a nerve brings on a contraction of the muſcles which are ſupplied by the other branches. Urine and excrement therefore are evidently expelled by the mechanical contraction of the organs of excretion: and to attribute theſe evacuations to *inſtinct*, is equally abſurd as to ſay, that water or any other ſoft ſubſtance pent up in a veſſel, and preſſed equally on all ſides, makes it eſcape by *inſtinct* through the eaſieſt paſſage. It is difficult to gueſs what the author means by the inſtinctive motion of the eye-lids and other parts of the body. There is a motion of the eye-lids which is voluntary, and another which is involuntary. The former proceeds from ſome motive, to exclude too great a glare of light, or to guard the eye againſt a foreſeen miſchief, and is therefore the reſult of reaſon as diſtinguiſhed from inſtinct: the latter is obviouſly the effect of aſſociation, which took place in early infancy and produced a habit. Infants for ſeveral days after birth do not wink with their eyes upon the approach of one's

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again he knows not why. Theſe motions are certainly performed by ſpontaneous exertions; and as they tend to quicken the deſcent of the ſtone, they ſerve the beſt of purpoſes. Yet though they are not performed with this view, and though nine-tenths of mankind know nothing of their ſalutary tendency, we would not be too poſitive that they proceed from inſtinct. A man ſuffering violent pain tries every *experiment* to procure relief; and if theſe inceſſant changes of poſture be begun with any view of this kind, however indiſtinct, they commence from reaſon, and may be continued by habit. If they be begun with no view whatever, they are undoubtedly inſtinctive.

(E) "As intellect is latent for a conſiderable time in the individuals among us, and muſt have been latent for a very long time, perhaps for ages, among ſavages, it is not to be ſuppoſed that Nature, in that natural and primitive ſtate, would leave us unprovided with what ſhe has ſo bountifully beſtowed upon other animals. What particular inſtinct man then had, it is difficult to ſay; but this we may be aſſured of, that he had all that was neceſſary for his being and well-being: but not ſo much would be neceſſary to him as to other animals, whoſe œconomy is more artificial than that of man, his being very ſimple, and much reſembling that of cattle and horſes. After he had acquired intellect, reaſon would, in ſome meaſure, ſupply the place of inſtinct: and there remains nothing now of inſtinct among us, except what appears in our infants before they have got the uſe of reaſon; ſuch as their applying to the breaſt of the mother for nouriſhment. By the uſe of intellect, and the arts and ſciences invented by us, we have formed a ſyſtem of life altogether different from the natural." *Ancient Metaphyſics*, vol. ii. page 300.

Whether intellect was for ages latent among ſavages, this is not the proper place to enquire. It is a queſtion which may be conſidered afterwards, when the author's opinion reſpecting the *four minds* in man paſſes under our review: but whatever may be thought of theſe peculiar ſentiments, the reaſon here aſſigned for the difficulty of aſcertaining the genuine inſtincts of man, will be admitted by all who have thought ſufficiently on the ſubject.

hand or any other ſubſtance; but after having experienced pain from too much light or any other thing which hurts the eye, and that pain having at firſt produced an automatic motion of the eye-lids, the motion comes in time to be ſo cloſely aſſociated with its cauſe, that the very appearance of the latter produces the former. In all this there is no inſtinct, nor any thing which reſembles inſtinct: in the one caſe, the motion of the eye-lids is in the ſtricteſt ſenſe voluntary and rational; and in the other, it is either automatic or the effect of habit.

"The love of light (ſays the ſame writer) is exhibited by infants at a very early period. I have remarked evident ſymptoms of this attachment on the third day after birth. When children are farther advanced, marks of the various paſſions generally appear. The paſſion of fear is diſcoverable at the age of two months. It is called forth by approaching the hand to the child's eye, and by any ſudden motion or unuſual noiſe." It has likewiſe been ſaid, that "an infant may be put into a fright by an angry countenance, and ſoothed again by ſmiles and blandiſhments;" and "that all theſe are caſes of pure inſtinct." In reply to which, we ſcruple not to aſſert with Dr Prieſtley, that an infant (unleſs by an infant be meant a child who has a good deal of experience, and of courſe has made many obſervations on the connections of things) "is abſolutely incapable of terror. I am poſitive (ſays he), that no child ever ſhowed the leaſt ſymptom of fear or apprehenſion till he had actually received hurts and had felt pain; and that children have no fear of any particular perſon or thing, but in conſequence of ſome connection between that perſon or thing and the pain they have felt. If any inſtinct of this kind were more neceſſary than another, it would be the *dread* of *fire*. But every body muſt have obſerved, that infants ſhow no ſign of any ſuch thing; for they will as readily put their finger to the flame of a candle as to any thing elſe, till they have been burned. But after ſome painful experience of this kind, their dread of fire, though undeniably the effect of aſſociation, becomes as quick and as effectual in its operations as if it were an original inſtinctive principle." We moreover do not heſitate to ſay, with the ſame great philoſopher, that if it were poſſible always to beat and terrify a child with a placid countenance, ſo as never to aſſume that appearance but in thoſe circumſtances, and always to ſoothe him with what we call an angry countenance, this connection of ideas would be reverſed, and we ſhould ſee the child frighted with a ſmile and delighted with a frown. In fact, there is no more reaſon to believe that a child is naturally afraid of a frown, than that he is afraid of being in the *dark*; and of this children certainly diſcover no ſign, till they have either found ſomething diſagreeable to them in the dark, or have been told that there is ſomething dreadful in it.

The truth of theſe obſervations is ſo obvious, that we doubt not but they will carry conviction to the mind of every reader. For though it ſhould be granted, that ſo early as on the third day after birth children exhibit ſymptoms of uneaſineſs upon the ſudden excluſion of light, it would by no means follow that the *love* of light is in them inſtinctive (A). Light operates upon the eye by contact, and communicates to the infant a ſenſation of touch. If that ſenſation be pleaſant, the child muſt neceſſarily feel ſome degree of uneaſineſs upon its removal, juſt as a full grown man muſt feel uneaſy upon being deprived of any poſitive pleaſure. But is *ſenſation*, or *pleaſure*, or the *removal* of pleaſure, pure inſtinct? No, ſurely.

Thus difficult is it to ſay in many caſes what actions have their origin in inſtinct, and what are merely the effects of early aſſociation. But we think it may be ſafely affirmed, that no action, whether of man or brute, which is deliberately performed with a *view* to conſequences, can with any propriety be ſaid to proceed from inſtinct; for ſuch actions are the effect of reaſon influenced by motives. Deliberation and inſtinct are obviouſly incompatible. To ſay with the author of the Philoſophy of Natural Hiſtory, "that, when we are ſtimulated by a particular inſtinct, inſtead of inſtantly obeying the impulſe, another inſtinct ariſes in oppoſition, creates heſitation, and often totally extinguiſhes the *original motive* to action," is either to affirm what is apparently not true, or it is a groſs perverſion of language. *Motives* oppoſed to each other may create heſitation, and a powerful motive may counterbalance a feeble inſtinct; but of two or more inſtincts operating at the ſame time, and oppoſing each other, we have no conception. Inſtinct, if we chooſe to ſpeak a language that is intelligible, means a certain impulſe under the direction of Supreme Wiſdom; and it is very little probable that ſuch wiſdom ſhould give oppoſite impulſes at the ſame inſtant. In the natural works of animals, which are confeſſedly under the influence of inſtinct, we perceive no ſymptoms of deliberation; but every one, when not interrupted by external violence, proceeds without heſitation in the direct road, to an end of which the animal itſelf knows nothing. The ſame would be the caſe with man were he under the guidance of inſtinct: and it is vain to ſay that the inſtinct of *fear* is daily counteracted by *ambition* and *reſentment*, till it be proved that *fear*, *ambition*, and *reſentment*, are really inſtincts. Of this, however, the author ſeems to have no doubt. Indeed his work is ſo liberally ſtored with theſe principles, ſo uſeful to every man who wiſhes to acquire the name of a philoſopher without the labour of inveſtigation, that not only *fear*, *ambition*, and *reſentment*, but even *ſuperſtition*, *devotion*, *reſpect*,

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(A) It may with equal propriety be ſaid, and upon apparently better evidence, that children have an inſtinctive love of *darkneſs*. A child who has been for ſome time in a dark room, will exhibit ſtronger ſymptoms of uneaſineſs upon the ſudden introduction of candles, than he would upon candles being ſuddenly carried out of a room which had been for ſome time illuminated. This fact, and the reaſon of it, are well known to every man who has but barely dipt into the ſcience of Optics: but no philoſopher, till our author aroſe, ever thought of accounting for it by the ſhort and eaſy method of inſtinct.

reſpect for eminent characters, *avarice*, *hope*, *envy*, *benevolence*, and *ſympathy*. are all, in his opinion, *inſtincts* ſimple or modified. The origin of fear we have already ſeen when examining the inſtincts ſaid to exhibit themſelves in early infancy: let us try if we cannot trace ſome other individuals of this numerous family to the ſame ſource of early aſſociations.

19 Source of this error.

The caſe then ſeems to be as follows. We firſt perceive or ſuppoſe ſome real good, i. e. ſome fitneſs to promote our happineſs, in thoſe things which we love or deſire. Hence we annex to thoſe things the idea of pleaſure; with which they come, in time, to be ſo cloſely aſſociated in our minds, that they cannot ever after preſent themſelves without bringing that idea along with them. This aſſociation likewiſe often remains even after that which firſt gave riſe to it is quite forgotten, or perhaps does not exiſt. An inſtance or two will make this very clear. No man can be born a lover of money; for in a ſtate of nature money exiſts not: no man therefore can be born with our author's inſtinct of avarice, directed in the manner which the moſt *common* acceptation of that word denotes. Yet how many men are there in the world, who have as ſtrong a deſire for money as if that deſire were innate and inſtinctive; who account ſo much money ſo much happineſs; and who make the mere poſſeſſion of gold and ſilver, without any thought or deſign of uſing them, the ultimate end of all their actions? This is not becauſe the love of money is born with them, for that is impoſſible; but becauſe they firſt perceive a great many advantages from the poſſeſſion of money, whence they conceive a pleaſure in having it. Hence they deſire it, endeavour to obtain it, and feel an actual pleaſure in obtaining and poſſeſſing it. Then, by dropping the intermediate ſteps between money and happineſs, they join money and happineſs immediately together, and content themſelves with the phantaſtic pleaſure of having it; making that which was at firſt purſued only as *means*, be to them an *ultimate end*, in which conſiſts their happineſs or miſery. The ſame might be obſerved concerning the thirſt after knowledge, fame, ambition, and moſt of the various purſuits of life. Theſe are at firſt entered upon with a veiw to ſome farther end, but at length become habitual exerciſe; with which the idea of pleaſure is ſo cloſely aſſociated, that we continue the purſuit after the reaſon from which it was at firſt begun has entirely vaniſhed from our minds. Hence alſo we may account for another of our author's *modified inſtincts*, the almoſt diabolical feeling of *envy*. Mr Locke obſerves, that there are ſome men entirely unacquainted with this paſſion. His obſervation we believe to be a juſt one: for moſt men that are uſed to reflection, remember the time when they were firſt under its influence; and though they did not, it is a thing very little likely that the beneficent Author of nature ſhould have implanted in the human mind even the ſeeds of an inſtinct, which, in the emphatic language of the Rambler, "is mere unmixed and genuine evil." Envy is that pain which ariſes in the mind upon obſerving the ſucceſs or proſperity of others; not however of *all* others indefinitely, but only of thoſe with whom, upon ſome account or other, the envious perſon has once had a rivalſhip. But of ſuch a feeling the origin is obvious; for when two or more perſons are competitors for the ſame thing, the ſucceſs of the one neceſſarily tends to the detriment of the other: hence the ſucceſs of the one rival is in the mind of the other cloſely aſſociated with pain or miſery; and this aſſociation remaining after the rivalſhip which occaſioned it has ceaſed, the perſon in whoſe mind envy is thus generated, always feels pain at the ſucceſs of his rival even in affairs which have no relation to the original competition. Thus it is, that we are apt to envy thoſe perſons who refuſe to be guided by our judgments, or perſuaded by our arguments: For this is nothing elſe than a rivalſhip about the ſuperiority of judgment; and we take a ſecret pride, both to let the world ſee, and in imagining ourſelves, that in perſpicacity and ſtrength of judgment we have no ſuperior.

Though the principle of aſſociation will be more fully explained in another place, there is one obſervation which muſt not be omitted here; it is, that we do not always, nor perhaps for the moſt part, make theſe aſſociations ourſelves, but learn them from others in very early life. We annex happineſs or miſery to certain things or actions, becauſe we ſee it done by our parents or companions; and acquire principles of action by imitating thoſe whom we eſteem, or by being told, by thoſe in whom we have been taught to place confidence, that ſuch conduct will promote our happineſs, and that the reverſe will involve us in miſery. Hence the ſon too often inherits both the vices and the party of his father as well as his eſtate; hence national virtues and vices, diſpoſitions and opinions; and hence too it is, that habits formed before the period of diſtinct remembrance are ſo generally miſtaken for natural inſtincts.

20 Men perform rational, inſtinctive, and automatic actions.

From the whole then of this inveſtigation, we think ourſelves warranted to conclude, that there is an eſſential difference between mechaniſm and inſtinct, and between both and reaſon; that mankind perform actions by each of theſe principles, and that thoſe actions ought to be carefully diſtinguiſhed; and, though the human mind is unqueſtionably endowed with a few inſtincts neceſſary to the preſervation of the individual and the propagation of the race, that by far the greater part of thoſe actions which are commonly ſaid to proceed from inſtinct are merely the effects of early habits.

21 The danger of referring every phenomenon in human nature to a particular inſtinct as its ultimate cauſe.

We are likewiſe of opinion, that the preſent faſhionable mode of referring almoſt every phenomenon in human nature to a particular inſtinct as its ultimate cauſe, is hurtful to ſcience, as tending to check all further inquiry; and dangerous in morals, as making people implicitly follow, as the *dictates* of *nature* and *nature's* GOD, the *abſurd*, *ſuperſtitious*, or *impious cuſtoms* of their reſpective countries.

INSTITUTES, in literary hiſtory, a book containing the elements of the Roman law.

The inſtitutes are divided into four books; and contain an abridgment of the whole body of the civil law, being deſigned for the uſe of ſtudents. See LAW, n° 6,—11. and 43, 44.

INSTITUTE, in Scots law. When by diſpoſition or deed of entail a number of perſons are called to the ſucceſſion of an eſtate one after another, the perſon firſt named is called the *inſtitute*, the others *ſubſtitutes*.

INSTITUTION, in general, ſignifies the eſtabliſhing or founding ſomething.—In the canon and common law it ſignifies the inveſting a clerk with the ſpiritualities of a rectory, &c. which is done by the biſhop, who uſes the following formula: "I inſtitute you rector of ſuch a church with the cure of ſouls, and receive your care and mine."

Institutions, in literary matters, denotes a ſyſtem of the elements or rules of any art or ſcience.

Thus phyſical, or medicinal inſtitutions, are ſuch as teach the neceſſary præcognita to the practice of medicine, or the cure of diſeaſes.

INSTRUMENT, in general, whatever is ſubſervient to a cauſe in producing any effect.

Mathematical, Philoſophical, &c. *Instruments.* See Astronomy, Electricity, Geometry, Levelling, Mechanics, Optics, Pneumatics, &c. &c.

Instrument is alſo uſed in law, to ſignify ſome public act, or authentic deed, by means whereof any truth is made apparent, or any right or title eſtabliſhed, in a court of juſtice.

Notorial Instrument, in Scots law, any fact certified in writing, under the hand of a notary-public.

INSUBRIUM ager, (anc. geog.), a diſtrict of the Tranſpadana; ſituated between the Ticinus to the weſt, the Addua to the eaſt, the Padus to the ſouth, and Orobii to the north. The people called *Inſubres* by Livy, *Inſubri* by Ptolemy, and *Iſombres* by Strabo. Now the Duchy of Milan.

INSULAR, any thing belonging to an iſland.—Inſular ſituations are productive of many happy conſequences to the inhabitants, both with reſpect to the climate, ſecurity, and convenience for commerce; for a particular account of which, ſee Island and Coast.

INSULATED, in architecture, an appellation given to ſuch columns as ſtand alone, or free from any contiguous wall, like an iſland in the ſea; whence the name.

Insulated, in electrical experiments. When any body is prevented from communicating with the earth by the interpoſition of an electric body, it is ſaid to be *inſulated.* See Electricity, p. 418.

INSURANCE, in law and commerce, a contract, whereby one party engages to pay the loſſes which the other may ſuſtain, for a ſtipulated premium or conſideration. The moſt common ſorts are, Inſurance againſt the dangers of the ſeas, inſurance againſt fire, inſurance of debts, and inſurance of lives.

I. *Insurance againſt Loſs at Sea,* is the moſt beneficial inſtitution, for promoting the ſecurity of trade, and preventing the ruin of individuals; and is now conducted by a regular ſyſtem of rules, eſtabliſhed by the interpoſition of the legiſlature, the deciſion of the courts of juſtice, and the practice of merchants.

It is carried on to the beſt advantage by public companies, or by a conſiderable number of private perſons, each of whom only engages for a ſmall ſum, on the ſame veſſel. In Britain there are two public companies eſtabliſhed by authority of parliament, viz. the London and Royal Exchange Inſurance-Companies. For procuring ſubſcription by private perſons, brokers are generally employed, who extend the policy or contract of inſurance, procure ſubſcriptions, and aſſiſt at ſettling loſſes. They are intitled to an allowance for their troubles, generally 5 *per cent.* on premiums, and 2 *per cent.* on loſſes.

The parties who engage to pay the damage are called the *inſurers* or *under-writers*: the parties for whoſe ſecurity they engage are called the *inſured*; and the premium is underſtood to be paid when the inſurance is made.

On this ſubject, we ſhall conſider, What is neceſſary to render an inſurance valid:——When the riſk commences, and when it terminates:—What conſtitutes a total or a partial loſs:—What proof of loſs is neceſſary:—and, How the loſs is adjuſted.

Firſt, In order to render an inſurance valid, the inſured muſt have property really at ſtake; the voyage muſt take place under the circumſtances agreed on; the dangers inſured againſt muſt not be contrary to law; and a candid account muſt be given of circumſtances which enhance the danger.

1. The condition of poſſeſſing property was required by 19 Geo. II. c. 37. to prevent ſhips from being fraudulently deſtroyed when inſured above their value; and to diſcourage a practice which had become common, of converting policies to the purpoſe of mere wagers. In tranſactions of this kind, as the inſured had no property, and could claim no indemnification for partial damage; ſo the inſurers, having loſt their wager by the ſhip's being loſt, could claim no abatement, though part was ſaved: accordingly, the policies contained clauſes of intereſt or no intereſt, free from average, and without benefit of ſalvage. All ſuch policies are declared invalid.

This reſtriction does not extend to privateers, nor to ſhips trading to the Spaniſh or Portugueſe plantations.

Inſurances are commonly made as intereſt ſhall appear; and it is incumbent on the inſured to prove the value of his property. The value of the goods may be proved by the invoices; and the coquet muſt be produced, if required, to inſtruct that the goods were actually ſhipped. It is admitted to value the ſhip at prime coſt and charges, deducting the freights that have been drawn ſince purchaſed, if the proprietors chooſe to ſtand to that rule; but they are not reſtricted to it. Sometimes the value of the ſhip or goods is expreſſed in the policy; and this value muſt be admitted, although it be higher than the true one; but it is incumbent on the inſured to prove that he had property at ſtake; and, if the property be trifling in compariſon of the ſum inſured, the inſurance will be ſet aſide, as an evaſion of the ſtatute.

Expected profits, and bounty on the whale-fiſhery, if ſpecified in the policy, may be inſured.

When the value is leſs than the ſum inſured, the owners may claim a return of premium for the exceſs.

If there be ſeveral policies on the ſame ſubject, of different dates, the earlier one is valid, and the others muſt be vacated. If they be of the ſame date, they muſt be vacated in equal proportions.

When a policy is vacated, in whole or in part, the under-writers have a right to retain ½ *per cent.* for their trouble.

In the caſe of a cargo intended for A, but afterwards ſent to B, both expected it, and inſured, and B claimed for the value on its being loſt. The under-writers anſwered, that it was a double inſurance, and they ought only to pay their proportion. Judgment was given, finding them liable for the whole, and reſerving to them any demand competent againſt the underwriters who inſured for A.

Fraudulently to caſt away or deſtroy a ſhip inſured above its value, is felony.

2. If the ſhip does not proceed on the voyage, or if, being warranted to depart with convoy, it departs without convoy, the inſurance muſt be vacated.

If the extent of a trading voyage be uncertain, the longeſt one in contemplation is deſcribed in the policy, and it is agreed that part of the premium ſhall be returned if the voyage be ſhortened. In like manner, in time of war, when inſurance is made without condition of convoy, it is agreed that part of the premium be returned in caſe it ſail with convoy.

When a ſhip is warranted to depart with convoy, it is underſtood from the uſual place of convoy (*e. g.* the Downs), and it is inſured till it arrive there.

The common proof of ſailing with convoy is the production of ſailing orders; but, if a ſhip be prevented by the weather from receiving the ſailing orders, other proof may be admitted.

A ſhip was inſured from the Thames to Halifax, warranted to ſail from Portſmouth with convoy. The convoy had ſailed before the ſhip arrived there, and the underwriters declined to inſure it, without convoy, for the reſt of the voyage. They were found liable to return part of the premium, retaining only in proportion to the accuſtomed rate from London to Portſmouth. This deciſion ſeems to eſtabliſh the following principle, that, when the voyage performed is only part of that deſcribed in the policy, and when the riſk can be proportioned, the underwriters are bound to return part of the premium, though there be no agreement for that purpoſe.

But, if a ſhip, inſured only againſt the hazards of the ſea, be taken by the enemy, the inſured have no right to claim a return of premium, though the capture happen ſoon, under pretence that little ſea-hazard was incurred.

If a ſhip deviates from the voyage deſcribed in the policy without neceſſity, it ſets aſide the inſurance. An intention to deviate is not ſufficient to ſet it aſide; there muſt be an actual deviation; and, even in that caſe, the inſurers are liable for damages ſuſtained before deviation.

It is no deviation to go out of the way to the accuſtomed place of convoy, nor to the neareſt place where neceſſary repairs may be had. Deviation, for the purpoſe of ſmuggling, if without the knowledge of the owners, does not ſet aſide the inſurance, nor when the maſter is forced by the crew to return.

In inſurances to the Eaſt-Indies, and home, the inſurers are underſtood to take the riſk of detention in the country, and of country voyages.

3. Inſurance of prohibited goods, againſt the riſk of ſeizure by the government, is unlawful, and invalid. The inſurers, inſured, brokers, and all acceſſories, are liable to the fine of 500 l.

4. If the inſured have any information of more than common danger, they muſt reveal every ſuch circumſtance to the inſurers, otherwiſe the policy is ſet aſide.

This rule is eſtabliſhed for the preſervation of good faith; and there are ſeveral ſtrong deciſions in ſupport of it. If a ſhip be ſpoke to leaky at ſea, or if there be a report of its being loſt, theſe circumſtances muſt be communicated to the inſurers. Even the concealment of a falſe report of loſs vitiates the inſurance; and, if the ſhip be afterwards loſt, though in a different manner, the inſured will recover nothing. In a voyage from Carolina to London, another ſhip had ſailed 10 days after that which was inſured, and arrived ſeven days before the inſurance was made; and the concealment of this circumſtance, though the fact was not proved to the ſatisfaction of the jury, was conſidered as ſufficient to ſet it aſide. Alſo, during the continuance of the American war, a ſhip being inſured from Portugal, by the month, without condeſcending on the voyage, ſailed for North America, and was taken by an American privateer. The inſurers refuſed to pay, becauſe the hazardous deſtination was concealed; and it was only upon proof of the inſured being equally ignorant of it that they were found liable.

But the inſured are not obliged to take notice of general perils, which the inſurers are underſtood to have in contemplation; dangerous navigation, Weſt-Indian hurricanes, enterprizes of the enemy, and the like.

Inſurance is not ſet aſide by a miſtake in the name of the ſhip or maſter, or the like.

Inſurance may be made on an uncertain ſhip; on any ſhip that the goods may be loaded on; on any ſhip that A ſhall ſail in from Virginia. In this laſt caſe, the policy is not transferred to a ſhip which A goes on board during the voyage.

Secondly, If a ſhip be inſured at and from a port, the inſurance commences immediately if the ſhip be there, or at its arrival there. If it be damaged when preparing for a voyage, the inſurers are liable; but not if the voyage be laid aſide for ſeveral years, with conſent of the owners. Inſurance from a port commences when the ſhip breaks ground; and, if it ſet ſail, and be driven back and loſt in the port, the inſurers are liable.

Inſurance on goods generally continues till they be landed; but, if they be ſold after the ſhip's arrival, and freight contracted to another port, the inſurance is concluded. Goods ſent on board another ſhip or lighter are not at the riſk of the inſurer; but goods ſent aſhore in the long boat are.

Inſurance on freight commences when the goods are put on board.

Goods from the Eaſt-Indies, inſured to Gibraltar, and to be reſhipped from thence to Britain, were put on board a ſtore-ſhip at Gibraltar, to wait an opportunity of re-ſhipping, and were loſt: The cuſtom of putting goods aboard a ſtore-ſhip being proved, the inſurers were found liable.

Loſs of ſails aſhore, when the ſhip is repairing, is comprehended within the inſurance. What is neceſſarily underſtood, is inſured, as well as what is expreſſed; the eſſential means, and intermediate ſteps, as well as the end. Ships performing quarantine are at the riſk of the inſurer.

Thirdly, The inſurers are liable for a total loſs when the ſubject periſhes through any of the perils inſured againſt. Baratry, though it properly ſignifies running away with the ſhip, extends to any kind of fraud in the maſter or mariners. Inſurance againſt detention of princes does not extend to ſhips that are ſeized for tranſgreſſing the laws of foreign countries.

The inſurers are alſo liable for a total loſs, when damage is ſuſtained, and the remaining property abandoned or veſted in the inſurers.

If a ſhip be ſtranded, or taken, and kept by the enemy, or detained by any foreign power, or ſeized for the ſervice of the government, the proprietors have a right to abandon.

But, if a ſhip be taken by the enemy, and be retaken, or makes its eſcape, before action againſt the inſurers; have the inſured a right to abandon, or muſt they only claim for the damages ſubſtained as an average loſs? There are oppoſite deciſions, according as the circumſtances of the caſe were ſtrong. When the ſhip was long detained, the goods periſhable, the voyage entirely loſt, or ſo diſturbed, that the purſuit of it was not worth the freight, or when the damage exceeds half the value of the thing, they have been found intitled to abandon; (Goſs againſt Withers, 2 Burrow, 683.). But, if the voyage be completed with little trouble or delay, they are not intitled; (Hamilton againſt Mendez, 2 Burrow, 1198.).

The inſured cannot claim, as for a total loſs, on an offer to abandon, when the loſs is, in its nature, only partial; for, if this were permitted, they might devolve the loſs occaſioned by bad markets on the inſurers.

And, in all caſes, the inſured have their option to abandon, or not. They may retain their property if they pleaſe, and claim for an average loſs; and they muſt make their option before they claim.

If the goods be ſo much damaged, that their value is leſs than the freight, the inſurers are accountable as for a total loſs.

The inſurers are liable for general average, when the property is charged with contribution; and for particular average, when the property is damaged, or part of it deſtroyed.

If the damage be ſuſtained through the fault of the ſhip, the owners of the goods may have recourſe, either againſt the maſter or inſurers; and, if the inſurers be charged, they ſtand in the place of the owners, and have recourſe againſt the maſter.

In order to prevent the inſurers from being troubled with frivolous demands for average, it is generally ſtipulated, that none ſhall be charged under 5 *per cent.* or ſome other determined rate; and corn, flax, fruit, fiſh, and like periſhable goods, are warranted free from average, unleſs general, or the ſhip be ſtranded.

In order to encourage every effort to ſave the ſhip, the inſurers are liable for charges laid out with that deſign, although the ſubject periſh. Thus, they may be charged with more than the ſum inſured.

In caſe of goods being damaged, the proportion of the ſum inſured, for which the underwriters are liable, is regulated by the proportion of the prices which the ſound and damaged goods fetch at the port of deſtination. The prime coſt of the goods is not conſidered, nor the neceſſity of immediate ſale, in conſequence of damage. Although the damaged goods ſell above prime coſt, the inſurers are liable.

Fourthly, if a ſhip be loſt, and the crew ſaved, the loſs is proved by the evidence of the crew.

If damage be ſuſtained, the extent is proved by an examination of the ſubject damaged, at the ſhip's arrival; and the cauſe by the evidence of the crew.

If the ſhip be ſtranded, evidence muſt be taken at the place where ſtranded.

Documents of loſs muſt be laid before the underwriters, with all convenient ſpeed; and, if theſe be ſufficiently clear, the loſs ſhould be immediately ſettled. The underwriters generally grant their notes at a month or ſix weeks date for their proportions.

If a ſhip be not heard of for a certain time, it is preſumed loſt; and the underwriters are liable to pay the ſums inſured, the property being abandoned to them in the event of the ſhip's return. Six months are allowed for a voyage to any part of Europe, a year to America, and two years to the Eaſt Indies.

By the ordinance of Hamburgh, if a ſhip be three months beyond the uſual time of performing a voyage, the underwriters may be deſired to pay 92 *per cent.* on an abandon. If they decline it, they are allowed 14 months more, and then they muſt pay the full value.

A ſhip inſured againſt the hazards of the ſea, but not againſt the enemy, if never heard of, is preſumed loſt at ſea.

Fifthly, In order that the manner of ſettling loſſes may be underſtood, we muſt explain what is meant by covering property. We mentioned already, that inſurances for greater ſums than the inſured had really at ſtake, were contrary to law: but ſome latitude is allowed in that reſpect; for if the owner were to inſure no more than the exact value of his property, he would loſe the premium of inſurance, and the abatement, if any was agreed on.

For example, if he has goods on board to the value of 100 l. and inſures the ſame at 5 *per cent.* to abate 2 *per cent.* in caſe of loſs; then, if a total loſs happen, he recovers 98l. from the inſurers, of which 5l. being applied to re-place the premium, the nett ſum ſaved is only 93 l.: but, if the value on board be only 93 l. and the ſum inſured 100 l. he would be fully indemnified for the loſs; and his property, in that caſe, is ſaid to be covered.

To find how much ſhould be inſured to cover any ſum, ſubtract the amount of the premium and abatement (if any), from 100 l. As the remainder is to 100 l. ſo is the value, to the ſum which covers it.

In caſe of a total loſs, if the ſum inſured be not greater than that which covers the property, the inſurers muſt pay it all. If greater, they pay what covers the property, and return the premium on the overplus.

Partial loſſes are regulated by this principle, that whereas the owner is not fully indemnified, in caſe of a total loſs, unleſs he covers his property, therefore he ſhould only be indemnified for a partial loſs in the ſame proportion; and, if it be not fully inſured, he is conſidered as inſurer himſelf, for the part not covered, and muſt bear a ſuitable proportion of the loſs. Therefore the value of the property is proved, and the ſum required to cover it computed. If that ſum be all inſured, the underwriters pay the whole damage; if only part be inſured, they pay their ſhare, which is computed by the following rule: As the ſum which covers the property is to the ſum inſured, ſo is the whole damage to the part for which the inſurers are liable.—For example, if the value of the property be 360 l. the ſum inſured 300 l. the premium 8 *per* *cent.* and abatement 2 *per cent.;* then the ſum which ſhould be inſured to cover the property is 400l.; and, if damage be ſuſtained to the extent of 200l. the owners will recover 150l.

If a voyage is inſured out and home, the premium outward muſt be conſidered as part of the value on the homeward property, and the ſum neceſſary to cover it computed accordingly. For example, to inſure 100l. out and home, at 5 *per cent.* each voyage, abatement 2 *per cent.* we compute thus:

93: 100:: L. 100: L. 107: 10: 6, to be inſured outward, premium on L. 107: 10: 6 outwards, at 5 *per cent.* L. 5: 7: 6: 93: 100:: L. 105: 7: 6: L. 113: 6 s. to be inſured home; the premium on which is L. 5: 13: 6; and, if the ſhip be loſt on the homeward voyage,

From the ſum inſured home				L. 113	6	0
Subtract the diſcount, 2 *per cent.*				- 2	5	3
Sum for which the inſurers are liable				L. 111	—	9
Inſurance out	L. 5	7	6			
Inſurance home -	5	13	3			
				11	—	9
Covered property				L 100	—	—

II. *Insurance againſt fire.* There are ſeveral offices in Britian for this purpoſe, of which the ſun fire-office is the moſt conſiderable. Inſurances are divided into common, hazardous, and doubly hazardous, according to the nature of the ſubject inſured. When the ſum inſured is high, there is a higher premium *per cent.* demanded; and money, papers, jewels, pictures, and gun-powder, are not comprehended. If a ſubject be wrong deſcribed, in oredr that it may be inſured at a lower premium, the policy is void. The benefit of a policy is transferred, by indorſement, to the repreſentatives of the perſon in whoſe favour it was made; and it may be transferred to other houſes when the inſured changes his habitation. If inſurance be made on the ſame ſubject in different offices, it muſt be ſpecified, by indorſement, on the policy; and, in caſe of loſs, the offices pay proportionally. The inſurers pay all expences in attempting to extinguiſh fire, or ſave goods, though not ſucceſful. If the value of a ſubject be inſured in part, and damage be ſuſtained, the inſurers pay the whole, if it does not exceed the ſum inſured.

III. *Insurance of Debts.* See Bottomry.

IV. In virtue of *Insurance for Lives*, when the perſon dies, a ſum of money becomes payable to the perſon on whoſe behalf the policy of inſurance was granted. One of the principal inſurance-offices of this kind, is that of the amicable ſociety for a perpetual aſſurance, kept in Serjeant's inn, Fleet-ſtreet, London.

This ſociety at Serjeant's inn requires an annual payment of 5l. from every member during life, payable quarterly. The whole annual income hence ariſing is equally divided among the nominees, or heirs, of ſuch members as die every year? and this renders the dividends among the nominees, in different years, more or leſs, according to the number of members who have happened to die in thoſe years. But this ſociety engages that the dividends ſhall not be leſs than 150l. to each claimant, though they may be more.—None are admitted whoſe ages are greater than 45, or leſs than 12; nor is there any difference of contribution allowed on account of difference of age.—This ſociety has ſubſiſted ever ſince 1706, and its credit and uſefulneſs are well eſtabliſhed. Its plan, however, is liable to ſeveral objections. Firſt, it is evident, that regulating the dividends among the nominees, by the number of members who die every year, is not equitable; becauſe it makes the benefit which a member is to receive to depend, not on the value of his contribution, but on a contingency; that is, the number of members that ſhall happen to die the ſame year with him. Secondly, its requiring the ſame payments from all perſons under 45, is alſo not equitable; for the payment of a perſon admitted at 12, ought not to be more than half the payment of a perſon admitted at 45. Thirdly, its plan is ſo narrow, as to confine its uſefulneſs too much. It can be of no ſervice to any perſon whoſe age exceeds 45. It is, likewiſe, by no means properly adapted to the circumſtances of perſons who want to make aſſurances on their lives for only one year, or a ſhort term of years. For example: the true value of the aſſurance of 150l. for five years, on the life of a perſon whoſe age is 39, may be found, by the firſt rule, to be nearly three guineas *per ann.* ſuppoſing intereſt at 3 *per cent.* and the probability of the duration of human life, as they are given in Dr Halley's Table of Obſervations. But ſuch an aſſurance could not be made in this ſociety without an annual payment of 5l. Neither is the plan of this ſociety at all adapted to the circumſtances of perſons who want to make aſſurances on particular ſurvivorſhips. For example: a perſon poſſeſſed of an eſtate or ſalary, which muſt be loſt with his life, has a perſon dependent upon him, for whom he deſires to ſecure a ſum of money payable at his death. But he deſires this only as a ſecurity againſt the danger of his dying firſt, and leaving a wife, or a parent, without ſupport. In theſe circumſtances he enters himſelf into this ſociety; and, by an annual payment of 5l. intitles his nominee at his death to 150l. In a few years, perhaps, his nominee happens to die; and having then loſt the advantages he had in view, he determines to forfeit his former payments, and to withdraw from the ſociety. The right method, in this caſe, would have been to have taken from ſuch a perſon the true value of the ſum aſſured, "on the ſuppoſition of non-payment, provided he ſhould ſurvive." In this way he would have choſen to contract with the ſociety: and had he done this, he would have paid for the aſſurance (ſuppoſing intereſt at 3 *per cent.* his age 30, the age of his nominee 30, and the values of lives as given by M. De Moivre) 3l. 8 s. in annual payments, to begin immediately, and to be continued during the joint duration of his own life, and the life of his nominee.

None of theſe objections are applicable to the plan of the ſociety which meets at Black-Friars bridge, and which has juſtly ſtyled itſelf the *Equitable Society for Aſſurances on Lives and Survivorſhips.* The buſineſs tranſacted by this ſociety is ſo extenſive, and it is governed ſo entirely by calculations, founded on the beſt rules and obſervations, that it cannot but prove one of the greateſt public benefits.

It was eſtabliſhed in the year 1762, in conſequence of propoſals which had been made, and lectures recommending ſuch a deſign, which had been read by Mr Dodſon, the author of the Mathematical Repoſitory. It aſſures any ſums or reverſionary annuities, on any life or lives for any number of years, as well as for the whole continuance of the lives; and in any manner that may be beſt adapted to the views of the perſons aſſured; that is, either by making the aſſured ſums payable certainly at the failure of any given lives; or on condition of ſurvivorſhip; and alſo, either by taking the price of the aſſurance in one preſent payment, or in annual payment, during any ſingle or joint lives, or any terms, leſs than the whole poſſible duration of the lives. Any perſons, for inſtance, who depend on incomes which muſt be loſt when they die, or who are only tenants for life in eſtates, may, if they want to borrow money, be enabled to give ſufficient ſecurity, by aſſuring ſuch ſums as they want to borrow in the ſociety, and aſſigning the policy; in conſequence of which, the lender will, during the term of the aſſurance, be guarded againſt all danger of loſing his principal by the death of the borrower. In the ſame way, clergymen, counſellors, perſons holding any places of profit, traders, and others, who have families, whoſe ſubſiſtence depends on the continuance of their lives, may here be enabled to make ſome proviſions for their families after their deceaſe. All perſons who enjoy annuities for the lives of others, may here ſecure themſelves againſt the loſs they would ſuſtain, ſhould they ſurvive the perſons on whoſe lives the annuities depend, by making aſſurances which ſhould intitle them to any ſums, payable on condition their ſurvivorſhip ſhould take place. Any perſon intitled to an eſtate, annuity, legacy, or office, after another perſon, provided he ſurvives, may here ſecure ſome equivalent for his family at his deceaſe, provided he does not ſurvive.—Huſbands may, in this ſociety, ſecure annuities for their wives, provided they ſhould leave them widows. Parents, by aſſuring the lives of their children when infants, till they attain a given age, may ſecure for them, ſhould they live to that age, ſuch ſums as may be neceſſary to put them out to apprenticeſhips or to make capitals or fortunes for them, with which to ſet out in buſineſs, or to marry. Any perſons, apprehenſive of being left without ſupport in old age, when incapable of labour, may, in this ſociety, purchaſe an annuity, to commence at any future year of his life, and to continue during the remainder of his life; and he may do this at a very ſmall expence, if he is young, and willing to wait for the commencement of his annuity till he is 55 or 60 years of age.

In ſhort, there are no kinds of aſſurances on lives and ſurvivorſhips, which this ſociety does not make. In doing this, it follows the rules which have been given by the beſt mathematical writers on the doctrine of *life annuities* and *reverſions*, particularly Mr Simpſon; and, in order to gain ſuch a profit as may render it a *permament* benefit to the public, and enable it to bear the expences of management, it takes the advantage of making its calculation at ſo low an intereſt as 3 *per cent.* and from tables of the probabilities and values of lives in London, where (as in all great towns) the rate of human mortality is much greater than it is in common among mankind.

This ſociety has lately made a particular inquiry into its own ſtate, as to *profit* and *loſs*, by all the buſineſs it has traſacted from its firſt inſtitution. This inquiry was made in three different methods, propoſed to the directors by Dr Price, the author of the treatiſe on Reverſionary Payments; and the reſult has been, that it appears, that a much ſmaller proportion of the perſons aſſured have died than *ſhould* have died, according to the tables for London, from which the calculations have been made, or even according to Dr Halley's table for Breſlaw; that, for this reaſon, the claims have been much leſs than they *ſhould* have been; and that the ſociety has for many years been enjoying an income ſome thouſands *per annum* greater than it wants, and a *ſurplus ſtock* of near L. 40,000, over and above what is neceſſary to enable it to make good all its engagements.

In theſe circumſtances, the ſociety finding itſelf well ſecured againſt future hazards; and being unwilling to take from the public an extravagant profit, have determined to reduce all the *future* payments for aſſurances *one-tenth*; and alſo to return to the perſons now aſſured *one-tenth* of all the payments which they had made. And there is, it ſeems, reaſon to expect, that this will be only a preparation for farther reductions. Nor need the public, we are informed, be apprehenſive of their going too far in making reductions; for in conſequence of the inquiry they have lately made, and of the order into which this inquiry has thrown their accounts, they will have it in their power to determine exactly from year to year what they are able to do, and always to keep under their view a clear ſtate of their own circumſtances.

From the preceding account of this ſociety it is manifeſt, that its buſineſs is ſuch, that none but ſkilful mathematicians are qualified to conduct it. The intereſt of the ſociety therefore abſolutely requires, that it ſhould make the places of thoſe who manage its buſineſs ſo advantageous, as to induce the ableſt mathematicians to accept them; and this will render it the more neceſſary for the ſociety to take care, on any future vacancies, to pay no regard in filling them up, to any other conſiderations than the ability and integrity of the candidates. The conſequence of granting good pay will be a multitude of ſolicitations on every vacancy, from perſons who, however unqualified, will hope for ſucceſs from their connections, and the intereſt they are able to make; and ſhould the ſociety, in any future time, be led by ſuch cauſes to truſt its buſineſs in the hands of perſons not poſſeſſed of ſufficient ability, as *calculators* and *mathematicians*, ſuch miſtakes may be committed as may prove in the higheſt degree detrimental. We have reaſon to know, that at preſent the ſociety is in no danger of this kind; and one of the great public advantages attending it is, that it has eſtabliſhed an *office*, where not only the buſineſs we have deſcribed is tranſacted with faithfulneſs and ſkill; but where alſo all who want ſolutions of any queſtions relating to life annuities and reverſions may apply, and be ſure of receiving juſt anſwers.

Table of the Rates of Aſſurance on Single Lives in the Society for equitable Aſſurances near Black-Friars Bridge.

Sum aſſured L. 100.

Age.	One year.			Seven years at an annual payment of			For the whole life, at an annual payment of		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
10	1	9	6	1	10	7	2	2	10
15	1	11	0	1	12	7	2	6	6
20	1	13	11	1	16	0	2	12	10
25	1	17	7	2	0	2	3	0	6
30	2	2	6	2	6	0	3	8	11
35	2	8	7	2	14	2	3	17	9
40	2	19	2	3	5	1	4	7	11
45	3	11	0	3	18	6	5	0	0
50	4	4	8	4	11	2	5	12	11
55	5	0	9	5	11	7	6	9	3
60	5	19	1	6	16	10	7	17	7
65	7	0	11	8	13	0	10	3	9

Theſe rates are 10 *per cent.* lower than the true values, according to the decrements of life in London, reckoning intereſt at 3 *per cent.*; but at the ſame time, for all ages under 50, they are near a *third* higher than all the true values, according to Dr Halley's Table of the decrements of life at Breſlaw, and Dr Price's Tables of the decrements of life at Northampton and Norwich.—As therefore this ſociety has lately found, that the decrements of life among its members have hitherto been lower than even thoſe given in theſe laſt Tables, it may be reaſonably expected, that they will in time reduce their rates of aſſurance to the true values by theſe tables.

Re-Inſurance is a ſecond contract, made by an inſurer, to transfer the riſk he has engaged for to another. It is in general forbidden by 19 Geo. II. c. 37. but is permitted to the repreſentatives of an inſurer in caſe of his death, or to his aſſignees in caſe of his bankruptcy; and it muſt be mentioned in the policy that it is a re-inſurance.

INTAGLIOS, precious ſtones on which are engraved the heads of great men, inſcriptions, and the like; ſuch as we frequently ſee ſet in rings, ſeals, &c.

INTEGER, in arithmetic, a whole number, in contradiſtinction to a fraction.

INTEGRAL, or Integrant, in philoſophy, appellations given to parts of bodies which are of a ſimilar nature with the whole: thus filings of iron have the ſame nature and properties as bars of iron.

Bodies may be reduced into their integrant parts by triture or grinding, limation or filing, ſolution, amalgation, &c. See Grinding, &c.

INTEGUMENTS, in anatomy, denote the common coverings which inveſt the body; as the cuticula, cutis, &c. See Anatomy.

Integument is alſo extended to the particular membranes which inveſt certain parts of the body; as the coats or tunics of the eye.

INTELLECT, a term uſed among philoſophers, to ſignify that faculty of the ſoul uſually called the *underſtanding*. See Logic and Metaphysics.

INTENDANT, one who has the conduct, inſpection, and management, of any thing. See Superintendant.

This is a title frequent among the French: they have *intendants of the marine*, who are officers in the ſeaports, whoſe buſineſs is to take care that the ordinances and regulations relating to ſea-affairs be obſerved: *intendants of the finances*, who have the direction of the revenues: *intendants of provinces*, who are appointed by the king to take care of the adminiſtration of juſtice, policy, and finances in the provinces: alſo *intendants of buildings, of houſes*, &c.

INTENDMENT, in law, is the intention, deſign, or true meaning, of a perſon or thing, which frequently ſupplies what is not fully expreſſed; but though the intent of parties in deeds and contracts is much regarded by the law, yet it cannot take place againſt the rules of law.

Intendment of Crimes; this, in caſe of treaſon, where the intention is proved by circumſtances, is puniſhable in the ſame manner as if it was put in execution. So, if a perſon enter a houſe in the night-time, with an intent to commit burglary, it is felony; alſo, an aſſault with an intent to commit a robbery on the highway is made felony, and puniſhed with tranſportation, 7 Geo. II. c. 21.

INTENT, in the civil law, ſignifies to begin, or commence, an action or proceſs.

INTENTION, in medicine, that judgment or method of cure which a phyſician forms to himſelf from a due examination of ſymptoms.

Intention, in phyſics, the increaſe of the power or energy of any quality; as heat, cold, &c. by which it ſtands oppoſed to *remiſſion*, which ſignifies its decreaſe or diminution.

Intention, in metaphyſics, denotes an exertion of the intellectual faculties with more than ordinary vigour; when the mind with earneſtneſs fixes its view on any idea, conſiders it on all ſides, and will not be called off by any ſolicitation.

INTERAMNA (anc. geog.), ſo called from its ſituation between rivers, or in an iſland in the river Nar; a town of the Ciſalpennine Umbria. *Interamnates* the people; ſurnamed *Nartes* by Pliny, to diſtinguiſh them from the people of other Interamnæ. Now *Terni;* a town in the Pope's territory in Umbria. E. Long. 13. 38. N. Lat. 42. 40.

Interamna, a town and colony of the Volſci in Latium, on the confines of Samnium, at the confluence of the rivers Liris and Melpis; and for diſtinction's ſake called *Lirinas*. The town is now in ruins.

Interamna, or *Interamnia Prætutianorum* (Ptolemy); a town in the territory of the Prætutiani, a part of the Picenum. Now *Teramo*, in the Abruzzo of Naples. E. Long. 15. N. Lat. 42. 40.

INTERCALARY, an appellation given to the odd day inſerted in leap-year; which was ſo called from *calo, calare*, "to proclaim," it being proclaimed by the prieſts with a loud voice.

INTERCATIA (anc. geog), a town of the Vaccæi in the Hither Spain. Here Scipio Æmilianus ſlew a champion of the barbarians in ſingle combat; and was the firſt who mounted the wall in taking the town. It was ſituated to the ſouth-eaſt of Aſturica; now ſaid to be in ruins.

INTERCESSION (*interceſſio*), was uſed in ancient Rome, for the act of a tribune of the people, or other magiſtrate, by which he inhibited the acts of other magiſtrates; or even, in caſe of the tribunes, the decrees of the ſenate. *Veto* was the ſolemn word uſed by the tribunes when they inhibited any decree of the ſenate or law propoſed to the people. The general law of theſe interceſſions was, that any magiſtrate might inhibit the acts of his equal or inferior: but the tribunes had the ſole prerogative of controlling the acts of every other magiſtrate, yet could not be controlled themſelves by any.

INTERCESSOR (from *inter* and *cedo* "I go between"), a perſon who prays, expoſtulates, or intercedes, in behalf of another. In the Roman law, interceſſor was the name of an officer, whom the governors of provinces appointed principally to raiſe taxes and other duties.

INTERCESSOR is alſo a term heretofore applied to ſuch biſhops as, during the vacancy of a ſee, adminiſtered the biſhopric, till a ſucceſſor to the deceaſed biſhop had been elected. The third council of Carthage calls theſe *interventors*.

INTERCOLUMNIATION, in architecture, denotes the ſpace between two columns, which is always to be proportioned to the height and bulk of the columns.

INTERCOSTAL, in anatomy, an appellation given to ſuch muſcles, nerves, arteries, and veins, as lie between the ribs.

INTERDICT, an eccleſiaſtical cenſure, by which the church of Rome forbids the performance of divine ſervice in a kingdom, province, town, &c. This cenſure has been frequently executed in France, Italy, and Germany; and in the year 1170, pope Alexander III. put all England under an interdict, forbidding the clergy to perform any part of divine ſervice, except baptiſing of infants, taking confeſſions, and giving abſolution to dying penitents. But this cenſure being liable to the ill conſequences of promoting libertiniſm and a neglect of religion, the ſucceeding popes have very ſeldom made uſe of it.

There was alſo an interdict of perſons, who were deprived of the benefit of attending on divine ſervice. Particular perſons were alſo anciently interdicted of fire and water, which ſignified a baniſhment for ſome particular offence: by this cenſure no perſon was allowed to receive them, or allow them fire or water; and being thus wholly deprived of the two neceſſary elements of life, they were doubtleſs under a kind of civil death.

INTEREST, is the premium or money paid for the loan or uſe of other money. See ARITHMETIC, n° 20.

Many good and learned men have in former times very much perplexed themſelves and other people by raiſing doubts about the legality of intereſt in *foro conſcientiæ*. It may not be amiſs here to enquire upon what grounds this matter does really ſtand.

The enemies to intereſt in general make no diſtinction between that and uſury, holding any increaſe of money to be indefenſibly uſurious. And this they ground as well on the prohibition of it by the law of Moſes among the Jews, as alſo upon what is laid down by Ariſtotle, That money is naturally barren; and to make it breed money is prepoſterous, and a perverſion of the end of its inſtitution, which was only to ſerve the purpoſes of exchange, and not of increaſe. Hence the ſchool-divines have branded the practice of taking intereſt, as being contrary to the divine law both natural and revealed; and the canon law has preſcribed the taking any the leaſt increaſe for the loan of money as a mortal ſin.

But, in anſwer to this, it may be obſerved, that the Moſaical precept was clearly a political, and not a moral precept. It only prohibited the Jews from taking uſury from their brethren the Jews; but in expreſs words permitted them to take it of a ſtranger: which proves that the taking of moderate uſury, or a reward for the uſe, for ſo the word ſignifies, is not *malum in ſe*, ſince it was allowed where any but an Iſrælite was concerned. And as to Ariſtotle's reaſon, deduced from the natural barrenneſs of money, the ſame may with equal force be alleged of houſes, which never breed houſes; and twenty other things, which nobody doubts it is lawful to make profit of, by letting them to hire. And though money was originally uſed only for the purpoſes of exchange, yet the laws of any ſtate may be well juſtified in permitting it to be turned to the purpoſes of profit, if the convenience of ſociety (the great end for which money was invented) ſhall require it. And that the allowance of moderate intereſt tends greatly to the benefit of the public, eſpecially in a trading country, will appear from that generally acknowledged principle, that commerce cannot ſubſiſt without mutual and extenſive credit. Unleſs money therefore can be borrowed, trade cannot be carried on: and if no premium were allowed for the hire of money, few perſons would care to lend it; or at leaſt the eaſe of borrowing at a ſhort warning (which is the life of commerce) would be entirely at an end. Thus, in the dark ages of monkiſh ſuperſtition and civil tyranny, when intereſt was laid under a total interdict, commerce was alſo at its loweſt ebb, and fell entirely into the hands of the Jews and Lombards: but when mens minds began to be more enlarged, when true religion and real liberty revived, commerce grew again into credit; and again introduced with itſelf its inſeparable companion, the doctrine of loans upon intereſt.

And, really, conſidered abſtractedly from this its uſe, ſince all other conveniences of life may be either bought or hired, but money can only be hired, there ſeems no greater impropriety in taking a recompence or price for the hire of this, than of any other convenience. If one borrow 100l. to employ in a beneficial trade, it is but equitable that the lender ſhould have a proportion of the gains. To demand an exorbitant price is equally contrary to conſcience, for the loan of a horſe, or the loan of a ſum of money: but a reaſonable equivalent for the temporary inconvenience which the owner may feel by the want of it, and for the hazard of his loſing it entirely, is not more immoral in one caſe than it is in the other. And indeed the abſolute prohibition of lending upon any, even moderate intereſt, introduces the very inconvenience which it ſeems meant to remedy. The neceſſity of individuals will make borrowing unavoidable. Without ſome profit by law, there will be but few lenders: and thoſe principally bad men, who will break through the law, and take a profit; and then will endeavour to indemnify themſelves from the danger of the penalty, by making that profit exorbitant. Thus, while all degrees of profit were diſcountenanced, we find more complaints of uſury, and more flagrant inſtances of oppreſſion, than in modern times when money may be eaſily had at a low intereſt. A capital diſtinction muſt therefore be made between a moderate and exorbitant profit; to the former of which we uſually give the name of *intereſt*, to the latter the truly odious appellation of *uſury*; the former is neceſſary in every civil ſtate; if it were but to exclude the latter, which ought never to be tolerated in any well-regulated ſociety. For, as the whole of this matter is well ſummed up by Grotius, "if the compenſation allowed by law does not exceed the proportion of the hazard run, or the want felt, by the loan, its allowance is neither repugnant to the revealed nor to the natural law: but if it exceeds thoſe bounds, it is then oppreſſive uſury; and though the municipal laws may give it impunity, they never can make it juſt."

We ſee, that the exorbitance or moderation of intereſt, for the money lent, depends upon two circumſtances; the inconvenience of parting with it for the preſent, and the hazard of loſing it entirely. The inconvenience to individual lenders can never be eſtimated by laws; the rate therefore of general intereſt muſt depend upon the uſual or general inconvenience. This reſults entirely from the quantity of ſpecie or current money in the kingdom: for, the more ſpecie there is circulating in any nation, the greater ſuperfluity there will be, beyond what is neceſſary to carry on the buſineſs of exchange and the common concerns of life. In every nation, or public community, there is a certain quantity of money thus neceſſary; which a perſon well ſkilled in political arithmetic might perhaps calculate as exactly, as a private banker can the demand for running caſh in his own ſhop: all above this neceſſary quantity may be ſpared, or lent, without much inconvenience to the reſpective lenders; and the greater this national ſuperfluity is, the more numerous will be the lenders, and the lower ought the rate of the national intereſt to be: but where there is not enough, or barely enough, circulating caſh, to anſwer the ordinary uſes of the public, intereſt will be proportionably high; for lenders will be but few, as few can ſubmit to the inconvenience of lending.

So alſo the hazard of an entire loſs has its weight in the regulation of intereſt: hence, the better the ſecurity, the lower will the intereſt be; the rate of intereſt being generally in a compound *ratio*, formed out of the inconvenience and the hazard. And as, if there were no inconvenience, there ſhould be no intereſt but what is equivalent to the hazard; ſo, if there were no hazard, there ought to be no intereſt, ſave only what ariſes from the mere inconvenience of lending. Thus, if the quantity of ſpecie in a nation be ſuch, that the general inconvenience of lending for a year is computed to amount to three *per cent.* a man that has money by him will perhaps lend it upon good perſonal ſecurity at five *per cent.* allowing two for the hazard run; he will lend it upon landed ſecurity, or mortgage, at four *per cent.* the hazard being proportionably leſs; but he will lend it to the ſtate, on the maintenance of which all his property depends, at three *per cent.* the hazard being none at all.

But ſometimes the hazard may be greater than the rate of intereſt allowed by law will compenſate. And this gives riſe to the practice, 1. Of bottomry, or *reſpondentia*. 2. Of policies of inſurance. See Bottomry, and Insurance.

Upon the two principles of inconvenience and hazard, compared together, different nations have at different times eſtabliſhed different rates of intereſt. The Romans at one time allowed *centiſſimæ*, *one per cent*, monthly, or *twelve per cent. per annum*, to be taken for common loans; but Juſtinian reduced it to *trientes*, or one third of the *as* or *centiſſimæ*, that is, *four per cent.*; but allowed higher intereſt to be taken of merchants, becauſe there the hazard was greater. So too Grotius informs us, that in Holland the rate of intereſt was then eight *per cent.* in common loans, but twelve to merchants. Our law eſtabliſhes one ſtandard for all alike, where the pledge or ſecurity itſelf is not put in jeopardy; leſt, under the general pretence of vague and indeterminate hazards, a door ſhould be opened to fraud and uſury: leaving ſpecific hazards to be provided againſt by ſpecific inſurances, or by loans upon *reſpondentia* or bottomry. But as to the rate of legal intereſt, it has varied and decreaſed for 200 years paſt, according as the quantity of ſpecie in Britain has increaſed by acceſſion of trade, the introduction of paper-credit, and other circumſtances. The ſtatute 37 Hen. VIII. c. 9. confined intereſt to ten *per cent.* and ſo did the ſtatute 13 Eliz. c. 8. But as, through the encouragements given in her reign to commerce, the nation grew more wealthy; ſo, under her ſucceſſor, the ſtatute 21 Jac. 1. c. 17. reduced it to eight *per cent.*; as did the ſtatute 12 Car. II. c. 13. to ſix: and laſtly, by the ſtatute 12 Ann. ſt. 2. c. 16. it was brought down to five *per cent.* yearly, which is now the extremity of legal intereſt that can be taken. But yet, if a contract which carries intereſt be made in a foreign country, the Britiſh courts will direct the payment of intereſt according to the law of that country in which the contract was made. Thus Iriſh, American, Turkiſh, and Indian intereſt, have been allowed in the Britiſh courts to the amount of even 12 *per cent.* For the moderation or exorbitance of intereſt depends upon local circumſtances; and the refuſal to enforce ſuch contracts would put a ſtop to all foreign trade. And, by ſtat. 14 Geo. III. c. 79. all mortgages and other ſecurities upon eſtates or other property in Ireland or the plantations, bearing intereſt not exceeding ſix *per cent.* ſhall be legal; though executed in the kingdom of Great Britain: unleſs the money lent ſhall be known at the time to exceed the value of the thing in pledge; in which caſe alſo, to prevent uſurious contracts at home under colour of ſuch foreign ſecurities, the borrower ſhall forfeit treble the ſum ſo borrowed.

INTERJECTION, in grammar, an indeclinable part of ſpeech, ſignifying ſome paſſion or emotion of the mind. See Grammar.

INTERIM, a name given to a formulary, or kind of confeſſion of the articles of faith, obtruded upon the Proteſtants after Luther's death by the emperor Charles V. when he had defeated their forces; ſo called becauſe it was only to take place in the *interim* (mean time) till a general council ſhould have decided all points in diſpute between the Proteſtants and Romaniſts. It retained moſt of the doctrines and ceremonies of the Romaniſts, excepting that of marriage, which was allowed to the clergy, and communion to the laity under both kinds. Moſt of the Proteſtants rejected it. There were two other interims; one of Leipſic, the other of Franconia.

INTERLOCUTOR, in Scots law. The ſentence or judgment of a court of law, is commonly called an *interlocutor* before decree is extracted.

INTERLOCUTORY decree, in Engliſh law. In a ſuit in equity, if any matter of fact be ſtrongly controverted, the fact is uſually directed to be tried at the bar of the court of king's bench, or at the aſſizes, upon a feigned iſſue. If a queſtion of mere law ariſes in the courſe of a cauſe, it is the practice of the court of chancery to refer it to the opinion of the judges of the court of king's bench, upon a caſe ſtated for that purpoſe. In ſuch caſes, interlocutory decrees or orders are made.

Interlocutory Judgments are ſuch as are given in the middle of a cauſe, upon ſome plea, proceeding on default, which is only intermediate, and does not finally determine or complete the ſuit. But the interlocutory judgments moſt uſually ſpoken of, are thoſe incomplete judgments, whereby the right of the plaintiff is eſtabliſhed, but the *quantum* of damages ſuſtained by him is not aſcertained, which is the province of a jury. In ſuch a caſe a writ of inquiry iſſues to the ſheriff, who ſummons a jury, enquires of the damages, and returns to the court the inquiſition ſo taken, whereupon the plaintiff's attorney taxes coſts, and ſigns final judgment.

Interlocutory Order, that which decides not the cauſe, but only ſettles ſome intervening matter relating to the cauſe. As, where an order is made in chancery, for the plaintiff to have an injunction, to quit poſſeſſion till the hearing of the cauſe; this order, not being final, is called *interlocutory*.

INTERLOPERS, are properly thoſe who, without due authority, hinder the trade of a company or corporation lawfully eſtabliſhed, by dealing in the ſame way.

INTERLUDE, an entertainment exhibited on the theatre between the acts of a play, to amuſe the ſpectators while the actors take breath and ſhift their dreſs, or to give time for changing the ſcenes and decorations.

In the ancient tragedy, the chorus ſung the interludes, to ſhow the intervals between the acts.

Interludes, among us, uſually conſiſt of ſongs, dances, feats of activity, concerts of muſic, &c.

Ariſtotle and Horace give it for a rule, that the interludes ſhould conſiſt of ſongs built on the principal parts of the drama; but ſince the chorus has been laid down, dancers, buffoons, &c. ordinarily furniſh the interludes.

INTERMENT, the act of interring, *i. e.* burying or laying a deceaſed perſon in the ground.

Ariſtotle aſſerted, that it was more juſt to aſſiſt the dead than the living. Plato, in his Republic, does not forget, amongſt other parts of juſtice, that which concerns the dead. Cicero eſtabliſhes three kinds of juſtice; the firſt reſpects the gods, the ſecond the manes or dead, and the third men. Theſe principles ſeem to be drawn from nature; and they appear at leaſt to be neceſſary for the ſupport of ſociety, ſince at all times civilized nations have taken care to bury their dead, and to pay their laſt reſpects to them. See Burial.

We find in hiſtory ſeveral traces of the reſpect which the Indians, the Egyptians, and the Syrians entertained for the dead. The Syrians embalmed their bodies with myrrh, aloes, honey, ſalt, wax, bitumen, and reſinous gums; they dried them alſo with the ſmoke of the fir and the pine tree. The Egyptians preſerved theirs with the reſin of the cedar, with aromatic ſpices, and with ſalt. Theſe people often kept ſuch mummies, or at leaſt their effigies, in their houſes, and at grand entertainments they were introduced, that by reciting the great actions of their anceſtors they might be better excited to virtue. See *Funeral Rites*.

The Greeks, at firſt, had probably not the ſame veneration for the dead as the Egyptians. Empedocles, therefore, in the eighty-fourth Olympiad, reſtored to life Ponthia, a woman of Agrigentum, who was about to be interred.* But this people, in proportion as they grew civilized, becoming more enlightened, perceived the neceſſity of eſtabliſhing laws for the protection of the dead.

At Athens the law required that no perſon ſhould be interred before the third day; and in the greater part of the cities of Greece a funeral did not take place till the ſixth or ſeventh. When a man appeared to have breathed his laſt, his body was generally waſhed by his neareſt relations, with warm water mixed with wine. They afterwards anointed it with oil; and covered it with a dreſs, commonly made of fine linen, according to the cuſtom of the Egyptians. This dreſs was white at Meſſina, Athens, and in the greater part of the cities of Greece, where the dead body was crowned with flowers. At Sparta it was of a purple colour, and the body was ſurrounded with olive leaves. The body was afterwards laid upon a couch in the entry of the houſe, where it remained till the time of the funeral. At the magnificent obſequies with which Alexander honoured Hepheſtion, the body was not burned until the tenth day.

The Romans, in the infancy of their empire, paid as little attention to their dead as the Greeks had done. Acilius Aviola having fallen into a lethargic fit, was ſuppoſed to be dead; he was therefore carried to the funeral pile; the fire was lighted up; and though he cried out he was ſtill alive, he periſhed for want of ſpeedy aſſiſtance. The Prætor Lamia met with the ſame fate. Tubero, who had been Prætor, was ſaved from the funeral pile. Aſclepiades a phyſician, who lived in the time of Pompey the Great, about one hundred and twenty years before the Chriſtian æra, returning from his country-houſe, obſerved near the walls of Rome a grand convoy and a crowd of people, who were in mourning aſſiſting at a funeral, and ſhowing every exterior ſign of the deepeſt grief. Having aſked what was the occaſion of this intercourſe, no one made any reply. He therefore approached the pretended dead body; and imagining that he perceived ſigns of life in it, he ordered the byſtanders to take away the flambeaux, to extinquiſh the fire, and to pull down the funeral pile. A kind of murmur on this aroſe throughout the whole company. Some ſaid that they ought to believe the phyſician, while others turned both him and his profeſſion into ridicule. The relations, however, yielded at length to the remonſtrances of Aſclepiades; they conſented to defer the obſequies for a little; and the conſequence was, the reſtoration of the pretended dead perſon to life. It appears that theſe examples, and ſeveral others of the like nature, induced the Romans to delay funerals longer, and to enact laws to prevent precipitate interments.

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* *Diogenes Laertius de Vita et Moribus Philoſophorum*, lib. 8.

At Rome, after allowing a ſufficient time for mourning, the neareſt relation generally cloſed the eyes of the deceaſed; and the body was bathed with warm water, either to render it fitter for being anointed with oil, or to reanimate the principle of life, which might remain ſuſpended without manifeſting itſelf. Proofs were afterwards made, to diſcover whether the perſon was really dead, which were often repeated during the time that the body remained expoſed; for there were perſons appointed to viſit the dead, and to prove their ſituation. On the ſecond day, after the body had been waſhed a ſecond time, it was anointed with oil and balm. Luxury encreaſed to ſuch a pitch in the choice of foreign perfumes for this purpoſe, that under the conſulſhip of Licinius Craſſus and Julius Cæſar, the ſenate forbade any perfumes to be uſed except ſuch as were the production of Italy. On the third day the body was clothed according to its dignity and condition. The robe called the prætexta was put upon magiſtrates, and a purple robe upon conſuls; for conquerors, who had merited triumphal honours, this robe was of gold tiſſue. For other Romans it was white, and black for the lower claſſes of the people. Theſe dreſſes were often prepared at a diſtance, by the mothers and wives of perſons ſtill in life. On the fourth day the body was placed on a couch, and expoſed in the veſtibule of the houſe, with the viſage turned towards the entrance, and the feet near the door; in this ſituation it remained till the end of the week. Near the couch were lighted wax tapers, a ſmall box in which perfumes were burnt, and a veſſel full of water for purification, with which thoſe who approached the body beſprinkled themſelves, An old man, belonging to thoſe who furniſhed every thing neceſſary for funerals, ſat near the deceaſed, with ſome domeſtics clothed in black. On the eighth day the funeral rites were performed; but to prevent the body from corrupting before that time, ſalt, wax, the reſinous gum of the cedar, myrrh, honey, balm, gypſum, lime, aſphaltes, or bitumen of Judea, and ſeveral other ſubſtances, were employed. The body was carried to the pile with the face uncovered, unleſs wounds or the nature of the diſeaſe had rendered it loathſome and diſguſting. In ſuch a caſe a maſk was uſed, made of a kind of plaſter; which has given riſe to the expreſſion of *funera larvata*, uſed in ſome of the ancient authors. This was the laſt method of concealment which Nero made uſe of, after having cauſed Germanicus to be poiſoned: for the effect of the poiſon had become very ſenſible by livid ſpots and the blackneſs of the body; but a ſhower of rain happening to fall, it waſhed the plaſter entirely away, and thus the horrid crime of fratricide was diſcovered.

The Turks have, at all times, been accuſtomed to waſh the bodies of their dead before interment; and as their ablutions are complete, and no part of the body eſcapes the attention of thoſe who aſſiſt at ſuch melancholy ceremonies, they can eaſily perceive whether one be really dead or alive, by examining, among other methods of proof, whether the *ſphincter ani* has loſt its power of contraction. If this muſcle remains ſtill contracted, they warm the body, and endeavour to recal it to life; otherwiſe, after having waſhed it with water and ſoap, they wipe it with linen cloths, waſh it again with roſe-water and aromatic ſubſtances, cover it with a rich dreſs, put upon its head a cap ornamented with flowers, and extend it upon a carpet placed in the veſtibule or hall at the entrance of the houſe.

In the primitive church the dead were waſhed and then anointed: the body was wrapped up in linen, or clothed in a dreſs of more or leſs value according to circumſtances, and it was not interred until after being expoſed and kept ſome days in the houſe. The cuſtom of clothing the dead is preſerved in France only for princes and eccleſiaſtics.

In other countries, more or leſs care is taken to prevent ſudden interments. At Geneva, there are people appointed to inſpect all dead bodies. Their duty conſiſts in examining whether the perſon be really dead, and whether one died naturally or by violence. In the north, as well as at Genoa, it is uſual not to bury the dead till three days have expired. In Holland, people carry their precautions much farther, and delay the funerals longer. And in England bodies generally remain unburied three or four days.

Premature INTERMENT. Nothwithſtanding the cuſtoms above recited; ſtill, in many places, and on many occaſions in all places, too much precipitation attends this laſt office; or if not precipitation, a neglect of due precautions in regard to the body. In general, indeed, the moſt improper treatment that can be imagined is adopted, and many a perſon made to deſcend into the grave before he has ſighed his laſt breath. The hiſtories related by Hildanus, by Camerarius, by Horſtius, by Macrobius in his Somnium Scipionis, by Plato in his Republic, by Valerius Maximus, and by a great many modern authors, leave us no doubt reſpecting the dangers or miſconduct of ſuch precipitation. It muſt appear aſtoniſhing that the attention of mankind has been after all ſo little rouſed by an idea the moſt terrible that can be conceived on this ſide of eternity. If nature recoils from the idea of death, with what horror muſt ſhe ſtart at the thought of death anticipated, precipitated by inattention—a return of life in darkneſs, diſtraction, and deſpair—then death repeated under agonies unſpeakable! To revive nailed up in a coffin! The brain can ſcarce ſuſtain the reflection in our cooleſt, ſafeſt moments.

According to preſent uſage, as ſoon as the ſemblance of death appears, the chamber of the ſick is deſerted by friends, relatives, and phyſicians; and the apparently dead, though frequently living, body, is committed to the management of an ignorant and unfeeling nurſe, whoſe care extends no farther than laying the limbs ſtraight, and ſecuring her accuſtomed perquiſites. The bed-cloaths are immediately removed, and the body is expoſed to the air. This, when cold, muſt extinguiſh any ſpark of life that may remain, and which, by a different treatment, might have been kindled into flame; or it may only continue to repreſs it, and the unhappy perſon afterwards revive amidſt the horrors of the tomb.

The difference between the end of a weak life and the commencement of death, is ſo ſmall, and the uncertainty of the ſigns of the latter is ſo well eſtabliſhed both by ancient and modern authors who have turned their attention to that important object, that we can ſcarcely ſuppoſe undertakers capable of diſtinguiſhing an apparent from a real death. Animals which ſleep during winter ſhow no ſigns of life; in this caſe, circulation is only ſuſpended: but were it annihilated, the vital ſpirit does not ſo eaſily loſe its action as the other fluids of the body; and the principle of life, which long ſurvives the appearance of death, may re-animate a body in which the action of all the organs ſeems to be at an end. But how difficult is it to determine whether this principle may not be revived? It has been found impoſſible to recal to life ſome animals ſuffocated by mephitic vapours, tho' they appeared leſs affected than others who have revived. Coldneſs, heavineſs of the body, a leaden livid colour, with a yellowneſs in the viſage, are all very uncertain ſigns: Mr Zimmerman obſerved them all upon the body of a criminal, who fainted through the dread of that puniſhment which he had merited. He was ſhaken, dragged about, and turned in the ſame manner as dead bodies are, without the leaſt ſigns of reſiſtance; and yet at the end of 24 hours he was recalled to life by means of volatile alkali.

A Director of the coach-office at Dijon, named *Colinet*, was ſuppoſed to be dead, and the news of this event was ſpread throughout the whole city. One of his friends, who was deſirous of ſeeing him at the moment when he was about to be buried, having looked at him for a conſiderable time, thought he perceived ſome remains of ſenſibility in the muſcles of the face. He therefore made an attempt to bring him to life by ſpirituous liquors, in which he ſucceeded; and this director enjoyed afterwards for a long time that life which he owed to his friend. This remarkable circumſtance was much like thoſe of Empedocles and Aſclepiades. Theſe inſtances would perhaps be more frequent, were men of ſkill and abilities called in caſes of ſudden death, in which people of ordinary knowledge are often deceived by falſe appearances.

A man may fall into a ſyncope, and may remain in that condition three or even eight days. People in this ſituation have been known to come to life when depoſited among the dead. A boy belonging to the hoſpital at Caſſel appeared to have breathed his laſt: he was carried into the hall where the dead were expoſed, and was wrapped up in a piece of canvas. Some time after, recovering from his lethargy, he recollected the place in which he had been depoſited, and crawling towards the door knocked againſt it with his foot. This noiſe was luckily heard by the centinel, who ſoon perceiving the motion of the canvas called for aſſiſtance. The youth was immediately conveyed to a warm bed, and ſoon perfectly recovered. Had his body been confined by cloſe bandages or ligatures, he would not have been able, in all probability, to make himſelf be heard: his unavailing efforts would have made him again fall into a ſyncope, and he would have been thus buried alive.

We muſt not be aſtoniſhed that the ſervants of an hoſpital ſhould take a ſyncope for a real death, ſince even the moſt enlightened people have fallen into errors of the ſame kind. Dr John Schmid relates, that a young girl, ſeven years of age, after being afflicted for ſome weeks with a violent cough, was all of a ſudden freed from this troubleſome malady, and appeared to be in perfect health. But ſome days after, while playing with her companions, this child fell down in an inſtant as if ſtruck by lightning. A death-like paleneſs was diffuſed over her face and arms; ſhe had no apparent pulſe, her temples were ſunk, and ſhe ſhowed no ſigns of ſenſation when ſhaken or pinched. A phyſician, who was called, and who believed her to be dead, in compliance with the repeated and preſſing requeſt of her parents, attempted, though without any hopes to recal her to life; and at length, after ſeveral vain efforts, he made the ſoals of her feet be ſmartly rubbed with a bruſh dipped in ſtrong pickle. At the end of three quarters of an hour ſhe was obſerved to ſigh; ſhe was then made to ſwallow ſome ſpirituous liquor; and ſhe was ſoon after reſtored to life, much to the joy of her diſconſolate parents.—A certain man having undertaken a journey, in order to ſee his brother, on his arrival at his houſe found him dead. This news affected him ſo much, that it brought on a moſt dreadful ſyncope, and he himſelf was ſuppoſed to be in the like ſituation. After the uſual means had been employed to recal him to life, it was agreed that his body ſhould be diſſected, to diſcover the cauſe of ſo ſudden a death; but the ſuppoſed dead perſon overhearing this propoſal, opened his eyes, ſtarted up, and immediately betook himſelf to his heels.—Cardinal Eſpinola, prime miniſter to Philip II. was not ſo fortunate; for we read in the Memoirs of Amelot de la Houſſai, that he put his hand to the knife with which he was opened in order to be embalmed. In ſhort, almoſt every one knows that Veſalius, the father of anatomy, having been ſent for to open a woman ſubject to hyſterics, who was ſuppoſed to be dead, he perceived, on making the firſt inciſion, by her motion and cries, that ſhe was ſtill alive: that this circumſtance rendered him ſo odious, that he was obliged to fly; and that he was ſo much affected by it, that he died ſoon after.—On this occaſion, we cannot forbear to add an event more recent, but no leſs melancholy. The Abbé Prevoſt, ſo well known by his writings and the ſingularities of his life, was ſeized with a fit of the apoplexy, in the foreſt of Chantilly, on the 23d of October 1763. His body was carried to the neareſt village, and the officers of juſtice were proceeding to open it, when a cry which he ſent forth affrightened all the aſſiſtants, and convinced the ſurgeon that the Abbé was not dead; but it was too late to ſave him, as he had already received the mortal wound.

Even in old age, when life ſeems to have been gradually drawing to a cloſe, the appearances of death are often fallacious. A lady in Cornwall, more than 80 years of age, who had been a conſiderable time declining, took to her bed, and in a few days ſeemingly expired in the morning. As ſhe had often deſired not to be buried till ſhe had been two days dead, her requeſt was to have been regularly complied with by her relations.

Lond. Chron. Vol. IV. p. 456.

Interment.

tions. All that ſaw her looked upon her as dead, and the report was current through the whole place; nay, a gentleman of the town actually wrote to his friend in the iſland of Scilly that ſhe was deceaſed. But one of thoſe who were paying the laſt kind office of humanity to her remains, perceived ſome warmth about the middle of the back; and acquainting her friends with it, they applied a mirror to her mouth; but, after repeated trials, could not obſerve it in the leaſt ſtained; her under jaw was likewiſe fallen, as the common phraſe is; and, in ſhort, ſhe had every appearance of a dead perſon. All this time ſhe had not been ſtripped or dreſſed; but the windows were opened, as is uſual in the chambers of the deceaſed. In the evening the heat ſeemed to increaſe, and at length ſhe was perceived to breathe.

In ſhort, not only the the ordinary ſigns are very uncertain, but we may ſay the ſame of the ſtiffneſs of the limbs, which may be convulſive: of the dilation of the pupil of the eye, which may proceed from the ſame cauſe; of putrefaction, which may equally attack ſome parts of a living body; and of ſeveral others. Haller, convinced of the uncertainty of all theſe ſigns, propoſes a new one, which he conſiders as infallible. "If the perſon (ſays he) be ſtill in life, the mouth will immediately ſhut of itſelf, becauſe the contraction of the muſcles of the jaw will awaken their irritability." The jaw, however, may be deprived of its irritability though a man may not be dead. Life is preſerved a long time in the paſſage of the inteſtines. The ſign pointed out by Dr Fothergill appears to deſerve more attention. "If the air blown into the mouth (ſays this phyſician) paſſes freely through all the alimentary channel, it affords a ſtrong preſumption that the irritability of the internal ſphincters is deſtroyed, and conſequently that life is at an end." Theſe ſigns, which deſerve to be confirmed by new experiments, are doubtleſs not known to undertakers.

The difficulty of diſtinguiſhing a perſon apparently dead from one who is really ſo, has, in all countries where bodies have been interred too precipitately, rendered it neceſſary for the law to aſſiſt humanity. Of ſeveral regulations made on this ſubject, we ſhall quote only a few of the moſt recent; ſuch as thoſe of Arras in 1772; of Mantua in 1774; of the Grand Duke of Tuſcany in 1775; of the Senechauſſée of Sivrai, in Poitou, in 1777; and of the Parliament of Metz in the ſame year. To give an idea of the reſt, it will be ſufficient to relate only that of Tuſcany. By this edict, the Grand Duke forbids the precipitate interment of perſons who die ſuddenly. He orders the Magiſtrates of health to be informed, that phyſicians and ſurgeons may examine the body; that they may uſe every endeavour to recal it to life, if poſſible, or to diſcover the cauſe of its death; and that they ſhall make a report of their procedure to a certain tribunal. On this occaſion the Magiſtrate of Health orders the dead not to be covered until the moment they are about to be buried, except ſo far as decency requires; obſerving always that the body be not cloſely confined, and that nothing may compreſs the jugular veins and the carotid arteries. He forbids people to be interred according to the ancient method; and requires that the arms and the hands ſhould be left extended, and that they ſhould not be folded or placed croſs-wiſe upon the breaſt. He forbids, above all, to preſs the jaws one againſt the other; or to fill the mouth and noſtrils with cotton or other ſtuffing. Laſtly, he recommends not to cover the viſage with any kind of cloth until the body is depoſited in its coffin.

Interment, Intermittent.

We ſhall conclude this article by ſubjoining, from Dr Hawes's *Addreſs to the Public* on this ſubject, a few of the caſes in which this fallacious appearance of death is moſt likely to happen, together with the reſpective modes of treatment which he recommends.

In apoplectic and fainting fits, and in thoſe ariſing from any violent agitation of the mind, and alſo when opium or ſpirituous liquors have been taken in too great a quantity, there is reaſon to believe that the appearance of death has been frequently miſtaken for the reality. In theſe caſes, the means recommended by the *Humane Society for the Recovery of Drowned Perſons* ſhould be perſevered in for ſeveral hours, and bleeding, which in ſimilar circumſtances has ſometimes proved pernicious, ſhould be uſed with great caution (See the article DROWNING.) In the two latter inſtances it will be highly expedient, with a view of counteracting the ſoporific effects of opium and ſpirits, to convey into the ſtomach, by a proper tube, a ſolution of tartar emetic, and by various other means to excite vomiting.

From the number of children carried off by convulſions, and the certainty ariſing from undoubted facts, that ſome who have in appearance died from that cauſe have been recovered; there is the greateſt reaſon for concluding, that many, in conſequence of this diſeaſe, have been prematurely numbered among the dead; and that the fond parent, by neglecting the means of recalling life, has often been the guiltleſs executioner of her own offspring. To prevent the commiſſion of ſuch dreadful miſtakes, no child, whoſe life has been apparently extinguiſhed by convulſions, ſhould be conſigned to the grave till the means of recovery above recommended in apoplexies, &c. have been tried; and, if poſſible, under the directions of ſome ſkilful practitioner of medicine, who may vary them as circumſtances ſhall require.

When fevers ariſe in weak habits, or when the cure of them has been principally attempted by means of depletion, the conſequent debility is often very great, and the patient ſometimes ſinks into a ſtate which bears ſo cloſe an affinity to that of death, that there is reaſon to ſuſpect that it has too often deceived the byſtanders, and induced them to ſend for the undertaker when they ſhould have had recourſe to the ſuccours of medicine. In ſuch caſes, volatiles, *eau de luce* for example, ſhould be applied to the noſe, rubbed on the temples, and ſprinkled often about the bed; hot flannels, moiſtened with a ſtrong ſolution of camphorated ſpirit, may likewiſe be applied over the breaſt, and renewed every quarter of an hour; and as ſoon as the patient is able to ſwallow, a tea-ſpoonful of the ſtrongeſt cordial ſhould be given every five minutes.

The ſame methods may alſo be uſed with propriety in the ſmall-pox when the puſtules ſink, and death apparently enſues; and likewiſe in any other acute diſeaſes, when the vital functions are ſuſpended from a ſimilar caſe.

INTERMITTENT, or INTERMITTING, *Fever* ſuch fevers as go off and ſoon return again, in oppoſition to thoſe which are continual. See (the *Index* ſubjoined to) Medicine.

INTERPOLATION, among critics, denotes a ſpurious paſſage inſerted into the writings of ſome ancient author.

INTERPOSITION, the ſituation of a body between two others, ſo as to hide them, or prevent their action.

The eclipſe of the ſun is occaſioned by an interpoſition of the moon between the ſun and us: and that of the moon by the interpoſition of the earth between the ſun and moon. See Eclipse.

INTERPRETER, a perſon who explains the thoughts, words, or writings, of ſome other, which before were unintelligible.—The word *interpres*, according to Iſidore, is compoſed of the prepoſition *inter*, and *partes*, as ſignifying a perſon in the middle betwixt two parties, to make them mutually underſtand each others thoughts: others derive it from *inter*, and *præs*, i. e. *fidejuſſor*; q. d. a perſon who ſerves as ſecurity between two others who do not underſtand one another.

There have been great debates about interpreting Scripture. The Romaniſts contend, that it belongs abſolutely to the church: adding, that where ſhe is ſilent, reaſon may be conſulted; but where ſhe ſpeaks, reaſon is to be diſregarded. The Proteſtants generally allow reaſon the ſovereign judge, or interpreter; tho' ſome among them have a ſtrong regard to ſynods, and others to the authority of the primitive fathers. Laſtly, others have recourſe to the Spirit within every perſon to interpret for them; which is what Bochart calls αποδειξις τȣ πνευματος.

INTERREGNUM, the time during which the throne is vacant in elective kingdoms; for in ſuch as are hereditary, like England, there is no ſuch thing as an interregnum.

INTERREX, the magiſtrate who governs during an interregnum.

This magiſtrate was eſtabliſhed in old Rome, and was almoſt as ancient as the city itſelf: after the death of Romulus there was an interregnum of a year, during which the ſenators were each interrex in their turn, five days a-piece.

After the eſtabliſhment of conſuls and a commonwealth, though there were no kings, yet the name and function of *interrex* was ſtill preſerved: for, when the magiſtrates were abſent, or there was any irregularity in their election, or they had abdicated, ſo that the comitia could not be held; provided they were unwilling to create a dictator, they made an interrex, whoſe office and authority was to laſt five days after which they made another. To the interrex was delegated all the regal and conſular authority, and he performed all their functions. He aſſembled the ſenate, held comitia or courts, and took care that the election of magiſtrates was according to rules. Indeed at firſt it was not the cuſtom of the interrex to hold comitia, at leaſt we have no inſtance of it in the Roman hiſtory. The patricians alone had the right of electing an interrex; but this office fell with the republic, when the emperors made themſelves maſters of every thing.

INTERROGATION, Erotesis, a figure of rhetoric, in which the paſſion of the ſpeaker introduces a thing by way of queſtion, to make its truth more conſpicuous.

The interrogation is a kind of apoſtrophe which the ſpeaker makes to himſelf; and it muſt be owned, that this figure is ſuited to expreſs moſt paſſions and emotions of the mind; it ſerves alſo to preſs and bear down an adverſary, and generally adds an uncommon briſkneſs, action, force, and variety, to diſcourſe.

Interrogation, in grammar, is a point which ſerves to diſtinguiſh ſuch parts of a diſcourſe, where the author ſpeaks as if he were aſking queſtions. Its form is this (?).

INTERROGATORIES, in law, are particular queſtions demanded of witneſſes brought in to be examined in a cauſe, eſpecially in the court of chancery. And theſe interrogatories muſt be exhibited by the parties in ſuit on each ſide; which are either direct for the party that produces them, or counter, on behalf of the adverſe party: and generally both plaintiff and defendant may exhibit, direct, and counter, or croſs interrogatories. They are to be pertinent, and only to the points neceſſary; and either drawn or peruſed by counſel, and to be ſigned by them.

INTERSECTION, in mathematics, the cutting of one line, or plane, by another; or the point or line wherein two lines, or two planes, cut each other.

The mutual interſection of two planes is a right line. The centre of a circle is in the interſection of two diameters. The central point of a regular or irregular figure of four ſides, is the point of interſection of the two diagonals.

The equinoxes happen when the ſun is in the interſections of the equator and ecliptic.

INTERSPINALES. See Anatomy, *Table of the Muſcles.*

INTERVAL, the diſtance of ſpace between two extremes, either in time or place. The word comes from the Latin *intervallum*, which, according to Iſidore, ſignifies the ſpace *inter foſſam & murum*, "between the ditch and the wall;" others note, that the ſtakes or piles, driven into the ground in the ancient Roman bulwarks, were called *valla*; and the interſtices or vacancy between them, *intervalla*.

Interval, in muſic. The diſtance between any given ſound and another, ſtrictly ſpeaking, is neither meaſured by any common ſtandard of extenſion nor duration; but either by immediate ſenſation, or by computing the difference between the numbers of vibrations produced by two or more ſonorous bodies, in the act of ſounding, during the ſame given time. As the vibrations are ſlower and fewer during the ſame inſtant, for example, the ſound is proportionally lower or graver; on the contrary, as during the ſame period the vibrations increaſe in number and velocity, the ſounds are proportionably higher or more acute. An interval in muſic, therefore, is properly the difference between the number of vibrations produced by one ſonorous body of a certain magnitude and texture, and of thoſe produced by another of a different magnitude and texture in the ſame time.

Intervals are divided into conſonant and diſſonant. A conſonant interval is that whoſe extremes, or whoſe higheſt and loweſt ſounds, when ſimultaneouſly heard, coaleſce in the ear, and produce an agreeable ſenſation called by Lord Kames a *tertium quid*. A diſſonant interval, on the contrary, is that whoſe extremes, ſimultaneouſly heard, far from coaleſcing in the ear, and producing one agreeable ſenſation, are each of them plainly diſtinguiſhed from the other, produce a grating effect upon the ſenſe, and repel each other with an irreconcileable hoſtility. In proportion as the vibrations of different ſonorous bodies, or of the ſame ſonorous body in different modes, more or leſs frequently coincide during the ſame given time, the chords are more or leſs perfect, and conſequently the intervals more or leſs conſonant. When theſe vibrations never coincide at all in the ſame given time, the diſcord is conſummate, and conſequently the interval abſolutely diſſonant.

Intervals are not only divided according to their natures, but alſo with reſpect to their degrees. In this view, they are either enharmonic, chromatic, or diatonic. Of theſe therefore in their order, from the leaſt to the greateſt.

An enharmonic interval is what they call the *eighth part of a tone*, or the difference between a major and minor ſemitone generally diſtinguiſhed by the name of a *comma*. Commas, however, are of three different kinds, as their quantities are more or leſs; but ſince theſe differences cannot be aſcertained without long and intricate computations, it is not neceſſary for us to attempt an inveſtigation, whoſe purſuit is ſo unpleaſant, and whoſe reſult attended with ſo little utility. It has by muſicians been generally called the *eighth part of a tone;* but they ought to have conſidered, that a comma is by no means the object of auricular perception, and that its eſtimate can only be formed by calculation. For a more minute diſquiſition of this matter, our readers may conſult the article Comma in the Muſical Dictionary, or the article Music in this Work, Notes, *n* and *s*. A chromatic interval conſiſts properly of a minor ſemitone, but may alſo admit the major. A diatonic interval conſiſts of a ſemitone-major at leaſt, but may conſiſt of any number of tones within the octave. When an octave higher or lower is aſſumed, it is obvious that we enter into another ſcale which is either higher or lower, but ſtill a repetition of the former degrees of ſound.

Intervals again are either ſimple or compound. All the intervals within any one octave are ſimple; ſuch as the ſecond major or minor, the third, the fourth, the fifth, the ſixth, the ſeventh, &c. of theſe afterwards. All intervals whoſe extremes are contained in different octaves, ſuch as the ninth, the tenth, the eleventh, the twelfth, the thirteenth, the fourteenth, the fifteenth, &c. may be termed *compound intervals*.

The ſemitone either exactly or nearly divides the tone into two equal parts. In the theory of harmonical computation three kinds of ſemitones are recogniſed, viz. the greateſt, the intermediate, and the ſmalleſt ſemitone. But in practice, to which theſe explications are chiefly adapted, the ſemitone is only diſtinguiſhed into major and minor. The ſemitone major is the difference between the third major and the fourth, as EF. Its ratio is as 15 to 16, and it forms the leaſt of all diatonic intervals.

The ſemitone minor conſiſts of the difference between the third major and minor: it may be marked in the ſame degree by a ſharp or a flat, and it only forms a chromatic interval; its ratio is as 24 to 25.

Though ſome diſtinction is made between theſe ſemitones by the manner of marking them, yet on the organ and harpſichord no diſtinction can be made; nor is there any thing more common for us than to ſay, that D ſharp in riſing is E flat in deſcending, and ſo through the whole diapaſon above or below; beſides, the ſemitone is ſometimes major and ſometimes minor, ſometimes diatonic and ſometimes chromatic, according to the different modes in which we compoſe or practiſe; yet in practice theſe are called *ſemitones* minor, which are marked by ſharps or flats, without changing the degree; and ſemitones major are thoſe which form the interval of a ſecond.

With reſpect to the three ſemitones recogniſed in theory, the greateſt ſemitone is the difference between a tone major and a ſemitone minor; and its ratio is as 25 to 27. The intermediate ſemitone is the difference between a ſemitone major and a tone major: and its ratio is as 128 to 135. In a word, the ſmall ſemitone conſiſts of the difference between the greateſt and the intermediate ſemitone; and its ratio is as 125 to 128.

Of all theſe intervals, there is only the ſemitone major, which is ſometimes admitted as a ſecond in harmony.

The interval of a tone which characteriſes the diatonic ſpecies of compoſition, is either major or minor. The former conſiſts of the difference between the fourth and fifth; and its ratio is as 8 to 9: and the latter, whoſe ratio is as 9 to 10, reſults from the difference between the third minor and the fourth.

Seconds are diſtinguiſhed into four kinds: two of which are not in practice ſufficiently momentous to be mentioned. The ſecond major is ſynonymous with the intervals of a tone; but as that tone may be either major or minor, its ratio may be either as 8 to 9, or as 9 to 10.

The ſecond minor conſiſts of the diſtance from B to C, or from E to F; and its ratio is as 15 to 16.

The third is ſo called, becauſe it conſiſts of two gradations, or three diatonic ſounds, as from G to B aſcending, or from A to C, incluſive of the extremes; of which the firſt is a third major, compoſed of two full tones, and its ratio as 4 to 5; the ſecond, a third minor conſiſting of a tone and a ſemitone major, and its ratio as 5 to 6.

The fourth has by ſome been reckoned an imperfect, but more juſtly by others a perfect, chord. It conſiſts of three diatonic degrees, but takes its name from the four different ſounds of which it is formed; or, in other words, the number by which it is denominated includes the extremes. It is compoſed of a tone major, a tone minor, and a ſemitone major, as from C to F aſcending; its ratio as 3 to 4.

The fifth next to the octave, is, perhaps, the moſt perfect interval, as leaſt ſuſceptible of alteration. The number from whence it aſſumes its name likewiſe includs its extremes. It conſiſts of two tones major, one minor, and a ſemitone major, as from A to E aſcending; its ratio is as 2 to 3.

The ſixth is not found among the natural order of conſonances, but only admitted by combination. It is not here neceſſary to mention its various diſtinctions and uſes, as we only give an account of intervals in general.

The ſixth major conſiſts of four tones and a ſemitone major, as from G to E aſcending: its ratio is as 3 to 5. The ſixth minor contains three tones and two ſemitones major, as from E to C aſcending; its ratio is as 5 to 8.

The ſeventh, as a reduplication of the ſecond, is a diſſonance. When major, it conſiſts diatonically of five tones, three major, and two minor; and a major ſemitone, as from C to B aſcending; its ratio is as 8 to 15.

When minor, it conſiſts of four tones, three major and one minor, and two major ſemitones, as from E to D aſcending; its ratio is as 5 to 9.

The octave is the moſt perfect of all chords, and in many caſes hardly to be diſtinguiſhed by the ear from an uniſon; that is to ſay, from that coincidence of ſound produced by two muſical ſtrings, whoſe matter, lengths, diameters, and tenſions, are the ſame. As the vibrations of two ſtrings in uniſon during any given time, are preciſely coincident; ſo whilſt the loweſt extreme of the octave vibrates once, the higheſt vibrates twice: and conſequently its ratio is as 1 to 2, as from c to C aſcending. It conſiſts of ſix full tones and two ſemitones major. Its name is derived from the Latin *octo*, "eight;" becauſe that number likewiſe includes its extremes. It may likewiſe be divided into twelve ſemitones. It contains the whole diatonic ſcale; and every ſeries above or below conſiſts only of the ſame returning ſounds. From whence the natures, diſtances, and powers, of every interval greater than the octave, as the ninth, the tenth, the eleventh, the twelfth, the thirteenth, the fourteenth, the fifteenth, the triple octave, &c. may eaſily be computed.

During our paſt obſervations upon the term *interval*, we have either wholly neglected our faithful aſſociate M. Rouſſeau, or only maintained a diſtant and momentary intercourſe with him. We now propoſe to pay him a more permanent and familiar viſit; but as he is engaged in the diſpute between the Pythagoreans and Ariſtoxenians, we think it more advantageous to decline the controverſy, and to follow him, after having eſcaped the fray, like a gentleman and a ſcholar. Having put the partizans of Ariſtoxenus to ſilence, let us, with him, forſake the liſts of combat, nor ſtain his triumph by inſulting the falling champions.

"We divide (ſays he) as did the ancients, intervals into conſonant and diſſonant. The conſonances are perfect or imperfect *; diſſonances are either ſuch by nature, or become ſuch by accident. There are only two intervals naturally diſſonant, viz. the ſecond and ſeventh, including their octaves or replications; nay, ſtill theſe two may be reduced to one alone, as the ſeventh is properly no more than a replication of the ſecond; for B, the ſeventh above the loweſt C, where we have generally begun the ſcale, is really an octave above B, the note immediately below that C; and conſequently the interval between theſe lower ſounds is no more than that of a ſecond major, to which all diſſonances may therefore be ultimately reduced, whether conſidered as major or minor; but even all the conſonances may become diſſonant by accident. See DISCORD.

"Beſides, every interval is either ſimple or reduplicated. Simple intervals are ſuch as the limits of a ſingle octave comprehend. Every interval which ſurpaſſes this extent is reduplicated; that is to ſay, compounded of one or more octaves, and of the ſimple interval whoſe replication it is.

"Simple intervals are likewiſe divided into direct and inverted. Take any ſimple interval whatever for a direct one; the quantity which, added to itſelf, is required to complete the octave, will be found an inverted interval; and the ſame obſervation holds reciprocally true of ſuch as are inverted.

"There are only ſix kinds of ſimple intervals; of which three contain ſuch quantities, as, added to the other three, are required to complete the octave; and of conſequence likewiſe the one muſt be inverſions of the other. If you take at firſt the ſmalleſt intervals, you will have, in the order of direct intervals, the ſecond, the third, and fourth; for inverted, the ſeventh, the ſixth, and fifth. Suppoſe theſe to be direct, the others will be inverted; every thing here is reciprocal.

"To find the name of any interval whatever, it is only neceſſary to add the denomination of unity to the degree which it contains. Thus the interval of one degree ſhall give a ſecond; of two, a third; of three, a fourth; of ſeven, an octave; of nine, a tenth, &c. But this is not ſufficient to determine an interval with accuracy; for under the ſame name it may be either major or minor, true or falſe, diminiſhed or redundant.

"The conſonances which are imperfect, and the two natural diſſonances, may be major or minor, which, without changing their degree, occaſions in the interval the difference of a ſemitone; ſo that if, from a minor interval, we ſtill deduce a ſemitone, it becomes an interval diminiſhed: if, by a ſemitone, we increaſe a major interval, it becomes an interval redundant.

"The perfect conſonances are by their nature invariable. When their intervals are ſuch as they ought to be, we call them *juſt*, *true:* and if we dilate or contract this interval by a ſemitone, the conſonance is termed *falſe*, and becomes a diſſonance; *redundant*, if the ſemitone be added; *diminiſhed*, if it be abſtracted. We improperly give the name of a *falſe fifth* to the fifth diminiſhed; this is taking the genus for the ſpecies: the fifth redundant is every jot as falſe as the diminiſhed, it is even more ſo in every reſpect."

In the Muſical Dictionary, plate C, fig. 2. may be ſeen a table of all the ſimple intervals practicable in muſic, with their names, their degrees, their values and their ratios.

Having aſcertained the diſtinction between major and minor intervals, it is only neceſſary to add, that theſe may be natural or artificial. Of the natural we have already given ſome account, by aſcertaining the diſtances and ratios of ſuch as have been mentioned. Of the artificial, we may obſerve, that they are ſuch as change their poſition from what it naturally is in the diatonic ſcale, to what the conveniency of compoſition or tranſpoſition requires it to be. A note

* See *Conſonance.*

thus artificially heightened by a ſemitone, together with the character which expreſſes that elevation, is called a *ſharp*; on the contrary, a note artificially depreſſed by a ſemitone, together with the character by which that depreſſion is ſignified, is called a *flat*. The character which reſtores a note thus depreſſed or raiſed to its primary ſtate, is called a *natural*. Major or minor intervals, as they prevail, characteriſe the major or minor mode. See Mode.

INTESTATE, in law, a perſon that dies without making a will.

INTESTINA, in the *Linnæan Syſtem*, an order of worms. See Zoology.

INTESTINES, Intestina, in *anatomy*, the *guts* or *bowels*; thoſe hollow, membranous, cylindrical parts, extended from the right orifice of the ſtomach to the anus; by which the chyle is conveyed to the lacteals, and the excrements are voided. See Anatomy, n° 93.

INTONATION, in muſic, the action of ſounding the notes in the ſcale with the voice, or any other given order of muſical tones. Intonation may be either true or falſe, either too high or too low, either too ſharp or too flat; and then this word *intonation*, attended with an epithet, muſt be underſtood concerning the manner of performing the notes.

In executing an air, to form the ſounds, and preſerve the intervals as they are marked with juſtneſs and accuracy, is no inconſiderable difficulty, and ſcarcely practicable, but by the aſſiſtance of one common idea, to which, as to their ultimate teſt, theſe ſounds and intervals muſt be referred: theſe common ideas are thoſe of the key, and the mode in which the performer is engaged; and from the word *tone*, which is ſometimes uſed in a ſenſe almoſt identical with that of the key, the word *intonation* may perhaps be derived. It may alſo be deduced from the word *diatonic*, as in that ſcale it is moſt frequently converſant; a ſcale which appears moſt convenient and moſt natural to the voice. We feel more difficulty in our intonation of ſuch intervals as are greater or leſſer than thoſe of the diatonic order; becauſe, in the firſt caſe, the glottis and vocal organs are modified by gradations too large; or too complex, in the ſecond.

INTRENCHMENT, in the military art, any work that fortifies a poſt againſt an enemy who attacks. It is generally taken for a ditch or trench with a parapet. Intrenchments are ſometimes made of faſcines with earth thrown over them, of gabions, hogſheads, or bags filled with earth, to cover the men from the enemy's fire.

INTRIGUE, an aſſemblage of events or circumſtances, occurring in an affair, and perplexing the perſons concerned in it. In this ſenſe, it is uſed to ſignify the nodus or plot of a play or romance; or that point wherein the principal characters are moſt embarraſſed through the artifice and oppoſition of certain perſons, or the unfortunate falling out of certain accidents and circumſtances.

In tragedy, comedy, or an epic poem, there are always two deſigns. The firſt and principal is that of the hero of the piece: the ſecond contains the deſigns of all thoſe who oppoſe him. Theſe oppoſite cauſes produce oppoſite effects, to wit, the efforts of the hero for the execution of his deſign, and the efforts of thoſe who thwart it. As thoſe cauſes and deſigns are the beginning of the action, ſo theſe efforts are the middle, and there form a knot or difficulty which we call the *intrigue*, that makes the greateſt part of the poem. It laſts as long as the mind of the reader or hearer is ſuſpended about the event of thoſe oppoſite efforts: the ſolution or cataſtrophe commences when the knot begins to unravel and the difficulties and doubts begin to clear up.

The intrigue of the Iliad is twofold. The firſt comprehends three days fighting in Achilles's abſence, and conſiſts on the one ſide in the reſiſtance of Agamemnon and the Greeks, and on the other in the inexorable temper of Achilles. The death of Patroclus unravels this intrigue, and makes the beginning of a ſecond. Achilles reſolves to be revenged, but Hector oppoſes his deſign; and this forms the ſecond intrigue, which is the laſt day's battle.

In the Æneid there are alſo two intrigues. The firſt is taken up in the voyage and landing of Æneas in Italy; the ſecond is his eſtabliſhment there: the oppoſition he met with from Juno in both theſe undertakings, forms the intrigue.

As to the choice of the intrigue, and the manner of unravelling it, it is certain they ought both to ſpring naturally from the ground and ſubject of the poem. Boſſu gives us three manners of forming the intrigue of a poem: the firſt is that already mentioned; the ſecond is taken from the fable and deſign of the poet; in the third the intrigue is ſo laid, as that the ſolution follows from it of courſe.

INTRINSIC, a term applied to the real and genuine values and properties, &c. of any thing in oppoſition to their *extrinſic* or *apparent* values.

INTRODUCTION, in general, ſignifies any thing which tends to make another in ſome meaſure known, before we have leiſure to examine it thoroughly; and hence it is uſed on a great variety of occaſions. Thus we ſpeak of the introduction of one perſon to another; the introduction to a book, &c.—It is alſo uſed to ſignify the actual motion of any body out of one place into another, when that motion has been occaſioned by ſome other body.

Introduction, in oratory. See Oratory, n° 26.

INTUITION, among logicians, the act whereby the mind perceives the agreement or diſagreement of two ideas, immediately by themſelves, without the intervention of any other; in which caſe the mind perceives the truth as the eye doth the light, only by being directed towards it. See Logic, n° 25. 27.

INTUITIVE evidence, is that which reſults from Intuition. Dr Campbell diſtinguiſhes different ſorts of *intuitive* evidence: one reſulting purely from intellection, or that faculty which others have called intuition; another kind ariſing from conſciouſneſs; and a third ſort from that new-named faculty *Common Sense*, which this ingenious writer as well as ſeveral others contend to be a diſtinct original ſource of knowledge, whilſt others refer its ſuppoſed office to the *intuitive* power of the underſtanding.

INVALID, a perſon wounded, maimed, or diſabled for action by age.

At Chelſea and Gr[illegible]wich are magnificent Hoſpi-

TALS or rather colleges, built for the reception and accommodation of *invalids*, or ſoldiers and ſeamen worn out in the ſervice.

There are alſo twenty independent companies of invalids, diſperſed in the ſeveral forts and garriſons.

At Paris is a college of the ſame kind, called *les Invalides*, which is accounted one of the fineſt buildings in that city.

INVECTED, in heraldry, denotes a thing fluted or furrowed. See HERALDRY.

INVECTIVE, in rhetoric, differs from reproof, as the latter proceeds from a friend, and is intended for the good of the perſon reproved; whereas the invective is the work of an enemy, and entirely deſigned to vex and give uneaſineſs to the perſon againſt whom it is directed.

INVEGES (Auguſtin), a learned Sicilian Jeſuit, wrote in Italian an Hiſtory of the city of Palermo, and other works, which are eſteemed. He died in 1677, aged 82.

INVENTION, denotes the act of finding any thing new, or even the thing thus found. Thus we ſay, *the invention of gunpowder, of printing*, &c. The alcove is a modern invention owing to the Moors.

The Doric, Ionic, and Corinthian orders, are of Greek invention; the Tuſcan and Compoſite of Latin invention. Janſon ab Almeloveen has written an Onomaſticon of inventions; wherein are ſhown, in an alphabetical order, the names of the inventors, and the time, place, &c. where they are made. Pancirollus has a treatiſe of old inventions that are loſt, and new ones that have been made; Polydore Virgil has alſo publiſhed eight books of the inventors of things. *De Inventoribus Rerum.*

INVENTION is alſo uſed for the finding of a thing hidden. The Romiſh church celebrates a feaſt on the 4th of May, under the title of, *Invention of the Holy Croſs.*

INVENTION is alſo uſed for ſubtilty of mind, or ſomewhat peculiar to a man's genius, which leads him to a diſcovery of things new; in which ſenſe we ſay, *a man of invention.*

INVENTION, in painting, is the choice which the painter makes of the objects that are to enter the compoſition of his piece. See PAINTING.

INVENTION, in poetry, is applied to whatever the poet adds to the hiſtory of the ſubject he has choſen; as well as to the new turn he gives it. See POETRY.

INVENTION, in rhetoric, ſignifies the finding out and chooſing of certain arguments which the orator is to uſe for the proving or illuſtrating his point, moving their paſſions, or conciliating the minds of his hearers. Invention, according to Cicero, is the principal part of oratory: he wrote four books *De Inventione*, whereof we have but two remaining. See ORATORY.

INVENTORY, in law, a catalogue or ſchedule orderly made, of all a deceaſed perſon's goods and chattels, at the time of his death, with their value appraiſed by indifferent perſons, which, in England, every executor or adminiſtrator is obliged to exhibit to the ordinary at ſuch time as he ſhall appoint.

By 21 Hen. VIII. c. v. executors and adminiſtrators are to deliver in upon oath to the ordinary, indented inventories, one part of which is to remain with the ordinary, and the other part with the executor or adminiſtrator; this is required for the benefit of the creditors and legatees, that the executor or adminiſtrator may not conceal any part of the perſonal eſtate from them. The ſtatute ordains, that the inventory ſhall be exhibited within three months after the perſon's deceaſe; yet it may be done afterwards, for the ordinary may diſpenſe with the time, and even with its being ever exhibited, as in caſes where the creditors are paid, and the will is executed.

INVERARY, a parliament-town of Scotland, in Argyleſhire, pleaſantly ſituated on a ſmall bay formed by the junction of the river Ary with Loch-fin, where the latter is a mile in width and 60 fathoms in depth. Here is a caſtle, the principal ſeat of the dukes of Argyle, chief of the Campbells. It is a modern building of a quadrangular form, with a round tower at each corner; and in the middle riſes a ſquare one glazed on every ſide to give light to the ſtaircaſe and galleries, which has from without rather a heavy appearance. This caſtle is built of a coarſe *lapis ollaris* brought from the other ſide of Loch-fin; and is of the ſame kind with that found in Norway, of which the king of Denmark's palace is built. The founder of the caſtle, the late Duke Archibald, alſo formed the deſign of an entire new town, upon a commodious elegant plan, becoming the dignity of the capital of Argyleſhire, a country moſt admirably ſituated for fiſheries and navigation. The town hath been rebuilt agreeable to the original deſign; and the inhabitants are well lodged in houſes of ſtone, lime, and ſlate. They are fully employed in arts and manufactures, and plentifully ſupplied in the produce of ſea and land.—The planting around Inverary is extenſive beyond conception, and admirably variegated; every crevice, glen, and mountain, diſplaying taſte and good ſenſe.

The value of the immenſe wood at this place, for the various purpoſes of bark, charcoal, forges, paling, furniture, houſe and ſhip building, is thus eſtimated by Mr Knox: "Some of the beech are from 9 to 12 feet in circumference, and the pines from 6 to 9; but theſe being comparatively few, we ſhall ſtate the medium girth of 2,000,000 trees planted within theſe laſt hundred years, at 3 feet, and the medium value at 4s. which produces L.400,000; and this, for the moſt part, upon grounds unfit for the plough, being chiefly compoſed of hills and rock." One of theſe hills riſes immediately from the houſe a great height, in the form of a pyramid, and is cloathed to the ſummit with a thick wood of vigorous ornamental trees. On this ſummit or point Archibald duke of Argyle built a Gothic tower or obſervatory, where he ſometimes amuſed himſelf. The aſcent by the road ſeems to be half a mile, and the perpendicular height about 800 feet.

INVERBERVIE, or BERVIE, a town of Kincardineſhire or the Mearns, 13 miles N. E. from Montroſe. It lies between two ſmall hills, which terminate in high cliffs towards the ſea; and though a royal borough, and the only one in the county, it is but a ſmall place, the inhabitants of which are chiefly employed in making thread.

INVERKEITHING, a parliament-town of Scotland in the county of Fife, ſituated on the northern ſhore of the Frith of Forth, in W. Long. 3. 15. N. Lat. 56. 5. It was much favoured by William, who granted its firſt charter. He extended its liberties conſiderably, and in the time of David I. it became a royal reſidence. The Moubrays had large poſſeſſions here, which were fortified in the reign of Robert II. The Franciſcans had a convent in this town; and, according to Sir Robert Sibbald, the Dominicans had another. This town has a conſiderable trade in coal and other articles.

INVERLOCHY, an ancient caſtle in the neighbourhood of *Fort-William* in Inverneſsſhire. It is adorned with large round towers; and, by the mode of building, ſeems to have been the work of the Engliſh in the time of Edward I. who laid large fines on the Scotch barons for the purpoſe of erecting new caſtles. The largeſt of theſe towers is called *Cumin's*. But long prior to theſe ruins Inverlochy, according to Boece, had been a place of great note, a moſt opulent city, remarkable for the vaſt reſort of French and Spaniards, probably on account of trade. It was alſo a ſeat of the kings of Scotland, for here Achaius in the year 790 ſigned (as is reported) the league offenſive and defenſive between himſelf and Charlemagne. In after-times it was utterly deſtroyed by the Danes, and never again reſtored.

In the neighbourhood of this place were fought two fierce battles, one between Donald Balloch brother to Alexander lord of the iſles, who with a great power invaded Lochaber in the year 1427: he was met by the earls of Mar and Caithneſs; the laſt was ſlain, and their forces totally defeated. Balloch returned to the iſles with a vaſt booty, the object of thoſe plundering chieftains. Here alſo the Campbells under the marquis of Argyle, in February 1645, received from Montroſe an overthrow fatal to numbers of that gallant name. Fifteen hundred fell in the action and in the purſuit, with the loſs only of three to the royaliſts. Sir Thomas Ogilvie, the friend of Montroſe, died of his wounds. His death ſuppreſſed all joy for the victory.

INVERNESS, capital of a county of the ſame name in Scotland, is a parliament-town, finely ſeated on the river Neſs, over which there is a ſtone-bridge of ſeven arches, in W. Long. 4°. N. Lat. 57. 36. It is large, well built, and very populous, being the laſt town of any note in Britian. As there are always regular troops in its neighbourhood, there is a great air of politeneſs, a plentiful market, and more money and buſineſs ſtirring than could have been expected in ſuch a remote part of the iſland. The country in the neighbourhood is remarkably well cultivated; and its produce clearly ſhows that the ſoil and climate are not deſpicable. The ſalmon-fiſhery in the Neſs is very conſiderable, and is let to London fiſhmongers. Some branches both of the woollen, linen, and hemp manufacture, are alſo carried on here; and, in conſequence of the excellent military roads, there is a great proportion of inland trade. But beſides all this, Inverneſs has a port with 20 creeks dependent upon it, part on the Murray Frith to the eaſt, and part on the north of the town, reaching even the ſouth border of the county of Caithneſs. Inverneſs has ſeveral good ſchools; and it is now intended to erect an academy there on an extenſive ſcale. The inhabitants ſpeak the Erſe and Engliſh language promiſcuouſly. On an eminence near the town are the remains of a caſtle, where, according to ſome hiſtorians, the famous Macbeth murdered Duncan his royal gueſt.

Inverneſs-Shire, a county of Scotland, bounded on the north by Roſsſhire; on the eaſt by the ſhires of Nairne, Murray, and Aberdeen; on the ſouth, by thoſe of Perth and Argyle; and on the weſt, by the Atlantic Ocean. Its extent from north to ſouth is above 50 miles; from eaſt to weſt about 80.—The northern part of this county is very mountainous and barren. In the diſtrict of Glenelg are ſeen the ruins of ſeveral ancient circular buildings, ſimilar to thoſe in the Weſtern Iſles, Sutherland, and Roſs ſhires; concerning the uſes of which antiquaries are not agreed. In their outward appearance, they are round and tapering like glaſs-houſes. In the heart of the wall, which is perpendicular within, there are horizontal galleries going quite round and connected by ſtairs. Theſe aſcend toward the top, which is open. They are all built of ſtone, without lime or mortar of any kind. They have no opening outward, except the doors and the top; but there are ſeveral in the inſide, as windows to the galleries. From Bernera barracks, in this diſtrict, proceeds the military road to Inverneſs.

This county is nearly divided by water; and it appears from a late ſurvey, that by means of a canal uniting Loch Neſs, Loch Oich, Loch Lochy, and Lochiel or Loch Eil, a communication might be readily opened here between the two ſeas. In this tract, Fort George, Fort Auguſtus, and Fort William, form what is called the *Chain of Forts* acroſs the iſland. By means of Fort George on the eaſt, all entrance up the Frith towards Inverneſs is prevented; Fort Auguſtus curbs the inhabitants midway; and Fort William is a check to any attempts in the weſt. Detachments are made from all theſe garriſons to Inverneſs, Bernera barracks oppoſite to the iſle of Skie, and caſtle Duart in the iſle of Mull. Other ſmall parties are alſo ſcattered in huts throughout the country, to prevent the ſtealing of cattle.

The river Neſs, upon which the capital of the ſhire is ſituated, is the outlet of the great lake called *Loch Neſs*. This beautiful lake is 22 miles in length, and for the moſt part one in breadth. It is ſkreened on the north weſt by the lofty mountains of Urquhart and Mealfourvony, and bordered with copices of birch and oak. The adjacent hills are adorned with many extenſive foreſts of pine; which afford ſhelter to the cattle, and are the retreat of ſtags and deer. There is much cultivation and improvement on the banks of Loch Neſs; and the paſture-grounds in the neighbouring valleys are excellent.—From the ſouth, the river Fyers deſcends towards this lake. Over this river there is built a ſtupendous bridge, on two oppoſite rocks; the top of the arch is above 100 feet from the level of the water. A little below the bridge is the celebrated Fall of Fyers, where a great body of water darts through a narrow gap between two rocks, then falls over a vaſt precipice into the bottom of the chaſm, where the foam riſes and fills the air like a great cloud of ſmoke.

Loch Oich is a narrow lake, ſtretching about four miles from eaſt to weſt. It is adorned with ſome ſmall wooded iſlands, and is ſurrounded with ancient trees. Near this is the family-ſeat of Glengary, ſurrounded by natural woods of full grown fir, which extend nine or ten miles along the banks of the river Gary. The waters of Loch Oich flow through Loch Neſs into the eaſtern ſea.—Loch Lochy tranſmits its waters in an oppoſite direction, this being the higheſt part of the vaſt flat tract that here ſtretches from ſea to ſea. This extenſive lake is above ten miles in length, and from one to two in breadth. From the weſt, the waters of Loch Arkek deſcend into this lake. Out of it runs the river Lochy, which about a mile below its iſſue from the lake, receives the Spean, a conſiderable river, over which there is a magnificent bridge, built by General Wade, about two miles above the place where it falls into the Lochy. Theſe united ſtreams traverſing the plains of Lochaber, after a courſe of five or ſix miles fall into Loch Eil.

A few miles to the ſouth-eaſt of Loch Lochy is Glenroy or King's Vale. The north-eaſt end of this valley opens on Loch Spey. A ſmall river paſſes along the bottom of the vale, accompanied by a modern road. On the declivity of the mountains, about a mile from the river, on either hand are ſeen ſeveral parallel roads of great antiquity. On the north-weſt ſide, five of theſe roads run parallel and cloſe by each other. On the oppoſite ſide are three other roads exactly ſimilar. Theſe roads are 30 feet broad, all perfectly horizontal, and extend eight or nine miles in length. Their deſtination or uſe has baffled the conjectures of antiquaries.—Not far from Fort Auguſtus ſoars the pointed ſummit of Benneviſh, which is eſteemed the higheſt mountain in Britain, riſing more than 4300 feet above the level of the ſea.—In the diſtricts of Moydart, Araſaick, Morer, and Knoydart, there are numerous bays and creeks, along the coaſt, many of which might be excellent fiſhing ſtations.

The ſouthern part of this county is very mountainous, and is ſuppoſed to be the moſt elevated ground in Scotland. From its numerous lakes many ſtreams deſcend toward both ſeas. In the extenſive diſtrict called *Badenoch* lies Loch Spey, the ſource of the great river Spey, which proceeding eaſtward with an increaſing ſtream, enters the ſhire of Murray at Rothiemurchus, after having expanded into a fine lake. Not far from this is ſeen the lofty top of Cairngorm; a mountain celebrated for its beautiful rock-cryſtals of various tints. Theſe are much eſteemed by lapidaries; and ſome of them, having the luſtre of fine gems, bring a very high price. Limeſtone, iron-ore, and ſome traces of different minerals, are found in the county; but no mines have yet been worked with much ſucceſs. Its rivers and lakes afford abundance of ſalmon and trout. The extenſive plains which ſurround the lakes are in general fertile; and the high grounds feed many ſheep and black cattle, the rearing and ſelling of which is the chief trade of the inhabitants.—By the preſent ſpirited exertions of the gentlemen in this populous county, the commerce and the induſtry of the inhabitants have of late been greatly increaſed; and to facilitate the communication with other parts, application has been made to parliament for leave to levy a tax on the proprietors of land for improving the roads and erecting bridges in this extenſive ſhire. The commonalty in the high parts of the county and on the weſtern ſhore ſpeak Gaelic; but the people of faſhion in Inverneſs and its vicinity uſe the Engliſh language, and pronounce it with remarkable propriety.

INVERSE, is applied to a manner of working the rule of three. See ARITHMETIC, n° 13.

INVERSION, the act whereby any thing is inverted or turned backwards. Problems in geometry and arithmetic are often proved by inverſion; that is, by a contrary rule or operation.

INVERSION, in grammar, is where the words of a phraſe are ranged in a manner not ſo natural as they might be. For an inſtance: "Of all vices, the moſt abominable, and that which leaſt becomes a man, is impurity." Here is an inverſion; the natural order being this: Impurity is the moſt abominable of all vices, and that which leaſt becomes a man.—An inverſion is not always diſagreeable, but ſometimes has a good effect.

INVERTED, in muſic, is derived from the Latin prepoſition *in*, and *vertere*, "to turn any thing a contrary way." The analogy of this term, and its uſe in muſic, will appear more obvious from the ſequel.

It ſignifies a change in the order of the notes which form a chord, or in the parts which compoſe harmony: which happens by ſubſtituting in the baſs, thoſe ſounds which ought to have been in the upper part: an operation not only rendered practicable, but greatly facilitated, by the reſemblance which one note has to another in different octaves; whence we derive the power of exchanging one octave for another with ſo much propriety and ſucceſs, or by ſubſtituting to the extremes thoſe which ought to have occupied the middle ſtation; and *vice verſa*.

It is certain, that in every chord there muſt be a fundamental and natural order, which is the ſame with that of its generation: but the circumſtances of ſucceſſion, taſte, expreſſion, the beauty of melody, and variety, the approximation of harmony, frequently oblige the compoſer to change that order by inverting the chords, and of conſequence the diſpoſition of the parts.

As three things may be arranged in ſix different orders, and four things in twenty-four; it would ſeem at firſt, that a perfect chord ſhould be ſuſceptible of ſix inverſions, and a diſſonant chord of twenty-four; ſince one is compoſed of four and the other of three ſounds, and ſince inverſion conſiſts only in a tranſpoſition of octaves. But it muſt be obſerved, that in harmony all the different diſpoſitions of acuter ſounds are not reckoned as inverſions, whilſt the ſame ſounds remain in the lower parts. Thus, theſe two orders of the perfect chord *ut mi ſol*, or CEG, and *ut ſol mi*, or C G E, are only taken for the ſame inverſion, and only bear the ſame name; this reduces the whole of inverſions of which a perfect chord is ſuſceptible to three; that is to ſay, to as many inverſions as the chord contains different ſounds: for the replications of the ſame ſound are here reckoned as nothing.

Every time, therefore, when the fundamental baſs is heard in the loweſt parts, or if the fundamental baſs be retrenched, every time when the natural order is preſerved in the chords, the harmony is direct. As ſoon as that order is changed, or as ſoon as the fundamental ſounds, without being in the lower parts, are heard in ſome of the others, the harmony is *inverted*. It is an inverſion of the chord, when the fundamental ſound is tranſpoſed; it is likewiſe an inverſion of the harmony, when the treble or any other part moves as the baſs ought to have done.

Every where, where a direct chord can be well placed, its inverſions will likewiſe be ſo with reſpect to the harmony; for it is ſtill the ſame fundamental ſucceſſion. Thus, at every note of the fundamental baſs, it is in the power of the compoſer to arrange the chord at his pleaſure, and of conſequence every moment to produce different inverſions; provided that he does not change the regular and fundamental ſucceſſion; provided alſo, that the diſſonances may always be prepared and reſolved in the ſame parts where they are firſt heard, that the ſenſible note may always aſcend, and that ſuch falſe relations may be avoided as would be too harſh upon the ear in the ſame part. This is the key of theſe myſterious diſtinctions which compoſers have made between thoſe chords where the treble is ſyncopated, and thoſe in which the baſs ought to be ſyncopated; as, for inſtance, between the ninth and the ſecond: it is thus that in the firſt the chord is direct, and the diſſonance in the treble; in the others, the chord is reverſed, and the diſſonance in the baſs.

With reſpect to chords by ſuppoſition, greater precaution is neceſſary in inverting them. As the ſound which they add to the baſs is abſolutely foreign to the harmony; it is often only tolerably there, on account of its vaſt diſtance from the other ſounds, which renders the diſſonance leſs harſh. But if theſe added ſounds ſhould happen to be tranſpoſed in the higher parts, as it ſometimes does; if this tranſpoſition be not performed with much art, it may produce a very bad effect; and never can this be happily practiſed without taking away ſome other ſound from the chord. See, at the article Accord in the Muſical Dictionary, the caſes when *inverſion* may be practiſed, and the choice of ſuch as are proper.

The perfect knowledge of *inverſion* depends on art and ſtudy alone: the choice is a different matter; to this an ear and a taſte are neceſſary; experience of the different effects are likewiſe indiſpenſable: and though the choice of inverſion be indifferent with reſpect to the foundation of the harmony, it is by no means ſuch in regard of the effect and expreſſion. It is certain, that the fundamental baſs is formed to ſupport the harmony, and to prevail beneath. Every time therefore when the order is changed and the harmony inverted, there ought to be good reaſons for it: without which, the compoſer will fall into the vice of our more recent muſic, where the melody of the treble is often like what the baſs ſhould be, and the baſs always like that of the treble, where every thing is confounded, reverſed, diſordered, without any other reaſon than to ſubvert the eſtabliſhed order, and to ſpoil the harmony.

INVESTIGATION, properly denotes the ſearching or finding out any thing by the tracts or prints of the feet; whence mathematicians, ſchoolmen, and grammarians, come to uſe the term in their reſpective reſearches.

INVESTING *a Place*, is when a general, having an intention to beſiege it, detaches a body of horſe to poſſeſs all the avenues; blocking up the garriſon, and preventing relief from getting into the place, till the army and artillery are got up to form the ſiege.

INVESTITURE, in law, a giving livery of ſeiſin or poſſeſſion. There was anciently a great variety of ceremonies uſed upon inveſtitures: as at firſt they were made by a certain form of words, and afterwards by ſuch things as had the greateſt reſemblance to the thing to be transferred: thus, where lands were intended to paſs, a turf, &c. was delivered by the granter to the grantee. In the church, it was cuſtomary for princes to make inveſtiture of eccleſiaſtical benefices, by delivering to the perſon they had choſen a paſtoral ſtaff and a ring.

INULA, elecampane: A genus of the polygamia ſuperflua order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is naked; the pappus ſimple; the antheræ, at the baſe, ending in two briſtles. There are 22 ſpecies, of which the helenium, or common elecampane, is the moſt remarkable. It is a native of Britain; but is cultivated in gardens for the ſake of the root, which is uſed in medicine. The root is perennial, thick, branching, and of a ſtrong odour. The lower leaves are eight or nine inches long, and four broad in the middle, rough on their upper ſide, but downy on the under ſide. The ſtalks riſe about four feet high, and divide toward the top into ſeveral ſmaller branches, garniſhed with oblong oval leaves indented on their edges, ending in acute points. Each branch is crowned with one large yellow radiated flower, ſucceeded by narrow four-cornered ſeeds, covered with down. It may be propagated in autumn by ſeeds or offsets.

Medicinal Uſes, &c. The root of elecampane, eſpecially when dry, has an agreeable aromatic ſmell; its taſte, on chewing, is glutinous and as it were ſomewhat rancid; in a little time it diſcovers an aromatic bitterneſs, which by degrees becomes conſiderably acrid and pungent. It poſſeſſes the general virtues of alexipharmacs; and is principally recommended for promoting expectoration in humoral aſthmas and coughs. Liberally taken, it is ſaid to excite urine, and to looſen the belly. In ſome parts of Germany, large quantities of this root are candied, and uſed as a ſtomachic for ſtrengthening the tone of the viſcera in general, and for attenuating tenacious juices. Spirituous liquors extract its virtues in greater perfection than watery ones. The former ſcarce elevate any thing in diſtillation: with the latter an eſſential oil ariſes, which concretes into white flakes: this poſſeſſes at firſt the flavour of the elecampane, but is very apt to loſe it in keeping. Outwardly applied, a decoction of it is ſaid to cure the itch. The root bruiſed and macerated in urine with balls of aſhes and whortle-berries, dyes a blue colour.

INUNDATÆ, the name of the 15th order in Linnæus's fragments of a natural method; conſiſting of plants which grow in the water. See Botany, p. 460.

INUNDATION, a ſudden overflowing of the dry land by the waters of the ocean, rivers, lakes, ſprings, or rains.

INVOCATION, in theology, the act of adoring God, and eſpecially of addreſſing him in prayer for his aſſiſtance and protection. See the article Adoration and Prayer.

The difference between the invocation of God and of the ſaints, as practiſed by the Papiſts, is thus explained in the catechiſm of the council of Trent. "We beg of God, (ſays the catechiſm,) to give us good things, and to deliver us from evil; but we pray to the ſaints, to intercede with God and obtain thoſe things which we ſtand in need of. Hence we uſe different forms in praying to God and to the ſaints: to the former we ſay, *hear us, have mercy on us;* to the latter we only ſay, *pray for us.*" The council of Trent expreſsly teaches, that the ſaints who reign with Jeſus Chriſt offer up their prayers to God for men; and condemn thoſe who maintain the contrary doctrine. The Proteſtants reject and cenſure this practice as contrary to ſcripture, deny the truth of the fact, and think it highly unreaſonable to ſuppoſe that a limited finite being ſhould be in a manner omnipreſent, and at one and the ſame time hear and attend to the prayers that are offered to him in England, China, and Peru; and from thence infer, that if the ſaints cannot hear their requeſts, it is inconſiſtent with common ſenſe to addreſs any kind of prayer to them.

Invocation, in poetry, an addreſs at the beginning of a poem, wherein the poet calls for the aſſiſtance of ſome divinity, particularly of his muſe, or the deity of poetry.

INVOICE, an account in writing of the particulars of merchandiſe, with their value, cuſtom, charges, &c. tranſmitted by one merchant to another in a diſtant country.

INVOLUCRUM, among botaniſts, expreſſes that ſort of cup which ſurrounds a number of flowers together, every one of which has beſide this general cup its own particular perianthium. The involucrum conſiſts of a multitude of little leaves diſpoſed in a radiated manner. See Calyx.

INVOLUTION, in algebra, the raiſing any quantity from its root to any height or power aſſigned. See Algebra.

IO, (fab. hiſt.) daughter of Inachus, or according to others of Jaſus or Pirene, was prieſteſs of Juno at Argos. Jupiter became enamoured of her; but Juno, jealous of his intrigues, diſcovered the object of his affection, and ſurpriſed him in the company of Io. Jupiter changed his miſtreſs into a beautiful heifer; and the goddeſs, who well knew the fraud, obtained from her huſband the animal whoſe beauty ſhe had condeſcended to commend. Juno commanded the hundred eyed Argus to watch the heifer; but Jupiter, anxious for the ſituation of Io, ſent Mercury to deſtroy Argus, and to reſtore her to liberty. Io, freed from the vigilance of Argus, was now perſecuted by Juno, who ſent one of the Furies to torment her. She wandered over the greateſt part of the earth and croſſed over the ſea, till at laſt ſhe ſtopped on the banks of the Nile, ſtill expoſed to the unceaſing torments of the Fury. Here ſhe entreated Jupiter to reſtore her to her natural form; and when the god had changed her from a heifer into a woman, ſhe brought forth Epaphus. Afterwards ſhe married Telegonus king of Egypt, or Oſiris according to others; and ſhe treated her ſubjects with ſuch mildneſs and humanity, that after death ſhe received divine honours, and was worſhipped under the name of *Iſis*. According to Herodotus, Io was carried away by Phœnician merchants, who wiſhed to make repriſals for Europa who had been ſtolen from them by the Greeks.

JOAB, general of the army of king David, defeated the Syrians and the other enemies of David, and took the fort of Zion from the Jebuſites, who, thinking it impregnable, committed it to the care of the lame and blind, whom they placed on the walls. He ſignalized himſelf in all David's wars, but was guilty of baſely murdering Abner and Amaſa. He procured a reconciliation between Abſalom and David; and afterwards ſlew Abſalom, contrary to the expreſs orders of the king. He at length joined Adonijah's party; and was put to death by the order of Solomon, 1014 B. C.

JOACHIMITES, in church hiſtory, the diſciples of Joachim a Ciſtertian monk, who was an abbot of Flora in Calabria, and a great pretender to inſpiration.

The Joachimites were particularly fond of certain ternaries: The Father, they ſaid, operated from the beginning till the coming of the Son; the Son, from that time to theirs, which was the year 1260; and from that time the Holy Spirit was to operate in his turn. They alſo divided every thing relating to men, to doctrine, and the manner of living, into three claſſes, according to the three perſons in the Trinity; The firſt ternary was that of men; of whom the firſt claſs was that of married men, which had laſted during the whole period of the Father; the ſecond was that of clerks, which had laſted during the time of the Son; and the laſt was that of the monks, in which there was to be an uncommon effuſion of grace by the Holy Spirit: The ſecond ternary was that of doctrine, viz. the Old Teſtament, the New, and the everlaſting Goſpel; the firſt they aſcribed to the Father, the ſecond to the Son, and the third to the Holy Spirit: A third ternary conſiſted in the manner of living. viz. under the Father, men lived according to the fleſh; under the Son, they lived according to the fleſh and the ſpirit; and under the Holy Ghoſt, they were to live according to the ſpirit only.

JOAN (Pope); called by Platina *John VIII.* is ſaid to have held the holy ſee between Leo IV. who died in 855, and Benedict III. who died in 858. Marianus Scotus ſays, ſhe ſat two years five months and four days. Numberleſs have been the controverſies, fables, and conjectures, relating to this pope. It is ſaid that a German girl, pretending to be a man, went to Athens, where ſhe made great progreſs in the ſciences: and afterward came to Rome in the ſame habit. As ſhe had a quick genius, and ſpoke with a good grace in the public diſputations and lectures, her great learning was admired, and every one loved her extremely, ſo that after the death of Leo, ſhe was choſen pope, and performed all offices as ſuch. Whilſt ſhe was in poſſeſſion of this high dignity, ſhe was got with child; and as ſhe was going in a ſolemn proceſſion to the Lateran church, ſhe was delivered of that child, between the Coliſeum and St Clement's church, in a moſt public ſtreet, before a crowd of people, and died on the ſpot, in 857. By way of embelliſhing this ſtory, may be added the precaution reported to have been afterward taken to avoid ſuch another accident.

dent. After the election of a pope, he was placed on a chair with an open ſeat, called the *groping chair*, when a deacon came moſt devoutly behind and ſatisfied himſelf of the pontiff's ſex by feeling. This precaution, however, has been long deemed unneceſſary, becauſe the cardinals now always get baſtards enough to eſtabliſh their virility before they arrive at the pontificate.

Joan d'Arc, or the Maid of Orleans, whoſe heroic behaviour in reanimating the expiring valour of the French nation, though by the moſt ſuperſtitious means, (pretending to be inſpired), deſerved a better fate. She was burnt by the Engliſh as a ſorcereſs in 1421, aged 24. See FRANCE, n° 101.

JOANNA (St), one of the Comora iſlands in the Indian ocean, E. Long. 44. 15. S. Lat. 12. 30. The north ſide ſhoots out into two points, 26 miles aſunder, between which there is a great bay. This iſland is a proper place of refreſhment for the Eaſt India ſhips, whoſe crews when ill of the ſcurvy, ſoon recover by the uſe of limes, lemons, and oranges, and from the air of the land. The town where the king reſides is at the eaſt ſide of the iſland; and though it is three quarters of a mile in length, it does not contain above 200 houſes. Their principal houſes are built with ſtone, with a quadrangle in the middle, and are only one ſtory high. All the other houſes, or rather huts, are ſlightly compoſed of plaſtered reeds; and yet the moſques are tolerable ſtructures, very neat and clean in the inſide. The horned cattle are a kind of buffaloes, having a large hump on their ſhoulders, which is very delicious eating; but there is not one horſe, mule, nor aſs, in all the iſland.—The original natives, in number about 7000, occupy the hills, and are generally at war with the Arabian interlopers, who eſtabliſhed themſelves on the ſea coaſt by conqueſt, and are about 3000 in number. Theſe latter are deſcribed by an anonymous letter-writer * as poor miſerable beings, who not being able to carry on any extenſive degree of cultivation, on account of their being expoſed to the depredation of the mountaineer natives, ſubſiſt chiefly by ſupplying the India ſhips who touch there for refreſhment with a few cattle and tropical fruits. According to the ſame writer, the deſcriptions of this iſland and its inhabitants by the Abbé Raynal and Major Rooke, are not only exaggerated but erroneous; neither the country being ſo pictureſque in beautiful landſcapes as the former deſcribes it, nor the inhabitants meriting the reſpectable character given of them by the latter. As we are not, however, competent to decide in this matter, we ſhall ſubjoin the entertaining account given by the Major.

Vide *Letter from a Gentleman on board an Indiaman*, giving an account of the iſland Joanna, 8vo, 1780.

Travels to the Coaſt of Arabia Felix, let. 4.

“ Though Joanna is not the largeſt, yet it may be reckoned the principal of the Comora Iſlands; it claims ſovereignty over, and exacts tribute from, all the others: theſe pretenſions it is however ſometimes obliged to aſſert by the ſword, and at preſent meditates an expedition againſt Mayotta, which is in a ſtate of rebellion. The natives on being aſked the cauſe of their war with that people, reply, “ Mayotta like America.” They get their ſupplies of arms and ammunition from ſhips that touch here; and the arrival of ſo large a fleet as the preſent will prove very ſeaſonable to them, as it is cuſtomary for all to make preſents of arms and powder to the prince when he pays a viſit on board, which he does to every one. A ſalute is the compliment due on that occaſion; but as our guns are ſhotted, an apology is made for the omiſſion of that ceremony, and the prince readily admits of it, provided he receives a number of cartridges equal to the guns that would have been fired.

“ The king lives at a town about 12 miles off on the eaſt ſide of the iſland: two princes of the blood reſide here; who on going their round of viſits fail not to aſk for every thing they ſee which ſtrikes their fancy; and of courſe the honour of making a preſent to a prince, induces one at firſt readily to grant what they requeſt: but no ſooner is that done than they make freſh applications, till we are reduced to the rude neceſſity of putting the negative on moſt of them. Theſe great perſonages are very richly dreſſed and attended by a numerous ſuite of ſlaves, who, like their princely maſters, are much ſtruck with the objects they ſee, but uſe leſs ceremony in their manner of obtaining them. Theſe black princes (for that is the complexion of them and all the inhabitants) have by ſome means or other obtained the titles of Prince of Wales and Prince Will: the former has probably been called ſo by ſome jocoſe Engliſhmen as being the heir apparent, and the natives have adopted the term, not the only one they borrow from us. They have an officer ſtyled Purſer Jack, who ſeems to be at the head of the finance-department. Of dukes they have a prodigious number, who entertain us at their hotels for a dollar per day, and give us for dinner very good rice and curry. Theſe noblemen, together with a numerous tribe of others of all ranks, make the earlieſt application to every one to ſolicit the honour of his company and cuſtom; even before the ſhip has let go its anchor, they come alongſide in their canoes, and produce written certificates of their honeſty and abilities from thoſe who have been here before: the purport of which is to inform you that the bearer has given them good cheer, waſhed their linen well, and ſupplied their ſhip punctually with all ſorts of refreſhments.

“ The effect is ſtriking and ſingular on entering the road to ſee a vaſt number of canoes, which are made of trunks of trees hollowed out, with three or four black fellows in each, their faces turned towards the front of the canoe, with paddles formed like a ſpade, digging away in the water, and moving with no ſmall velocity. To keep theſe cockle-ſhells ſteady, and prevent them from overſetting, they have what is termed an outrigger: it is compoſed of two poles laid acroſs the upper part of the canoe, and extending ſeveral feet beyond the edges thereof on each ſide, joined at the extremities by two flat pieces of wood, ſo that it appears like a ſquare frame laid acroſs the canoe: they are very long, but ſo narrow that one perſon can only ſit breadthways.

“ The price of every article here is regulated; and each ſhip has its contractor who engages to ſupply it with neceſſaries at the eſtabliſhed rate.

“ We find no other animals for our ſea proviſions but bullocks, goats, and fowls: the ſeaſon for oranges is paſt, but we get moſt other tropical fruits; and whatever we want, have only to give in a liſt to a duke, and he provides us therewith. This, it will be thought, is a new character for a duke to appear in, and ſuch it ſeems to be; but it is in fact only owing to the mode: they as their own ſtewards, and diſpoſe of the produce of their eſtates themſelves, which noblemen of other countries do by the intermediate aid of an agent: they at leaſt act conſiſtently with their characters by an urbanity of manners, which one is ſurpriſed to meet with in a people inhabiting a ſmall ſpot ſecluded from the reſt of the civilized world. They have a regular form of government, and exerciſe the Mahometan religion: both were introduced by Arabians who paſſed over from the continent and ſubdued the country. The original Joanna natives are by no means thoroughly reconciled to this uſurpation, and ſtill look upon their conquerors with an evil eye. Like their ſentiments, ſo are the colours of theſe two races of men very different: the Arabs have not ſo deep a tinge as the others, being of a copper complexion with better features and a more animated countenance. They conſider a black ſtreak under the eyes as ornamental; and this they make every day at their toilettes with a painting bruſh dipt in a kind of ointment. The cuſtom of chewing the betel nut prevails greatly here, as in moſt of the Eaſtern countries; and anſwers to the faſhion of ſmoking tobacco or taking ſnuff with us, except that with them it is more general. No one is without a purſe or bag of betel; and it is looked on as a piece of civility to offer it to your friend when you meet him or take leave. See the articles ARECA and BETEL.

“ Their religion licences a plurality of wives and likewiſe concubines. They are extremely jealous of them, and never allow any man to ſee the women: but female ſtrangers are admitted into the haram; and ſome Engliſh ladies, whoſe curioſity has led them there, make favourable reports of their beauty, and richneſs of apparel diſplayed in a profuſion of ornaments of gold, ſilver, and beads, in form of necklaces, bracelets, and ear-rings; they wear half a dozen or more in each through holes bored all along the outer rim of the ear.

“ The men ſeem not to look with an eye of indifference on our fair countrywomen notwithſtanding they are of ſo different a complexion. One of the firſt rank among them being much ſmitten with an Engliſh young lady, wiſhed to make a purchaſe of her at the price of 5000 dollars; but on being informed that the lady would fetch at leaſt 20 times that ſum in India, he lamented that her value was ſo far ſuperior to what he could afford to give.

“ Theſe people are very temperate and abſtemious, wine being forbidden them by the law of Mahommed. They are frequent in prayer, attending their moſques three or four times a-day. We are allowed to enter them on condition of taking off our ſhoes. Theſe buildings are regular, but quite plain. In prayer the people proſtrate themſelves on the ground, frequently kiſſing it and expreſſing very fervent devotion.

“ Joanna town is cloſe to the ſea, ſituated at the foot of a very high hill, and about a mile and a half in circuit. The houſes are incloſed either with high ſtone walls or palings made with a kind of reed; and the ſtreets are little narrow alleys, extremely intricate and forming a perfect labyrinth. The better kind of houſes are built of ſtone within a court-yard, having a portico to ſhield them from the ſun, and one long lofty room where they receive gueſts, the other apartments being ſacred to the women. The ſides of their rooms are covered with a number of ſmall mirrors, bits of china ware, and other little ornaments that they procure from ſhips which come here to refreſh: the moſt ſuperb of them are furniſhed with cane ſophas covered with chintz and ſattin matreſſes. Moſt of the people ſpeak a little Engliſh: they profeſs a particular regard for our nation, and are very fond of repeating to you, that “ Joanna-man and Engliſh-man all brothers;” and never fail to aſk “ how King George do?” In general they appear to be a courteous and well diſpoſed people, and very fair and honeſt in their dealings, though there are amongſt them, as in all other nations, ſome viciouſly inclined; and theft is much practiſed by the lower claſs, notwithſtanding the puniſhment of it is very exemplary being amputation of both hands of the delinquent.

“ The inhabitants of this iſland, like thoſe of moſt hot and tropical countries, are indolent, and do not improve by their labour the richneſs of that ſoil with which nature has bleſſed them. Climate here favours vegetation to ſuch a degree as requires little toil in the huſbandman; but that little is denied: ſo that beyond oranges, bananas, pine-apples, cocoa nuts, yams, and purſlain (all growing ſpontaneouſly), few vegetables are met with. Nor are the natural beauties of the iſland inferior to its other advantages of plenty and fertility; the face of the country is very pictureſque and pleaſing, its ſcenes being drawn by the bold ſtrokes of Nature's maſterly pencil; lofty mountains clothed to their very ſummits, deep and rugged valleys adorned by frequent cataracts, caſcades, woods, rocks, and rivulets, intermixed in “ gay theatric pride,” form the landſcape. Groves are ſeen extending over the plains to the very edge of the ſea, formed principally by the cocoa-nut trees, whoſe long and naked ſtems leave a clear uninterrupted paſſage beneath; while their tufted and overſpreading tops form a thick ſhade above, and keep off the ſcorching rays of the ſun. In theſe we pitch our tents and enjoy a ſhort relief from the ennui of a tedious voyage.

“ In the interior part of the iſland, ſurrounded by mountains of a prodigious height, and about 15 miles from this town, is ſituated a ſacred lake half a mile in circumference. The adjacent hills covered with lofty trees, and the unfrequented ſolitude of the place, ſeem more calculated to inſpire religious awe in thoſe who viſit this ſequeſtered ſpot, than any ſanctity that is to be diſcovered in a parcel of wild ducks inhabiting it, which are deified and worſhipped by the original natives, who conſult them as their oracles on all important affairs, and ſacrifice to them. Being extremely averſe to conduct ſtrangers there, they ſtipulate that all guns ſhall be left at a place five miles from the lake. The worſhip paid to theſe birds enſures their ſafety and tranquillity; and rendering them of courſe perfectly tame, they fearleſsly approach any one who goes there. The Arabian part of the iſlanders hold this barbarous ſuperſtition in the utmoſt deteſtation; but dare not forbid the practice of it, ſo bigotted to it are the others.”

JOB, or *Book of Job*, a canonical book of the Old Teſtament, containing a narrative of a ſeries of miſfortunes which happened to a man whoſe name was *Job*, as a trial of his virtue and patience; together with the conferences he had with his cruel friends on the ſubject of his misfortunes, and the manner in which he was reſtored to eaſe and happineſs. This book is filled with thoſe noble, bold, and figurative expreſſions, which conſtitute the very ſoul of poetry.

Many of the Jewiſh rabbins pretend that this relation is altogether a fiction; others think it a ſimple narrative of a matter of fact juſt as it happened: while a third ſort of critics acknowledge, that the groundwork of the ſtory is true, but that it is wrote in a poetical ſtrain, and decorated with peculiar circumſtances, to render the narration more profitable and entertaining.

The time is not ſet down in which Job lived. Some have thought that he was much ancienter than Moſes, becauſe the law is never cited by Job or his friends, and becauſe it is related that Job himſelf offered ſacrifices. Some imagine that this book was wrote by himſelf; others ſay, that Job wrote it originally in Syriac or Arabic, and that Moſes tranſlated it into Hebrew: but the rabbins generally pronounce Moſes to be the author of it; and many Chriſtian writers are of the ſame opinion.

JOBBER, a perſon who undertakes jobs, or ſmall pieces of work.

In ſome ſtatutes, jobber is uſed for a perſon who buys and ſells for others. See Brokers.

JOBBING, the buſineſs of a jobber.

Stock-Jobbing, denotes the practice of trafficking in the public funds, or of buying and ſelling ſtock with a view to its riſe or fall. The term is commonly applied to the illegal practice of buying and ſelling ſtock for time, or of accounting for the differences in the riſe or fall of any particular ſtock for a ſtipulated time, whether the buyer or ſeller be poſſeſſed of any ſuch real ſtock or not. See *Stock-Broker*.

JOBERT (Lewis), a pious and learned Jeſuit, born at Paris in 1647. He diſtinguiſhed himſelf as a preacher; and beſides ſeveral other tracts wrote a treatiſe entitled *La Science des Medailles*, which is in good eſteem. He died in 1719; and the beſt edition of this work is that of Paris in 1739, 2 vols 12mo.

JOCASTA, (fab. hiſt.) a daughter of Menœceus, who married Laius king of Thebes, by whom ſhe had Œdipus. She afterwards married her ſon Œdipus, without knowing who he was, and had by him Eteocles, Polynices, &c. When ſhe diſcovered that ſhe had married her own ſon and been guilty of inceſt, ſhe hanged herſelf in deſpair. She is called *Epicaſta* by ſome mythologiſts.

JOCKEY, in the management of horſes; the perſon who trims up, and rides about horſes for ſale.

JODE (Peter de), an engraver of ſome note, was a native of Antwerp. He received his firſt inſtructions in the art of engraving from Henry Goltzius; and afterwards went to Italy, in order to complete his ſtudies from the works of the great maſters. He engraved ſeveral plates in that country from different painters; and returned to Antwerp about the year 1601, where he reſided till the time of his death, which happened A. D. 1634. His works are very numerous, and poſſeſs a conſiderable ſhare of merit.

Jude (Peter de, the younger), was ſon to the former, and born in 1606. From his father he learned the art of engraving, and ſurpaſſed him in taſte and the facility of handling the graver; though he can ſcarcely be ſaid to have equalled him in correctneſs of drawing, eſpecially when confined to the naked parts of the human figure. It does not appear that he went to Italy; but he accompanied his father to Paris, where they engraved conjointly a conſiderable number of plates for M. Bonefant, and Le Sieur L'Imago. His moſt capital performances are from Rubens and Vandyck. Baſan ſays of him, that in ſeveral of his engravings he has "equalled the beſt engravers, and in others he has ſunk below himſelf." The time of his death is not known. He left a ſon, *Arnold*, who was alſo an engraver, but of very inferior merit.

JODELLE (Stephen), lord of Limodin, was born at Paris in 1532; and diſtinguiſhed himſelf ſo greatly by his poetical talents, that he was reckoned one of the Pleiades celebrated by Ronſard. He is ſaid to be the firſt Frenchman who wrote plays in his own language according to the ancient form. He was remarkably ready at compoſition, writing without ſtudy or labour; and was well ſkilled in polite arts and genteel exerciſes. In his younger years he embraced the reformed religion, and wrote a ſatire on the maſs in 100 Latin verſes; yet all of a ſudden returned to that maſs again. He died in 1579, very poor.

JOEL, or *the Prophecy of Joel*, a canonical book of the Old Teſtament. Joel was the ſon of Pethuel, and the ſecond of the twelve leſſer prophets. The ſtyle of this prophet is figurative, ſtrong, and expreſſive. He upbraids the Iſraelites for their idolatry, and fortels the calamities they ſhould ſuffer as the puniſhment of that ſin: but he endeavours to ſupport them with the comfort that their miſeries ſhould have an end upon their reformation and repentance. Some writers, inferring the order of time in which the minor prophets lived from the order in which they are placed in the Hebrew copies, conclude that Joel propheſied before Amos, who was contemporary with Uzziah, king of Judah. Archbiſhop Uſher makes this inference from Joel's foretelling that drought, chap. i. which Amos mentions as having happened, chap. iv. 7, 8, 9. If we conſider the main deſign of Joel's prophecy, we ſhall be apt to conclude, that it was uttered after the captivity of the ten tribes; for he directs his diſcourſe only to Judah, and ſpeaks diſtinctly of the ſacrifices and oblations that were daily made in the temple.

JOGHIS, a ſect of heathen religious in the Eaſt Indies, who never marry, nor hold any thing in private property, but live on alms, and practiſe ſtrange ſeverities on themſelves.

They are ſubject to a general, who ſends them from one country to another to preach. They are, properly, a kind of penitent pilgrims; and are ſuppoſed to be a branch of the ancient Gymnoſophiſts.

They frequent, principally, ſuch places as are conſecrated by the devotion of the people, and pretend to live ſeveral days together without eating or drinking. After having gone through a courſe of diſcipline for a certain time, they look on themſelves as impeccable, and privileged to do any thing; upon which they give a looſe to their paſſions, and run into all manner of debauchery.

JOGUES, or Yoogs, certain ages, æras, or periods, of extraordinary length, in the chronology of the Hindoos. They are four in number; of which the following is an account, extracted from Halhed's Preface to the Code of Gentoo Laws, p. xxxvi.

1. The *Suttee Jogue* (or age of purity) is ſaid to have laſted three million two hundred thouſand years; and they hold that the life of man was extended in that age to one hundred thouſand years, and that his ſtature was twenty-one cubits.

2. The *Tirtah Jogue* (in which one third of mankind was corrupted) they ſuppoſed to have conſiſted of two million four hundred thouſand years, and that men lived to the age of ten thouſand years.

3. The *Dwapaar Jogue* (in which half of the human race became depraved) endured one million ſix hundred thouſand years, and the life of man was then reduced to a thouſand years.

4. The *Collee Jogue* (in which all mankind are corrupted, or rather leſſened, for that is the true meaning of *Collee*) is the preſent æra, which they ſuppoſe ordained to ſubſiſt four hundred thouſand years, of which near five thouſand are already paſt; and the life of man in that period is limited to one hundred years.

Concerning the Indian chronology, we have already had occaſion to be pretty copious; ſee Hindoos, n° 19, 22. We ſhall here, however, ſubjoin Dr Robertſon's obſervations on the above periods, from the Notes to his *Hiſtorical Diſquiſition concerning India*.

† P. 360.

“ If (ſays he†) we ſuppoſe the computation of time in the Indian chronology to be made by ſolar or even by lunar years, nothing can be more extravagant in itſelf, or more repugnant to our mode of calculating the duration of the world, founded on ſacred and infallible authority. From one circumſtance, however, which merits attention, we may conclude, that the information which we have hitherto received concerning the chronology of the Hindoos is very incorrect. We have, as far as I know, only five original accounts of the different Jogues or æras of the Hindoos. The firſt is given by M. Roger, who received it from the Brahmins on the Coromandel coaſt. According to it, the Suttee Jogue is a period of one million ſeven hundred and twenty-eight thouſand years; the Tirtah Jogue is one million two hundred and ninety-ſix thouſand years; the Dwapaar Jogue is eight hundred and ſixty four thouſand. The duration of the Colle Jogue he does not ſpecify; (*Porte Ouverte*, p. 179.) The next is that of M. Bernier, who received it from the Brahmins of Benares. According to him, the duration of the Suttee Jogue was two million five hundred thouſand years; that of the Tirtah Jogue one million two hundred thouſand years; that of the Dwapaar Jogue is eight hundred and ſixty-four thouſand years. Concerning the period of the Collee Jogue, he likewiſe is ſilent; (*Voyages*, tom. ii. p. 160.) The third is that of Colonel Dow; according to which the Suttee Jogue is a period of fourteen million of years, the Tirtah Jogue one million eighty thouſand, the Dwapaar Jogue ſeventy-two thouſand, and the Collee Jogue thirty-ſix thouſand years; *Hiſt. of Hindoſt.* vol. i. p. 2.) The fourth account is that of M. Le Gentil, who received it from the Brahmins of the Coromandel coaſt; and as his information was acquired in the ſame part of India, and derived from the ſame ſource with that of M. Roger, it agrees with his in every particular. *Mem. de l'Academ. des Sciences pour* 1772, tom. ii. part i. p. 176.) The fifth is the account of Mr Halhed, which has been already given. From this diſcrepancy, not only of the total numbers, but of many of the articles in the different accounts, it is manifeſt that our information concerning Indian chronology is hitherto as uncertain as the whole ſyſtem of it is wild and fabulous. To me it appears highly probable, that when we underſtand more thoroughly the principles upon which the fictitious æras or Jogues of the Hindoos have been formed, that we may be more able to reconcile their chronology to the true mode of computing time, founded on the authority of the Old Teſtament; and may likewiſe find reaſon to conclude, that the account given by their aſtronomers of the ſituation of the heavenly bodies at the beginning of the Collee Jogue, is not eſtabliſhed by actual obſervation, but the reſult of a retroſpective calculation.”

JOHN (St), the Baptist, the fore-runner of Jeſus Chriſt, was the ſon of Zacharias and Elizabeth. He retired into a deſart, where he lived on locuſts and wild honey; and about the year 29 began to preach repentance, and to declare the coming of the Meſſiah. He baptized his diſciples, and the following year Chriſt himſelf was baptized by him in the river Jordan. Some time after, having reproved Herod Antipas, who had a criminal correſpondence with Herodias his brother Philip's wife, he was caſt into priſon, where he was beheaded. His head was brought to Herodias; who, according to St Jerome, pierced his tongue with the bodkin ſhe uſed to faſten up her hair, to revenge herſelf after his death for the freedom of his reproofs.

John (St), the apoſtle, or the evangeliſt, was the brother of St James the Great, and the ſon of Zebedee. He quitted the buſineſs of fiſhing to follow Jeſus, and was his beloved diſciple. He was witneſs to the actions and miracles of his Maſter; was preſent at his transfiguration on mount Tabor; and was with him in the garden of Olives. He was the only apoſtle who followed him to the croſs; and to him Jeſus left the care of his mother. He was alſo the firſt apoſtle who knew him again after his reſurrection. He preached the faith in Aſia; and principally reſided at Epheſus, where he maintained the mother of our Lord. He is ſaid to have founded the churches of Smyrna, Pergamus, Thyatira, Sardis, Philadelphia, and Laodicea. He is alſo ſaid to have preached the goſpel amongſt the Parthians, and to have addreſſed his firſt epiſtle to that people. It is related, that, when at Rome, the emperor Domitian cauſed him to be thrown into a caldron of boiling oil, when he came out unhurt; on which he was baniſhed to the iſle of Patmos, where he wrote his Apocalypſe. After the death of Domitian, he returned to Epheſus, where he compoſed his Goſpel, about the year 96; and died there, in the reign of Trajan, about the year 100, aged 94.

Goſpel of St John, a canonical book of the New Teſtament, containing a recital of the life, actions, doctrine, and death, of our Saviour Jeſus Chriſt, written by St John the apoſtle and evangeliſt.

St John wrote his Goſpel at Epheſus, after his return

turn from the iſle of Patmos, at the deſire of the Chriſtians of Aſia. St Jerome ſays, he would not undertake it, but on condition that they ſhould appoint a public faſt to implore the aſſiſtance of God; and that, the faſt being ended, St John, filled with the Holy Ghoſt, broke out into theſe words, "In the beginning was the Word," &c. The ancients aſſign two reaſons for this undertaking: the firſt is, becauſe, in the other three Goſpels, there was wanting the hiſtory of the beginning of Jeſus Chriſt's preaching, till the impriſonment of John the Baptiſt, which therefore he applied himſelf particularly to relate. The ſecond reaſon was, in order to remove the errors of the Cerinthians, Ebionites, and other ſects. But Mr Lampe and Dr Lardner have urged ſeveral reaſons to ſhow that St John did not write againſt Cerinthus or any other heretics in his Goſpel.

Revelation of St John. See APOCALYPSE.

John of Saliſbury, biſhop of Chartres in France, was born at Saliſbury in Wiltſhire, in the beginning of the 12th century. Where he imbibed the rudiments of his education, is unknown: but we learn, that in the year 1136, being then a youth, he was ſent to Paris, where he ſtudied under ſeveral eminent profeſſors, and acquired conſiderable fame for his application and proficiency in rhetoric, poetry, divinity, and particularly in the learned languages. Thence he travelled to Italy: and, during his reſidence at Rome, was in high favour with pope Eugenio III. and his ſucceſſor Adrian IV. After his return to England, he became the intimate friend and companion of the famous Thomas BECKET, archbiſhop of Canterbury, whom he attended in his exile, and is ſaid to have been preſent when that haughty prelate was murdered in his cathedral. What preferment he had in the church during this time, does not appear; but in 1176 he was promoted by king Henry II. to the biſhopric of Chartres in France, where he died in 1182. This John of Saliſbury was realy a Phænomenon. He was one of the firſt reſtorers of the Greek and Latin languages in Europe; a claſſical ſcholar, a Philoſopher, a learned divine, and an elegant Latin poet. He wrote ſeveral books; the principal of which are, his Life of St Thomas of Canterbury, a collection of letters, and Polycraticon.

Pope John XII. a native of Cahors, before called *James d'Euſe*, was well ſkilled in the civil and canon law; and was elected pope after the death of Clement V. on the 7th of Auguſt 1316. He publiſhed the conſtitutions called *Clementines*, which were made by his predeceſſor; and drew up the other conſtitutions called *Extravagantes*. Lewis of Bavaria being elected emperor, John XII. oppoſed him in favour of his competitor; which made much noiſe, and was attended with fatal conſequences. That prince, in 1329, cauſed the antipope Peter de Corbiero, a cordelier, to be elected, who took the name of Nicholas V. and was ſupported by Michael de Ceſenne, general of his order; but that antipope was the following year taken and carried to Avignon, where he begged pardon of the pope with a rope about his neck, and died in priſon two or three years after. Under this pope aroſe the famous queſtion among the cordeliers, called *the bread of the cordeliers*; which was, Whether thoſe monks had the property of the things given them, at the time they were making uſe of them? for example, Whether the bread belonged to them when they were eating it, or to the pope, or to the Roman church? This frivolous queſtion gave great employment to the pope; as well as thoſe which turned upon the colour, form, and ſtuff, of their habits, whether they ought to be white, grey, or black; whether the coul ought to be pointed or round, large or ſmall; whether their robes ought to be full, ſhort, or long; of cloth, or of ſerge, &c. The diſputes on all theſe minute trifles were carried ſo far between the minor brothers, that ſome of then were burned upon the occaſion. He died at Avignon in 1334, aged 90.

JOHN, king of England. See ENGLAND, n° 135, 147.

John of Fordoun, See FORDOUN.

John of Gaunt, duke of Lancaſter, a renowned general, father of Henry IV. king of England, died in 1438.

John of Leyden, otherwiſe called *Buccold.* See ANABAPTISTS.

John Sobieſki of Poland, one of the greateſt warriors in the 17th century, was, in 1665 made grand-marſhal of the crown; and, in 1667, grand-general of the kingdom. His victories obtained over the Tartars and the Turks procured him the crown, to which he was elected in 1674. He was an encourager of arts and ſciences, and the protector of learned men. He died in 1696, aged 72.

St John's day, the name of two Chriſtian feſtivals; one obſerved on June 24th, kept in commemoration of the wonderful circumſtances attending the birth of John the Baptiſt; and the other on December 27th, in honour of St John the evangeliſt.

St John's Wort. See HYPERICUM.

JOHN'S (St), an iſland of the Eaſt-Indies, and one of the Philippines, eaſt of Mindanayo, from which it is ſeparated by a narrow ſtrait. E. Long. 125. 25. N. Lat. 7. 0.

JOHN'S (St), an iſland of North-America, in the bay of St Lawrence, having New-Scotland on the ſouth and weſt, and Cape Breton on the eaſt. The Britiſh got poſſeſſion of it when Louiſbourgh was ſurrendered to them, on July 26, 1758.

JOHNSON (BEN), one of the moſt conſiderable dramatic poets of the laſt age, whether we conſider the number or the merit of his productions. He was born at Weſtminſter in 1574, and was educated at the public ſchool there under the great Camden. He was deſcended from a Scottiſh family; and his father, who loſt his eſtate under Queen Mary, dying before our poet was born, and his mother marrying a bricklayer for her ſecond huſband, Ben was taken from ſchool to work at his father-in-law's trade. Not being captivated with this employment, he went into the Low Countries, and diſtinguiſhed himſelf in a military capacity. On his return to England, he entered himſelf at St John's college, Cambridge; and having killed a perſon in a duel, was condemned, and narrowly eſcaped execution. After this he turned actor; and Shakeſpeare is ſaid to have firſt introduced him to the world, by recommending a play of his to the ſtage, after it had been rejected. His Alchymiſt gained him ſuch reputation, that in 1619 he was, at the death of

Mr Daniel, made poet-laureat to King James I. and maſter of arts at Oxford. As we do not find Johnſon's œconomical virtues any where recorded, it is the leſs to be wondered at, that after this we find him petitioning king Charles, on his acceſſion, to enlarge his father's allowance of 100 merks into pounds; and quickly after we learn, that he was very poor and ſick, lodging in an obſcure alley: on which occaſion it was, that Charles, being prevailed on in his favour, ſent him ten guineas; which Ben receiving, ſaid, "His majeſty has ſent me ten guineas, becauſe I am poor and live in an alley; go and tell him, that his ſoul lives in an alley." He died in Auguſt 1637, aged 63 years, and was buried in Weſtminſter-Abbey,—The moſt complete edition of his works was printed in 1756, in 7 vols 8vo.

Johnson (Samuel), an Engliſh divine, remarkable for his learning, and ſteadineſs in ſuffering for the principles of the revolution in 1688. He was born in 1649; and, entering into orders, obtained in 1670 the rectory of Corringham in the hundreds of Eſſex, worth no more than L. 80 a year; which was the only church-preferment he ever had. The air of this place not agreeing with him, he was obliged to place a curate on the ſpot, at the expence of half his income, while he ſettled at London; a ſituation much more to his liking, as he had a ſtrong propenſity to politics. The times were turbulent: the duke of York declaring himſelf a Papiſt, his ſucceſſion to the crown began to be warmly oppoſed; and Mr Johnſon, who was naturally of no ſubmiſſive temper, being made, chaplain to lord William Ruſſel, engaged the eccleſiaſtical champion for paſſive obedience Dr Hicks, in a treatiſe intitled *Julian the apoſtate, &c.* publiſhed in 1682. He was anſwered by Dr Hicks in a piece intitled *Jovian, &c.* To which he drew up, and printed, a reply, under the title of *Julian's arts to undermine and extirpate Chriſtianity, &c.;* but by the advice of his friends ſuppreſſed the publication. For this unpubliſhed work he was committed to priſon; but not being able to procure a copy, the court proſecuted him for writing the firſt tract, condemned him to a fine of 500 merks, and to lie in priſon until it was paid. By the aſſiſtance of Mr Hambden, who was his fellow-priſoner, he was enabled to run into farther troubles; for on the encampment of the army on Hounſlow-heath, in 1686, he printed and diſperſed, *An humble and hearty addreſs to all the Proteſtants in the preſent army;* for this he was ſentenced to a ſecond fine of 500 merks, to be degraded from the prieſthood, to ſtand twice in the pillory, and to be whipped from Newgate to Tyburn. It happened luckily, that, in the degradation, they omitted to ſtrip him of his caſſock; which circumſtance, ſlight as it may appear, rendered his degradation imperfect, and afterwards preſerved his living to him. Interceſſion was made to get the whipping omitted; but James replied, "That ſince Mr Johnſon had the ſpirit of martyrdom, it was fit he ſhould ſuffer:" and he bore it with firmneſs, and even with alacrity. On the Revolution, the parliament reſolved the proceedings againſt him to be null and illegal; and recommended him to the king, who offered him the rich deanery of Durham: but this he refuſed, as inadequate to his ſervices and ſufferings, which he thought to merit a biſhopric. The truth was, he was paſſionate, ſelf-opinionated, and turbulent; and though, through Dr Tillotſon's means, he obtained a penſion of 300 l. a-year, with other gratifications, he remained diſcontented; pouring forth all his uneaſineſs againſt a ſtanding army, and the great favours ſhown to the Dutch. He died in 1703, and his works were afterwards collected is one volume folio.

Johnson (Dr Samuel), who has been ſtyled the brighteſt ornament of the 18th century, was born in the city of Litchfield in Staffordſhire on the 18th of September N. S. 1709. His father Michael was a bookſeller; and muſt have had ſome reputation in the city, as he more than once bore the office of chief magiſtrate. By what caſuiſtical reaſoning he reconciled his conſcience to the oaths required to be taken by all who occupy ſuch ſtations, cannot now be known; but it is certain that he was zealouſly attached to the exiled family, and inſtilled the ſame principles into the youthful mind of his ſon. So much was he in earneſt in this work, and at ſo early a period did he commence it, that when Dr Sachaverel, in his memorable tour through England, came to Litchfield, Mr Johnſon carried his ſon, not then quite three years old, to the cathedral, and placed him on his ſhoulders, that he might ſee as well as hear the far-famed preacher.

But political prejudices were not the only bad things which young Sam inherited from his father: he derived from the ſame ſource a morbid melancholy, which, though it neither depreſſed his imagination, nor clouded his perſpicacity, filled him with dreadful apprehenſions of inſanity, and rendered him wretched through life. From his nurſe he contracted the *ſcrophula* or king's evil, which made its apperance at a very early period, disfigured a face naturally well formed, and deprived him of the ſight of one of his eyes.

When arrived at a proper age for grammatical inſtruction, he was placed in the free ſchool of Litchfield, of which one Mr Hunter was then maſter; a man whom his illuſtrious pupil thought "very ſevere, and wrong-*headedly* ſevere," becauſe he would beat a boy for not anſwering queſtions which he could not expect to be aſked. He was, however, a ſkilful teacher; and Johnſon, when he ſtood in the very front of learning, was ſenſible how much he owed to him; for upon being aſked how he had acquired ſo accurate a knowledge of the Latin tongue, he replied, "My maſter beat me very well; without that, Sir, I ſhould have done nothing."

At the age of 15 Johnſon was removed from Lichfield to the ſchool of Stourbridge in Worceſterſhire, at which he remained little more than a year, and then returned home, where he ſtaid two years without any ſettled plan of life or any regular courſe of ſtudy. He read, however, a great deal in a deſultory manner, as chance threw books in his way, and as inclination directed him through them; ſo that when in his 19th year he was entered a commoner of Pembroke college Oxford, his mind was ſtored with a variety of ſuch knowledge as is not often acquired in univerſities, where boys ſeldom read any books but what are put into their hands by their tutors. He had given very early proofs of his poetical genius both in his ſchool exerciſes and in other occaſional compoſitions: but what is perhaps more remarkable, as it ſhows that he muſt have thought much on a ſubject on which other boys of that age ſeldom think at all, he had before he was 14 entertained doubts of the truth of revelation. From the melancholy of his temper theſe would naturally prey upon his ſpirits, and give him great uneaſineſs: but theſe were happily removed by a proper courſe of reading (A); for "his ſtudies being honeſt, ended in conviction. He found that religion is true; and what he had learned, he ever afterwards endeavoured to teach."

Concerning his reſidence in the univerſity, and the means by which he was there ſupported, his two principal biographers contradict each other; ſo that theſe are points of which we cannot write with certainty. According to Sir John Hawkins, the time of his continuance at Oxford is diviſible into two periods: Mr Boſwell repreſents it as only one period, with the uſual interval of a long vacation. Sir John ſays, that he was ſupported at college by Mr Andrew Corbet in quality of aſſiſtant in the ſtudies of his ſon: Mr Boſwell aſſures us, that though he was promiſed pecuniary aid by Mr Corbet, that promiſe was not in any degree fulfilled. We ſhould be inclined to adopt the knight's account of this tranſaction, were it not palpably inconſiſtent with itſelf. He ſays, that the two young men were entered in Pembroke on the *ſame day*; that Corbet continued in the college two years; and yet that Johnſon was driven home in little more than *one year*, becauſe by the *removal* of Corbet he was deprived of his penſion. A ſtory, of which one part contradicts the other, cannot wholly be true. Sir John adds, that "meeting with another ſource, the bounty, as it is ſuppoſed, of ſome one or more of the members of the cathedral of Lichfield, he returned to college, and made up the whole of his reſidence in the univerſity about three years." Mr Boſwell has told us nothing but that Johnſon, though his father was unable to ſupport him, continued three years in college, and was then driven from it by extreme poverty.

Theſe gentlemen differ likewiſe in their accounts of Johnſon's tutors. Sir John Hawkins ſays that he had two, Mr Jordan and Dr Adams. Mr Boſwell affirms that Dr Adams *could not* be his tutor, *becauſe* Jordan did not quit the college till 1731; the year in the autumn of which Johnſon himſelf was compelled to leave Oxford. Yet the ſame author repreſents Dr Adams as ſaying, "I was Johnſon's *nominal* tutor, but he was above my mark:" a ſpeech of which it is not eaſy to diſcover the meaning, if it was not Johnſon's duty to attend Adams's lectures. In moſt colleges we believe there are two tutors in different departments of education; and therefore it is not improbable that Jordan and Adams may have been tutors to Johnſon at the ſame time, the one in languages, the other in ſcience. Jordan was a man of ſuch mean abilities, that though his pupil loved him for the goodneſs of his heart, he would often riſk the payment of a ſmall fine rather than attend his lectures; nor was he ſtudious to conceal the reaſon of his abſence. Upon occaſion of one ſuch impoſition, he ſaid, "Sir, you have ſconced me two-pence for non-attendance at a lecture not worth a penny." For ſome tranſgreſſion or abſence his tutor impoſed upon him as a Chriſtmas exerciſe the taſk of tranſlating into Latin verſe Pope's *Meſſiah*; which being ſhown to the author of the original, was read and returned with this encomium, "The writer of this poem will leave it a queſtion for poſterity, whether his or mine be the original." The particular courſe of his reading while in college and during the vacation which he paſſed at home, cannot be traced. That at this period he read much, we have his own evidence in what he afterwards told the king; but his mode of ſtudy was never regular, and at all times he thought more than he read. He informed Mr Boſwell, that what he read *ſolidly* at Oxford was Greek, and that the ſtudy of which he was moſt fond was metaphyſics.

It was in the year 1731 that Johnſon left the univerſity without a degree; and as his father, who died in the month of December of that year, had ſuffered great misfortunes in trade, he was driven out a commoner of nature, and excluded from the regular modes of profit and proſperity. Having therefore not only a profeſſion but the means of ſubſiſtence to ſeek, he accepted, in the month of March 1732, an invitation to the office of under-maſter of a free ſchool at Market Boſworth in Leiceſterſhire: but not knowing, as he ſaid, whether it was more diſagreeable for him to teach or for the boys to learn the grammar-rules, and being likewiſe diſguſted at the treatment which he received from the patron of the ſchool, he relinquiſhed

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(A) Mrs Piozzi ſays, that at the age of 10 Johnſon's mind was diſturbed by ſcruples of infidelity, which preyed upon his ſpirits and made him very uneaſily, and that they were afterwards removed by the ſtudy of *Grotius de veritate*, &c. This account of the early ſtate of Johnſon's mind with reſpect to religion, Mr Boſwell affects to turn into ridicule, as if it were a thing abſolutely impoſſible that a boy of 10 years ſhould have any religious ſcruples. He ſays, that Johnſon became *inattentive* to religion at nine; *talked*, but did not *think* much, againſt it at 14; and was firſt made to think about it in earneſt by a caſual peruſal of *Law's ſerious call to the unconverted*, which he had taken up with a view to laugh at it. That it is not common for boys of 10 to have ſcruples of infidelity, muſt be granted; but that ſome have had them ſo early, the writer of this article knows by the moſt complete evidence; and if that be admitted of Johnſon which has been true of others, Mrs Piozzi's narrative is natural, and honourable to him of whom it is written. But that a *melancholy* perſon ſhould *talk* without *thinking* againſt religion, or that he ſhould *think* againſt it with a diſpoſition to *laughter*, and not be at the time a confirmed *athieſt*, is in itſelf ſo extremely incredible, that we cannot help ſuſpecting Mr Boſwell to have on this occaſion miſtaken the words of his great friend. "Law's ſerious call" is a very good book: but ſurely it is not ſo well adapted to carry conviction to a reaſoning mind as *Grotius de veritate*; and there is in Mr Boſwell's two volumes ſufficient evidence that Johnſon was of our opinion.

in a few months a ſituation which he ever afterwards recollected with horror. Being thus again without any fixed employment, and with very little money in his pocket, he tranſlated Lobo's voyage to Abyſſinia, for the trifling ſum, it is ſaid, of five guineas, which he received from a bookſeller in Birmingham. This was the firſt attempt which it is certain he made to procure pecuniary aſſiſtance by means of his pen; and it muſt have held forth very little encouragement to his commencing author by profeſſion.

In 1735, being then in his 26th year, he married Mrs Porter, the widow of a mercer in Birmingham; whoſe age was almoſt double his; whoſe external form, according to Garrick and others, had never been captivating; and whoſe fortune amounted to hardly 800l. That ſhe had a ſuperiority of underſtanding and talents is extremely probable, both becauſe ſhe certainly inſpired him with a more than ordinary paſſion, and becauſe ſhe was herſelf ſo delighted with the charms of his converſation as to overlook his external diſadvantages, which were many and great. He now ſet up a private academy; for which purpoſe he hired a large houſe well ſituated near his native city: but his name having then nothing of that celebrity which afterwards commanded the attention and reſpect of mankind, this undertaking did not ſucceed. The only pupils who are known to have been placed under his care, were the celebrated David Garrick, his brother George Garrick, and a young gentleman of fortune whoſe name was Offely. He kept his academy only a year and a half; and it was during that time that he conſtructed the plan and wrote a great part of his tragedy of Irene.

The reſpectable character of his parents and his own merit had ſecured him a kind reception in the beſt families at Lichfield; and he was particularly diſtinguiſhed by Mr Walmſley regiſter of the eccleſiaſtical court, a man of great worth and of very extenſive and various erudition. That gentlemen, upon hearing part of Irene read, thought ſo highly of Johnſon's abilities as a dramatic writer, that he adviſed him by all means to finiſh the tragedy and produce it on the ſtage. To men of genius the ſtage holds forth temptations almoſt reſiſtleſs. The profits ariſing from a tragedy, including the repreſentation and printing of it, and the connections which it ſometimes enables the author to form, were in Johnſon's imagination ineſtimable. Flattered, it may be ſuppoſed, with theſe hopes, he ſet out ſome time in the year 1737 with his pupil David Garrick for London, leaving Mrs Johnſon to take care of the houſe and the wreck of her fortune. The two adventurers carried with them from Mr Walmſley an earneſt recommendation to the reverend Mr Colſon, then maſter of an academy, and afterwards Lucaſian profeſſor of mathematics in the univerſity of Cambridge; but from that gentleman it does not appear that Johnſon found either protection or encouragement.

How he ſpent his time upon his firſt going to London is not particularly known. His tragedy was refuſed by the managers of that day; and for ſome years the Gentleman's Magazine ſeems to have been his principal reſource for employment and ſupport. To enumerate his various communications to that far-famed miſcellany, would extend this article beyond the limits which we can afford. Suffice it to ſay, that his connection with Cave the proprietor became very cloſe; that he wrote prefaces, eſſays, reviews of books, and poems; and that he was occaſionally employed in correcting the papers written by other correſpondents. When the complaints of the nation againſt the adminiſtration of Sir Robert Walpole became loud, and a motion was made, February 13th 1740-1, to remove him from his majeſty's counſels for-ever, Johnſon was pitched upon by Cave to write what was in the Magazine entitled *Debates in the Senate of Lilliput*, but was underſtood to be the ſpeeches of the moſt eminent members in both houſes of parliament. Theſe orations, which induced *Voltaire* to compare Britiſh with ancient eloquence, were haſtily ſketched by Johnſon while he was not yet 32 years old, while he was little acquainted with life, while he was ſtruggling not for diſtinction but for exiſtence. Perhaps in none of his writings has he given a more conſpicuous proof of a mind prompt and vigorous almoſt beyond conception: for they were compoſed from ſcanty notes taken by illiterate perſons employed to attend in both houſes; and ſometimes he had nothing communicated to him but the names of the ſeveral ſpeakers, and the part which they took in the debate.

His ſeparate publications which at this time attracted the greateſt notice were, "*London*, a Poem in imitation of Juvenal's third Satire;" "*Marmor Norfolcienſe*, or an Eſſay on an ancient prophetical Inſcription in Monkiſh Rhyme, lately diſcovered near Lynne in Norfolk;" and "A complete Vindication of the Licenſers of the Stage from the malicious and ſcandalous aſperſions of Mr Brook author of Guſtavus Vaſa." The poem, which was publiſhed 1738 by Dodſley, is univerſally known and admired as the moſt ſpirited inſtance in the Engliſh language of ancient ſentiments adapted to modern topics. Pope, who then filled the poetical throne without a rival, being informed that the author's name was *Johnſon*, and that he was an obſcure perſon, replied, "he will ſoon be *deterrè*." The other two pamphlets, which were publiſhed in 1739, are filled with keen ſatire on the government: and though Sir John Hawkins has thought fit to declare that they diſplay neither learning nor wit, Pope was of a different opinion; for in a note of his preſerved by Mr Boſwell, he ſays, that "the whole of the Norfolk prophecy is vey humorous."

Mrs Johnſon, who went to London ſoon after her huſband, now lived ſometimes in one place and ſometimes in another, ſometimes in the city and ſometimes at Greenwich: but Johnſon himſelf was oftener to be found at St John's Gate, where the Gentleman's Magazine was publiſhed, than in his own lodgings. It was there that he became acquainted with *Savage*, with whom he was induced, probably by the ſimilarity of their circumſtances, to contract a very cloſe friendſhip; and ſuch was their extreme neceſſities, that they have often wandered whole nights in the ſtreet for want of money to procure them a lodging. In one of theſe nocturnal rambles, when their diſtreſs was almoſt incredible, ſo far were they from being depreſſed by their ſituation, that in high ſpirits and brimful of patriotiſm, they traverſed St James's Square for ſeveral hours, inveighed againſt the miniſter; and, as Johnſon ſaid in ridicule of himſelf, his companion, and all ſuch patriots, "reſolved that *they* would ſtand by their country!" 1744, he publiſhed the life of his un-

unfortunate companion; a work which, had he never written any thing elſe, would have placed him very high in the rank of authors (b). His narrative is remarkably ſmooth and well diſpoſed, his obſervations are juſt, and his reflections diſcloſe the inmoſt receſſes of the human heart.

In 1749, when Drury-lane theatre was opened under the management of Garrick, Johnſon wrote a prologue for the occaſion; which for juſt dramatic criticiſm on the whole range of the Engliſh ſtage, as well as for poetical excellence, is confeſſedly unrivalled. But this year is, in his life, diſtinguiſhed as the epoch when his arduous and important work, the Dictionary of the Engliſh Language, was announced to the world by the publication of its plan or proſpectus, addreſſed to the earl of Cheſterfield. From that nobleman Johnſon was certainly led to expect patronage and encouragement; and it ſeems to be equally certain that his lordſhip expected, when the book ſhould be publiſhed, to be honoured with the dedication. The expectations of both were diſappointed. Lord Cheſterfield after ſeeing the lexicographer once or twice, ſuffered him to be repulſed from his door: but afterwards thinking to conciliate him when the work was upon the eve of publication, he wrote two papers in "The World," warmly recommending it to the public. This artifice was ſeen through; and Johnſon, in very polite language, rejected his Lordſhip's advances, letting him know, that he was unwilling the public ſhould conſider him as owing to a patron that which Providence had enabled him to do for himſelf. This great and laborious work its author expected to complete in three years: but he was certainly employed upon it ſeven; for we know that it was begun in 1747, and the laſt ſheet was ſent to the preſs in the end of the year 1754. When we conſider the nature of the undertaking, it is indeed aſtoniſhing that it was finiſhed ſo ſoon, ſince it was written, as he ſays, "with little aſſiſtance of the learned, and without any patronage of the great: not in the ſoft obſcurities of retirement, or under the ſhelter of academic bowers, but amidſt inconvenience and diſtraction, in ſickneſs and in ſorrow." The ſorrow to which he here alludes, is probably that which he felt for the loſs of his wife, who died on the 17th of March O. S. 1752, and whom he continued to lament as long as he lived.

The Dictionary did not occupy his whole time: for while he was puſhing it forward, he fitted his Tragedy for the ſtage; wrote the lives of ſeveral eminent men for the Gentleman's magazine; publiſhed an Imitation of the 10th Satire of Juvenal, intitled "The Vanity of human Wiſhes;" and began and finiſhed "The Rambler." This laſt work is ſo well-known, that it is hardly neceſſary to ſay that it was a periodical paper, publiſhed twice a-week, from the 20th of March 1750 to the 14th of March 1752 incluſive: but to give our readers ſome notion of the vigour and promptitude of the author's mind, it may not be improper to obſerve, that notwithſtanding the ſeverity of his other labours, all the aſſiſtance which he received does not amount to five papers; and that many of the moſt maſterly of thoſe unequalled eſſays were written on the ſpur of the occaſion, and never ſeen entire by the author till they returned to him from the preſs (c).

Soon after the Rambler was concluded, Dr Hawkeſ-

(b) From the merit of this work Mr Boſwell has endeavoured to detract, by inſinuating, that the perſon called *Richard Savage* was an impoſtor, and not the ſon of the earl of Rivers and the counteſs of Maccleſfield. See our account of Savage.

(c) The ſtyle of the Rambler has been much praiſed and much cenſured, ſometimes perhaps by men who paid little attention to the author's views. It has been compared with the ſtyle of Addiſon; to which it is thought ſuperior by ſome, and inferior by others. Its effects have been petulantly caricatured, and its merits unduly exalted. To attempt a defence of all the words in it which are derived from the Latin, would be in vain; for though many of them are elegant and expreſſive, others are harſh, and do not eaſily aſſimilate with the Engliſh idiom. But it would be as eaſy to defend the uſe of Johnſon's words as the ſtructure of all Addiſon's ſentences; for though many of theſe are exquiſitely beautiful, it muſt be confeſſed that others are feeble, and offend at once the ear and the mind. An ingenious eſſayiſt ſays, that in the Rambler "the conſtant, recurrence of ſentences in the form of what have been called triplets, is diſguſting to all readers." The recurrence is indeed very frequent; but it certainly is not conſtant, nor we hope always diſguſting: and as what he calls the triplet is unqeſtionably the moſt energetic form of which an Engliſh ſentence is ſuſceptible, we cannot help thinking, that it *ſhould* frequently recur in detached eſſays, of which the object is to inculcate moral truths. He who reads *half a volume* of the Rambler at a ſitting, will feel his ear fatigued by the cloſe of ſimilar periods ſo frequently recurring; but he who reads only one paper in the day, will experience nothing of this wearineſs. For purpoſes merely didactic, when ſomething is to be told that was not known before, Addiſon's ſtyle is certainly preferable to Johnſon's, and Swift's is preferable to both: but the queſtion is, Which of them makes the beſt proviſion againſt that inattention by which known truths are ſuffered to lie neglected? There are very few moral truths in the Spectator or in the Rambler of which the reader can be totally ignorant; but there are many which may have little influence on his conduct, becauſe they are ſeldom the objects of his thought. If this be ſo, that ſtyle ſhould be conſidered as beſt which moſt rouſes the attention, and impreſſes deepeſt in the mind the ſentiments of the author: and therefore, to decide between the ſtyle of Addiſon and that of Johnſon, the reader ſhould compare the effects of each upon his own memory and imagination, and give the preference to that which leaves the moſt laſting impreſſion. But it is ſaid that Johnſon himſelf muſt have recognized the fault of perpetual triplets in his ſtyle, ſince they are by no means frequent in his laſt productions. Is this a fair ſtate of the caſe? His laſt production was "the lives of the Britiſh poets," of which a great part conſiſts of the narration of facts; and ſuch a narration in the ſtyle of the Rambler would be ridiculous.

Johnſon.

worth projected "The Adventurer" upon a ſimilar plan; and by the aſſiſtance of friends he was enabled to carry it on with almoſt equal merit. For a ſhort time, indeed, it was the moſt popular work of the two; and the papers with the ſignature T, which are confeſſedly the moſt ſplendid in the whole collection, are now known to have been communicated by Johnſon, who received for each the ſum of two guineas. This was double the price for which he ſold ſermons to ſuch clergymen as either would not or could not compoſe their own diſcourſes; and of ſermon-writing he ſeems to have made a kind of trade.

Though he had exhauſted, during the time that he was employed on the dictionary, more than the ſum for which the bookſellers had bargained for the copy: yet by means of the Rambler, Adventurer, ſermons, and other productions of his pen, he now found himſelf in greater affluence than he had ever been before; and as the powers of his mind, diſtended by long and ſevere exerciſe, required relaxation to reſtore them to their proper tone, he appears to have done little or nothing from the cloſing of the Adventurer till the year 1756, when he ſubmitted to the office of reviewer in the Literary Magazine. Of the reviews by far the moſt valuable is that of Soame Jennyns's "Free inquiry into the Nature and Origin of Evil." Never were wit and metaphyſical acuteneſs more cloſely united than in that criticiſm, which expoſes the weakneſs and holds up to contempt the reaſonings of thoſe vain mortals, who preſumptuouſly attempt to graſp the ſcale of exiſtence, and to form plans of conduct for the Creator of the univerſe. But the furniſhing of magazines, reviews, and even newſpapers with literary intelligence, and authors of books with dedications and prefaces, was conſidered as an employment unworthy of Johnſon. It was therefore propoſed by the bookſellers that he ſhould give a new edition of the dramas of Shakeſpeare; a work which he had projected many years before, and of which he had publiſhed a ſpecimen which was commended by Warburton. When one of his friends expreſſed a hope that this employment would furniſh him with amuſement and add to his fame, he replied, "I look upon it as I did upon the Dictionary; it is all work; and my inducement to it is not love or deſire of fame, but the want of money, which is the only motive to writing that I know of." He iſſued propoſals, however, of conſiderable length; in which he ſhowed that he knew perfectly what a variety of reſearch ſuch an undertaking required: but his indolence prevented him from purſuing it with diligence, and it was not publiſhed till many years afterwards.

On the 15th of April 1758 he began a new periodical paper intitled "The Idler," which came out every Saturday in a weekly newſpaper, called "the Univerſal Chronicle, or Weekly Gazette," publiſhed by *Newberry*. Of theſe eſſays, which were continued till the 5th of April 1760, many were written as haſtily as an ordinary letter; and one in particular compoſed at Oxford was begun only half an hour before the departure of the poſt which carried it to London. About this time he had the offer of a living, of which he might have rendered himſelf capable by entering into orders. It was a rectory in a pleaſant country, of ſuch yearly value as would have been an object to one in much better circumſtances; but ſenſible, as it is ſuppoſed, of the aſperity of his temper, he declined it, ſaying, "I have not the requiſites for the office, and I cannot in my conſcience ſhear the flock which I am unable to feed."

Johnſon.

In the month of January 1759 his mother died at the great age of 90: an event which deeply affected him and gave birth to the 41ſt Idler, in which he laments, that "the life which made his own life pleaſant was at an end, and that the gate of death was ſhut upon his proſpects." Soon afterwards he wrote his "Raſſelas Prince of Abyſſinia;" that with the profits he might defray the expence of his mother's funeral, and pay ſome debts which ſhe had left. He told a friend, that he received for the copy 100l. and 25l. more when it came to a ſecond edition; that he wrote it in the evenings of one week, ſent it to the preſs in portions as it was written, and had never ſince read it over.

Hitherto, notwithſtanding his various publications, he was poor, and obliged to provide by his labour for the wants of the day that was paſſing over him; but having been early in 1762 repreſented to the king as a very learned and good man without any certain proviſion, his majeſty was pleaſed to grant him a penſion, which Lord Bute, then firſt miniſter, aſſured him "was not given for any thing which he *was to do*, but for what he *had already done*." A fixed annuity of three hundred pounds a-year, if it diminiſhed his diſtreſs, increaſed his indolence; for as he conſtantly avowed that he had no other motive for writing than to gain money, as he had now what was abundantly ſufficient for all his purpoſes, as he delighted in converſation, and was viſited and admired by the witty, the elegant, and the learned, very little of his time was paſt in ſolitary ſtudy. Solitude was indeed his averſion; and that he might avoid it as much as poſſible, Sir Joſhua Reynolds and he, in 1764, inſtituted a club, which exiſted long without a name, but was afterwards known by the title of the *Literary Club*. It conſiſted of ſome of the moſt enlightened men of the age, who met at the Turk's Head in Gerard-ſtreet Soho one evening in every week at ſeven, and till a late hour enjoyed "the feaſt of reaſon and the flow of ſoul."

In 1765, when Johnſon was more than uſually oppreſſed with conſtitutional melancholy, he was fortunately introduced into the family of Mr Thrale, one of the moſt eminent brewers in England, and member of parliament for the borough of Southwark: and it is but juſtice to acknowledge, that to the aſſiſtance which

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culous. Cicero's orations are univerſally admired; but if Cæſar's commentaries had been written in that ſtyle, who would have read them? When Johnſon in his biography has any important truth to enforce, he generally employs the rounded and vigorous periods of the Rambler; but in the bare narration he uſes a ſimple ſtyle, and that as well in the life of Savage, which was written at an early period, as in the lives of thoſe which were written lateſt. It is not, however, very prudent in an ordinary writer to attempt a cloſe imitation of the ſtyle of the Rambler; for Johnſon's vigorous periods are fitted only to the weight of Johnſon's thoughts.

which Mr and Mrs Thrale gave him, to the ſhelter which their houſe afforded him for 16 or 17 years, and to the pains which they took to ſoothe or repreſs his uneaſy fancies, the public is probably indebted for ſome of the moſt maſterly as well as moſt popular works which he ever produced. At length, in the October of this year, he gave to the world his edition of Shakeſpeare, which is chiefly valuable for the preface, where the excellencies and defects of that immortal bard are diſplayed with ſuch judgment, as muſt pleaſe every man whoſe taſte is not regulated by the ſtandard of faſhion or national prejudice. In 1767 he was honoured by a private converſation with the king in the library at the queen's houſe: and two years afterwards, upon the eſtabliſhment of the royal academy of painting, ſculpture, &c. he was nominated profeſſor of ancient literature; an office merely honorary, and conferred on him, as is ſuppoſed, at the recommendation of his friend the preſident.

In the variety of ſubjects on which he had hitherto exerciſed his pen, he had forborne, ſince the adminiſtration of Sir Robert Walpole, to meddle with the diſputes of contending factions; but having ſeen with indignation the methods which, in the buſineſs of Mr Wilkes, were taken to work upon the populace, he publiſhed in 1770 a pamphlet, intitled "The Falſe Alarm;" in which he aſſerts, and labours to prove by a variety of arguments founded on precedents, that the expulſion of a member of the houſe of commons is equivalent to excluſion, and that no ſuch calamity as the ſubverſion of the conſtitution was to be feared from an act warranted by uſage, which is the law of parliament. Whatever may be thought of the principles maintained in this publication, it unqueſtionably contains much wit and much argument, expreſſed in the author's beſt ſtyle of compoſition; and yet it is known to have been written between eight o'clock on Wedneſday night and twelve o'clock on Thurſday night, when it was read to Mr Thrale upon his coming from the houſe of commons. In 1771 he publiſhed another political pamphlet, intitled, "Thoughts on the late tranſactions reſpecting Falkland's Iſlands;" in which he attacked *Junius*: and he ever afterwards delighted himſelf with the thought of having deſtroyed that able writer, whom he certainly ſurpaſſed in nervous language and pointed ridicule.

In 1773 he viſited with Mr Boſwell ſome of the moſt conſiderable of the Hebrides or Weſtern Iſlands of Scotland, and publiſhed an account of his journey in a volume which abounds in extenſive philoſophical views of ſociety, ingenious ſentiments, and lively deſcription, but which offended many perſons by the violent attack which it made on the authenticity of the poems attributed to Oſſian. For the degree of offence that was taken, the book can hardly be thought to contain a ſufficient reaſon: if the antiquity of theſe poems be yet doubted, it is owing more to the conduct of their editor than to the violence of Johnſon. In 1774, the parliament being diſſolved, he addreſſed to the electors of Great Britain, a pamphlet, intitled "The Patriot;" of which the deſign was to guard them from impoſition, and teach them to diſtinguiſh true from falſe patriotiſm. In 1775 he publiſhed "Taxation no tyranny; in anſwer to the reſolutions and addreſs of the American Congreſs." In this preformance his admirer Mr Boſwell cannot, he ſays, perceive that ability of argument or that felicity of expreſſion for which on other occaſions Johnſon was ſo eminent. This is a ſingular criticiſm. To the aſſumed principle upon which the reaſoning of the pamphlet reſts many have objected, and perhaps their objections are well founded; but if it be admitted that "the Supreme Power of every community has the right of requiring from all its ſubjects ſuch contributions as are neceſſary to the public ſafety or public proſperity," it has been thought a very difficult taſk to break the chain of arguments by which it is proved that the Britiſh parliament had a right to tax the Americans. As to the *expreſſion* of the pamphlet, the reader, who adopts the maxim recorded in the "Journal of a tour to the Hebrides," that a controvertiſt "ought not to ſtrike ſoft in battle," muſt acknowledge that it is uncommonly happy, and that the whole performance is one of the moſt brilliant as well as moſt correct pieces of compoſition that ever fell from the pen of its author. Theſe eſſays drew upon him numerous attacks, all of which he heartily deſpiſed; for though it has been ſuppoſed that "A letter addreſſed to Dr Samuel Johnſon occaſioned by his political publications," gave him great uneaſineſs, the contrary is manifeſt, from his having, after the appearance of that letter, collected them into a volume with the title of "Political Tracts by the author of the Rambler." In 1765 Trinity College Dublin had created him LL.D. by *diploma*, and he now received the ſame honour from the Univerſity of Oxford; an honour with which, though he did not boaſt of it, he was highly gratified. In 1777 he was induced, by a caſe of a very extraordinary nature, to exerciſe that humanity which in him was obedient to every call. Dr William Dodd, a clergyman. under ſentence of death for the crime of forgery, found means to intereſt Johnſon in his behalf, and procured from him two of the moſt energetic compoſitions of the kind ever ſeen; the one a petition from himſelf to the king, the other a like addreſs from his wife to the queen. Theſe petitions failed of ſucceſs.

The principal bookſellers in London having determined to publiſh a body of Engliſh poetry, Johnſon was prevailed upon to write the lives of the poets, and give a character of the works of each. This taſk he undertook with alacrity, and executed it in ſuch a manner as muſt convince every competent reader, that as a biographer and a critic, no nation can produce his equal. The work was publiſhed in ten ſmall volumes, of which the firſt four came abroad 1778, and the others in 1781. While the world in general was filled with admiration of the ſtupendous powers of that man, who at the age of ſeventy-two, and labouring under a complication of diſeaſes, could produce a work which diſplays ſo much genius and ſo much learning; there were narrow circles in which prejudice and reſentment were foſtered, and whence attacks of different ſorts iſſued againſt him. Theſe gave him not the ſmalleſt diſturbance. When told of the feeble, though ſhrill, outcry that had been raiſed, he ſaid—"Sir, I conſidered myſelf as entruſted with a certain portion of truth. I have given my opinion ſincerely; let them ſhow where they think me wrong."

He had hardly begun to reap the laurels gained by this performance, when death deprived him of Mr Thrale, in whoſe houſe he had enjoyed the moſt comfortable hours of his life; but it abated not in Johnſon that care for the intereſts of thoſe whom his friend had left behind him, which he thought himſelf bound to cheriſh both in duty as one of the executors of his will, and from the nobler principle of gratitude. On this account, his viſits to Streatham, Mr Thrale's villa, were for ſome time after his death regularly made on Monday and protracted till Saturday, as they had been during his life; but they ſoon became leſs and leſs frequent, and he ſtudiouſly avoided the mention of the place or the family. Mrs Thrale, now Piozzi, ſays indeed, that "it grew extremely perplexing and difficult to live in the houſe with him when the maſter of it was no more; becauſe his diſlikes grew capricious, and he could ſcarce bear to have any body come to the houſe whom it was abſolutely neceſſary for her to ſee." The perſon whom ſhe thought it moſt neceſſary for her to ſee may perhaps be gueſſed at without any ſuperior ſhare of ſagacity; and if theſe were the viſits which Johnſon could not bear, we are ſo far from thinking his diſlikes capricious, though they may have been perplexing, that if he had acted otherwiſe, we ſhould have blamed him for want of gratitude to the friend whoſe "face for fifteen years had never been turned upon him but with reſpect or benignity."

About the middle of June 1783 his conſtitution ſuſtained a ſeverer ſhock than it had ever before felt, by a ſtroke of the palſy; ſo ſudden and ſo violent, that it awakened him out of a ſound ſleep, and rendered him for a ſhort time ſpeechleſs. As uſual, his recourſe under this affliction was to piety, which in him was conſtant, ſincere, and fervent. He tried to repeat the Lord's prayer firſt in Engliſh, then in Latin, and afterwards in Greek; but ſucceeded only in the laſt attempt; immediately after which he was again deprived of the power of articulation. From this alarming attack he recovered with wonderful quickneſs, but it left behind it ſome preſages of an hydropic affection; and he was ſoon afterwards ſeized with a ſpaſmodic aſthma of ſuch violence that he was confined to the houſe in great pain, while his dropſy increaſed notwithſtanding all the efforts of the moſt eminent phyſicians in London and Edinburgh. He had, however, ſuch an interval of eaſe as enabled him in the ſummer 1784 to viſit his friends at Oxford, Litchfield, and Aſhbourne in Derbyſhire. The Romiſh religion being introduced one day as the topic of converſation when he was in the houſe of Dr Adams, Johnſon ſaid, "If you join the papiſts externally, they will not interrogate you ſtrictly as to your belief in their tenets. No reaſoning papiſt believes every article of their faith. There is one ſide on which a good man might be perſuaded to embrace it. A good man of a timorous diſpoſition, in great doubt of his acceptance with God, and pretty credulous, might be glad of a church where there are ſo many helps to go to heaven. I would be a papiſt if I could. I have fear enough; but an obſtinate rationality prevents me. I ſhall never be a papiſt unleſs on the near approach of death, of which I have very great terror."

His conſtant dread of death was indeed ſo great, that it aſtoniſhed all who had acceſs to know the piety of his mind and the virtues of his life. Attempts have been made to account for it in various ways; but doubtleſs that is the true account which is given in the *Olla Podrida*, by an elegant and pious writer, who now adorns a high ſtation in the church of England. "That he ſhould not be conſcious of the abilities with which Providence had bleſſed him, was impoſſible. He felt his own powers; he felt what he was capable of having performed; and he ſaw how little, comparatively ſpeaking, he had performed. Hence his apprehenſion on the near proſpect of the account to be made, viewed through the medium of conſtitutional and morbid melancholy, which often excluded from his ſight the bright beams of divine mercy." This, however, was the caſe only while death was approaching from ſome diſtance. From the time that he was certain it was near, all his fears were calmed; and he died on the 13th of December 1784, full of reſignation, ſtrengthened by faith, and joyful in hope.

For a juſt character of this great man our limits afford not room: we muſt therefore content ourſelves with laying before our readers a very ſhort ſketch. His ſtature was tall, his limbs were large, his ſtrength was more than common, and his activity in early life had been greater than ſuch a form gave reaſon to expect: but he was ſubject to an infirmity of the convulſive kind, reſembling the diſtemper called St Vitus's dance; and he had the ſeeds of ſo many diſeaſes ſown in his conſtitution, that a ſhort time before his death he declared that he hardly remembered to have paſſed one day wholly free from pain. He poſſeſſed very extraordinary powers of underſtanding; which were much cultivated by reading, and ſtill more by meditation and reflection. His memory was remarkably retentive, his imagination uncommonly vigorous, and his judgment keen and penetrating. He read with great rapidity, retained with wonderful exactneſs what he ſo eaſily collected, and poſſeſſed the power of reducing to order and ſyſtem the ſcattered hints on any ſubject which he had gathered from different books. It would not perhaps be ſafe to claim for him the higheſt place, among his contemporaries, in any *ſingle* department of literature; but, to uſe one of his own expreſſions, he brought more *mind* to every ſubject, and had a greater variety of knowledge *ready* for all occaſions, than any other man that could be eaſily named. Though prone to ſuperſtition, he was in all other reſpects ſo remarkably incredulous, that Hogarth ſaid, while Johnſon firmly believed the bible, he ſeemed determined to believe nothing but the bible. Of the importance of religion he had a ſtrong ſenſe, and his zeal for its intereſts were always awake, ſo that profaneneſs of every kind was abaſhed in his preſence. The ſame energy which was diſplayed in his literary productions, was exhibited alſo in his converſation, which was various, ſtriking, and inſtructive: like the ſage in Raſſelas, he ſpoke, and attention watched his lips; he reaſoned, and conviction cloſed his periods: when he pleaſed, he could be the greateſt ſophiſt that ever contended in the liſts of declamation; and perhaps no man ever equalled him in nervous and pointed repartees. His veracity from the moſt trivial to the moſt ſolemn occaſions, was ſtrict even to ſeverity: he ſcorned to embelliſh a ſtory with fictitious circumſtances; for what is not a repreſentation of reality, he uſed to ſay, is not worthy of our attention. As his purſe and his houſe were open to the indigent, ſo was his heart tender to thoſe who wanted relief, and his ſoul was ſuſceptible of gratitude and every kind impreſſion. He had a roughneſs in his manner which ſubdued the ſaucy and terrified the meek: but it was *only* in his *manner;* for no man was more loved than Johnſon was by thoſe who knew him; and his works will be read with veneration for their author as long as the language in which they are written ſhall be underſtood.

JOHNSTON, or Johnson (John), a learned divine, born in 1662. He was zealous for the Revolution, and preached a noted ſermon at Feverſham on the occaſion, from the words, "Remember Lot's wife;" wherein he ſet forth the great danger of looking back, and vindicated the liturgy againſt Mr Baxter and others. He publiſhed *The Clergyman's Vade Mecum,* and *A Collection of Eccleſiaſtical Laws* as a continuation of it; but catching the infection ſpread by Dr Sachaverel, he, on the acceſſion of Geo. I. to the amazement of all his old friends, entertained unfavourable thoughts of the Proteſtant ſucceſſion, and refuſed to read the uſual prayers for the king. Being proſecuted, however, he thought proper to ſubmit; and died vicar of Cranbrook in Kent, in 1725.

Johnston (Dr Arthur), was born at Caſkieben, near Aberdeen, the ſeat of his anceſtors, and probably was educated at Aberdeen, as he was afterwards advanced to the higheſt dignity in that univerſity. The ſtudy he chiefly applied himſelf to was that of phyſic; and to improve himſelf in that ſcience, he travelled into foreign parts. He was twice at Rome; but the chief place of his reſidence was Padua, in which univerſity the degree of M. D. was conferred on him in 1610, as appears by a MS. copy of verſes in the advocate's library in Edinburgh. After leaving Padua, he travelled through the reſt of Italy, and over Germany, Denmark, England, Holland, and other countries; and at length ſettled in France; where he met with great applauſe as a Latin poet. He lived there 20 years, and by two wives had 13 children. After 24 years abſence, he returned into Scotland in 1632. It appears by the Council Books at Edinburgh, that the Doctor had a ſuit at law before that court about that time. In the year following, it is very well known that Charles I. went into Scotland, and made biſhop Laud, then with him, a member of that council; and by this accident, it is probable, that acquaintance began between the doctor and that prelate, which produced his "Pſalmorum Davidis Paraphraſum Poëtica;" for we find that, in the ſame year, the doctor printed a ſpecimen of his Pſalms at London, and dedicated them to his lordſhip.

He proceeded to perfect the whole, which took him up four years; and the firſt edition complete was publiſhed at Aberdeen in 1637, and at London the ſame year. In 1641, Dr Johnſton being at Oxford, on a viſit to one of his daughters who was married to a divine of the church of England in that place, was ſeized with a violent diarrhœa, of which he died in a few days, in the 54th year of his age, not without having ſeen the beginning of thoſe troubles that proved ſo fatal to his patron. He was buried in the place where he died; which gave occaſion to the following lines of his learned friend Wedderburn in his *Suſpiria* on the Doctor's death:

> Scotia mœſta, dole, tanti viduata ſepulchro
> Vatis; is Angligenis contigit altus honos.

In what year Dr Johnſton was made phyſician to the king does not appear; it is moſt likely that the archbiſhop procured him that honour at his coming into England in 1633, at which time he tranſlated Solomon's Song into Latin elegiac verſe, and dedicated it to his majeſty. His Pſalms were reprinted at Middleburgh, 1642; London, 1657; Cambridge, ...; Amſterdam, 1706; Edinburgh, by William Lauder, 1739; and laſt on the plan of the Delphin claſſics, at London, 1741, 8vo, at the expence of auditor Benſon, who dedicated them to his late majeſty George II. and prefixed to this edition memoirs of Dr Johnſton, with the teſtimonies of various learned perſons. A laboured compariſon between the two tranſlations of Buchanan and Johnſton was printed the ſame year in Engliſh, in 8vo, intituled, "A Prefatory Diſcourſe to Dr "Johnſton's Pſalms, &c." and "A Concluſion to it." His tranſlations of the Te Deum, Creed, Decalogue, &c. were ſubjoined to the Pſalms. His other poetical works are his Epigrams; his *Parerga;* and his *Muſæ Anglicæ,* or commendatory Verſes upon perſons of rank in church and ſtate at that time.

JOIGNY, a town of France, in Champagne, and in the dioceſe of Sens, with a very handſome caſtle. It conſiſts of three pariſhes, and is pleaſantly ſituated on the river Yonne, in E. Long. 3. 25. N. Lat. 47. 56.

JOINERY, the art of working in wood, or of fitting various pieces of timber together. It is called by the French *menuiſerie,* "ſmall work," to diſtinguiſh it from carpentery, which is employed about large and leſs curious works.

JOINT in general, denotes the juncture of two or more things. The joints of the human body are called by anatomiſts *articulations.* See Anatomy, n° 2.

The ſuppleneſs to which the joints may be brought by long practice from the time of infancy, is very ſurpriſing. Every common poſture-maſter ſhows us a great deal of this; but one of the moſt wonderful inſtances we ever had of it, was in a perſon of the name of *Clark,* and famous for it in London, where he was commonly known by the name of *Clark the poſture-maſter.* This man had found the way, by long practice, to diſtort many of the bones, of which no body before had ever thought it poſſible to alter the poſition. He had ſuch an abſolute command of his muſcles and joints, that he could almoſt disjoint his whole body; ſo that he once impoſed on the famous Mullens by his diſtortions, in ſuch a manner, that he refuſed to undertake his cure: but, to the amazement of the phyſician, no ſooner had he given over his patient, than he ſaw him reſtore himſelf to the figure and condition of a proper man, with no diſtortion about him.

JOINTURE, in law, generally ſignifies a ſettlement of lands and tenements, made on a woman in conſideration of marriage.

JOINVILLE (John Sire de), an eminent French ſtateſman of the 13th century, who was ſeneſchel or high-ſteward of Champagne, and one of the principal lords in the court of Lewis IX. He attended that monarch in all his expeditions; and had ſo much confidence placed in him, that all matters of juſtice in the palace were referred to his deciſion, and the king undertook nothing of conſequence without conſulting him. He wrote the hiſtory of St Lewis in French, which is a very curious and intereſting piece; and died about the year 1318. The beſt edition of this work is that of Du Cange, in folio, with learned remarks.

Joinville, an ancient and conſiderable town of France, in Champagne, with the title of a principality, and a large magnificent caſtle. It is ſituated on the river Marne, in E. Long. 5. 10. N. Lat. 48. 20.

JOISTS, or Joysts, in architecture, thoſe pieces of timber framed into the girders and ſummers, on which the boards of the floor are laid.

JOKES. See Jesting.

Iolaia, a feſtival at Thebes, the ſame as that called Heracleia. It was inſtituted in honour of Hercules and his friend Iolas, who aſſiſted him in conquering the hydra. It continued during ſeveral days, on the firſt of which were offered ſolemn ſacrifices. The next day horſe-races and athletic exerciſes were exhibited. The following day was ſet apart for wreſtling, the victors were crowned with garlands of myrtle generally uſed at funeral ſolemnities. They were ſometimes rewarded with tripods of braſs. The place where the exerciſes were exhibited was called Iolaion; where there were to be ſeen the monument of Amphitryon and the cenotaph of Iolas, who was buried in Sardinia. Theſe monuments were ſtrewed with garlands and flowers on the day of the feſtival.

Iŏlas or Iolaus, (fab. hiſt.) a ſon of Iphiclus king of Theſſaly, who aſſiſted Hercules in conquering the Hydra, and burnt with a hot iron the place where the heads had been cut off, to prevent the growth of others. He was reſtored to his youth and vigour by Hebe, at the requeſt of his friend Hercules. Some time afterwards Iolas aſſiſted the Heraclidæ againſt Euryſtheus, and killed the tyrant with his own hand. According to Plutarch, Iolas had a monument in Bœotia and Phocis, where lovers uſed to go and bind themſelves by the moſt ſolemn oaths of fidelity, conſidering the place as ſacred to love and friendſhip. According to Diodorus and Pauſanias, Iolas died and was buried in Sardinia, where he had gone to make a ſettlement at the head of the ſons of Hercules by the 50 daughters of Theſpius.

JOLI, or Joly, (Claudius), a worthy pariſh-prieſt, and an excellent ſcholar, deſcended from a family eminent for learning and piety; was born at Paris in 1607. He applied himſelf firſt to the law, and pleaded for ſome time at the bar: but inclining afterwards to the church, he entered into orders, and in 1631 obtained a canonry in the cathedral church of Notre Dame at Paris; the duties of which office he diſcharged with an exactneſs beyond all example as long as he lived. Diſcovering at the ſame time occaſionally a capacity for ſtate-affairs, the duke de Longueville, the French plenipotentiary for negociating a general peace, took Joly with him to Munſter, where he proved a good aſſiſtant. On his return, he reſumed his former employments with his uſual zeal. In 1671 he was made precentor in his church; and ſeveral times official of Paris, without his ſeeking; always behaving, as an eccleſiaſtical magiſtrate, with perfect integrity, and teſtifying a ſincere love for juſtice. He died in 1700, and left many works; in which, as in as many mirrors, his true character fully appears.

Joli (Guy), king's counſellor to the Chatelet, and ſyndic of the revenues of the Hotel de Ville at Paris, attached himſelf for a long time to cardinal de Retz in the capacity of ſecretary. Beſide other tracts, he wrote *Memoirs* from 1648 to 1665, including thoſe of Cardinal de Retz; a tranſlation of which into Engliſh was publiſhed in 1755.

JOLLOXOCHITL, or Flower of the Heart, in botany; a large beautiful flower growing in Mexico; where it is not leſs eſteemed for its beauty than for its odour, which is ſo powerful, that a ſingle flower is ſufficient to fill a whole houſe with the moſt pleaſing fragrance. It has many petals, which are glutinous, externally white, internally reddiſh or yellowiſh, and diſpoſed in ſuch a manner, that when the flower is open and its petals are expanded, it has the appearance of a ſtar, but when ſhut it reſembles in ſome meaſure a heart, from whence its name aroſe. The tree which bears it is tolerably large, and its leaves are long and rough.

ION, (fab. hiſt.), a ſon of Xuthus and Creuſa daughter of Erechtheus, who married Helice, the daughter of Selinus king of Ægiale. He ſucceeded to the throne of his father-in-law; and built a city, which he called *Helice* on account of his wife. His ſubjects from him received the name of *Ionians*, and the country that of *Ionia*. See Ionia.

Ion, a tragic poet of Chios, who flouriſhed about the 82d Olympiad. His tragedies were repreſented at Athens, where they met with univerſal applauſe. He is mentioned and greatly recommened by Ariſtophanes and Athenæus, &c.

IONA, Jona, or Icolmkill, one of the Hebrides; a ſmall, but celebrated iſland, "once the *luminary* of the Caledonian regions (as Dr Johnſon expreſſes it), whence ſavage clans and roving barbarians derived the benefits of knowledge and the bleſſings of religion." The name *Iona* is derived from a Hebrew word ſignifying a *dove*, in alluſion to its patron Columba, who landed here in 565. See Columba.—It is ſaid to have been a ſeat of the druids before his arrival, when its name in Iriſh was *Inis Druniſh*, or the "Druid Iſland." The druids being expelled or converted, he founded here a cell of canons regular, who till 716 differed from the church of Rome in the obſervance of Eaſter and in the tonſure. After his death, the iſland retained his name, and was called *Ycolumb cil* or "Columb's cell," now *Icolmkill*. The Danes diſlodged the monks in the 9th century, and Cluniacs were the next order that ſettled here.

This iſland, which belongs to the pariſh of Roſs in Mull, is three miles long, and one broad: the eaſt ſide is moſtly flat; the middle riſes into ſmall hills; and the weſt ſide is very rude and rocky: the whole forming a ſingular mixture of rock and fertility.—There is in the iſland only one town, or rather village, conſiſting of about 60 mean houſes. Near the town is the bay of Martyrs ſlain by the Danes. An oblong incloſure, bounded by a ſtone dyke and called *Clachnan Druinach*,

Druinach, in which bones have been found, is ſuppoſed to have been a burial-place of the Druids, or rather the common cemetery of the towns-people. Beyond the town are the ruins of the nunnery of Auſtin canoneſſes, dedicated to St Oran, and ſaid to be founded by Columba: the church was 58 feet by 20, and the eaſt roof is entire. On the floor, covered deep with cow-dung, is the tomb of the laſt prioreſs with her figure praying to the Virgin Mary, and this inſcription on the ledge: *Hic jacet domina Anna Donaldi Terleti filia, quondam prioriſſa de Jona, quæ obiit an'o* m^{o} d^{o} xi^{mo} *ejus animam Altiſſimo commendamus:* and another inſcribed, *Hic jacet Mariota filia Johan: Lauchlain domini de.....* A broad paved way leads hence to the cathedral; and on this way is a large handſome croſs called *Macleane's*, the only one that remains of 360 which were demoliſhed here at the Reformation. Reilig Ouran, or the burying place of Oran, is the large incloſure where the kings of Scotland, Ireland, and of the iſles, and the deſcendants, were buried in three ſeveral chapels. The dean of the iſles, who travelled over them 1549, and whoſe account has been copied by Buchanan, and publiſhed at Edinburgh 1784, ſays, that in his time one of theſe chapels (or "tombes of ſtain formit like little chapels with ane braid gray marble or quhin ſtain on the gavil of ilk ane of the tombes," containing, as the chronicle ſays, the remains of 48 Scottiſh monarchs, from Fergus II. to Macbeth, 16 of whom were pretended to be of the race of Alpin), was inſcribed *Tumulus regum Scotiæ*. The next was inſcribed, *Tumulus regum Hiberniæ*, and contained four Iriſh monarchs: and the 3d inſcribed, *Tumulus regum Norwegiæ*, contained eight Norwegian princes or viceroys of the Hebrides, while they were ſubject to the crown of Norway. Boetius ſays, that Fergus founded this abbey for the burial-place of his ſucceſſors and cauſed an office to be compoſed for the funeral ceremony. All that Mr Pennant could diſcover here were only certain ſlight remains, built in a ridged form and arched within, but the inſcriptions loſt. Theſe were called *Jornaire nan righ* or "the ridge of the kings." Among theſe ſtones are to be ſeen only theſe two inſcriptions in the Gaelic or Erſe language and ancient Iriſh characters; *Cros Dombail ſat'aſich*, i. e. "the croſs of Donald Longſhanks" and that of *Urchvine o Guin*; and another inſcribed *Hic jacent quatuor priores de Hy, Johannes, Hugenius, Patricius, in decretis olim bacularius, qui obiit an. Dom. milles*^{mo} *quingenteſimo.* Above 300 inſcriptions were collected here by Mr Sacheverel in 1688, and given to the earl of Argyle, but afterwards loſt in the troubles of the family. The place is in a manner filled with grave-ſtones, but ſo over-grown with weeds, that few or none are at preſent to be ſeen, far leſs any inſcriptions read. Here alſo ſtands the chapel of St Oran, the firſt building begun by Columba, which the evil ſpirits would not ſuffer to ſtand till ſome human victim was buried alive; for which ſervice Oran offered himſelf, and his red grave-ſtone is near the door. In this chapel are tombs of ſeveral chiefs, &c. A little north-weſt of the door is a little pedeſtal of a croſs; on it are certain ſtones that ſeem to have been the ſupports of a tomb. Numbers who viſit this iſland think it incumbent on them to turn each of theſe thrice round, according to the courſe of the ſun. They are called *Clacha-brath*; for it is thought that the *brath*, or end of the world, will not arrive till the pedeſtal on which they ſtand is worn through. Originally (ſays Mr Sacheverel) here were three noble globes of white marble, placed on three ſtone baſons, and theſe were turned round; but the ſynod ordered them and 60 croſſes to be thrown into the ſea. The preſent ſtones are probably ſubſtituted in place of theſe globes. The precinct of theſe tombs was held ſacred, and enjoyed the privileges of a girth or ſanctuary. Theſe places of retreat were by the ancient Scotch law, not to ſhelter indiſcriminately every offender, as was the caſe in more bigotted times in Catholic countries; for here all atrocious criminals were excluded: and only the unfortunate delinquent, or the penitent ſinner, was ſhielded from the inſtant ſtroke of rigorous juſtice. A little to the north of this incloſure ſtands the cathedral, built in form of a croſs, 115 feet long by 23, the tranſept 70 feet: the pillars of the choir have their capitals charged with ſcripture and other hiſtories; and near the altar are the tombs of two abbots and a knight. A fragment remains of the altar-ſtone of white marble veined with grey. This church is aſcribed to Maldwin in the 7th century; but the preſent ſtructure is far too magnificent for that age. Moſt of the walls are built of red granite from the Nun's iſland in the Sound. Two parallel walls of a covered way about 12 feet high and 10 wide, reach from the ſouth-eaſt corner to the ſea. In the church-yard is a fine croſs of a ſingle piece of red granite, 14 feet high, 22 broad, and 10 inches thick. Near the ſouth-eaſt end is Mary's chapel. The monaſtery is behind the chapel; of which only a piece of the cloiſters remains, and ſome ſacred black ſtones in a corner, on which contracts and alliances were made, and oaths ſworn. Eaſt of it was the abbot's gardens and offices. North of this was the palace of the biſhop of the iſles after the ſeparation of Man from them. This ſee was endowed with 13 iſlands; ſeveral of which were frequently taken away by the chieftains. The title of *Soder*, which ſome explained *Soter*, Σωτηρ "the name of Chriſt, or Soder, an imaginary town," is really derived from the diſtinction of the dioceſe into the northern iſlands or Nordereys (*i. e.* all to the north of Adnamurchan point), and the Southern or Sudereys; which laſt being the moſt important, the iſle of Man retained both titles.

Other ruins of monaſtic buildings and offices may be traced, as well as ſome druidical ſepulchral remains. Several abbeys were derived from this, which with the iſland was governed by an abbot-preſbyter, who had rule even over biſhops. The place where Columba landed is a pebbly beach, where a heap of earth repreſents the form of his ſhip. Near it is a hill with a circle of ſtones called *Cnoc-nar-aimgeal*, or "the hill of angels," with whom the ſaint held conference; and on Michaelmas day the inhabitants courſed their horſes round it, a remain of the cuſtom of bringing them there to be bleſſed. In former times, this iſland was the place where the archives of Scotland and many valuable old manuſcripts were kept. Of theſe moſt are ſuppoſed to have been deſtroyed at the Reformation; but many, it is ſaid, were carried to the Scotch college at Douay in France, and it is hoped ſome of them may ſtill be recovered. This once illuſtrious ſeat of learning and piety has now no ſchool for education, no temple for worſhip, no inſtructor in religion, unleſs viſited by the pariſh miniſter from another iſland.

JONAH, or *Propheſy of Jonah*, a canonical book of the Old Teſtament; in which it is related, that Jonah (about 771 B. C.) was ordered to go and prophecy the deſtruction of the Ninevites, on account of their wickedneſs. But the prophet, inſtead of obeying the divine command, embarked for Tarſhiſh; when, a tempeſt ariſing, the mariners threw him into the ſea: he was ſwallowed by a great fiſh; and after being three days and nights in his belly, was caſt upon the land. Hereupon being ſenſible of his paſt danger and ſurpriſing deliverance, he betook himſelf to the journey and embaſſy to which he was appointed; and arriving at Nineveh the metropolis of Aſſyria, he, according to his commiſſion, boldly laid open their ſins and miſcarriages, and proclaimed their ſudden overthrow: upon which the whole city, by prayer and faſting, and a ſpeedy repentance, happily averted the divine vengeance, and eſcaped the threatened ruin. Jonah upon this, fearing to paſs for a falſe prophet, retired to a hill at ſome diſtance from the city; where God, by a miracle, condeſcended to ſhow him the unreaſonableneſs of his diſcontent.

JONAS (Juſtus), a Proteſtant divine, born at North Hauſen, in Thuringia, in 1493. He was one of Luther's moſt zealous diſciples. He contracted a ſtrict friendſhip with Melancthon; became principal of the college of Wittemburg, and afterwards dean of the univerſity of that city. He wrote a treatiſe in favour of the marriage of prieſts, and other works: and died in 1555.

JONAS (Arnagrimus), a learned Icelander, acquired great reputation by his ſkill in the ſciences, and particularly in aſtronomy. He was coadjutor to Gundebran de Thorlac, biſhop of Hola, in Iceland. He refuſed that biſhopric, after the death of Gundebran: and died in 1649. He wrote ſeveral works; the principal of which are, *Idea veræ Magiſtratûs*, and his hiſtory and deſcription of Iceland.

JONATHAN, the ſon of Saul, celebrated in ſacred hiſtory for his valour, and his friendſhip for David againſt the intereſt of his own houſe. Slain in battle 1055 B. C.

Jonathan Maccabæus, brother of Judas, a renowned general of the Jews. He forced Bacchides the Syrian general, who made war with the Jews, to accept a peace; conquered Demetrius Soter, and afterwards Apollonius, that prince's general; but, being enſnared by Tryphon, was put to death 144 B. C.

JONES (Inigo), a celebrated Engliſh architect, was the ſon of a cloth-worker of London, and was born in 1572. He was at firſt put apprentice to a joiner; but early diſtinguiſhed himſelf by his inclination to drawing or deſigning, and was particularly taken notice of for his ſkill in landſcape-painting. This afterwards recommended him to the favour of William earl of Pembroke, who ſent him abroad with a handſome allowance in order to perfect himſelf in that branch. He was no ſooner at Rome, than he found himſelf in his proper ſphere: he felt that nature had not formed him to decorate cabinets, but to deſign palaces. He dropt the pencil and conceived Whitehall. In the ſtate of Venice he ſaw the works of Palladio, and learned how beautiful taſte may be exerted on a leſs theatre than the capital of an empire. How his abilities diſtinguiſhed themſelves in a ſpot where they certainly had no opportunity to act, we are not told, though it would not be the leaſt curious part of his hiſtory; certain it is, that, on the ſtrength of his reputation at Venice, Chriſtian IV. invited him to Denmark, and appointed him his architect; but on what buildings he was employed in that country, we are yet to learn. James I. found him at Copenhagen, and queen Ann took him in the quality of her architect to Scotland. He ſerved prince Henry in the ſame capacity, and the place of ſurveyor-general of the works was granted to him in reverſion On the death of that prince, with whom at leaſt all his lamented qualities did not die, Jones travelled once more into Italy, and, aſſiſted by ripeneſs of judgment, perfected his taſte. To the interval between theſe voyages Mr Walpole is inclined to aſſign thoſe buildings of Inigo, which are leſs pure, and border too much upon the baſtard ſtyle, which one may call *king James's gothic*. Inigo's deſigns of that period are not gothic, but have a littleneſs of parts, and a weight of ornaments, with which the revival of the Grecian taſte was encumbered, and which he ſhook off in his grander deſigns. The ſurveyor's place fell, and he returned to England; and, as if architecture was not all he had learned at Rome, with an air of Roman diſintereſtedneſs he gave up the profits of his office, which he found extremely in debt; and prevailed upon the comptroller and paymaſter to imitate his example, till the whole arrears were cleared.

In 1620, he was employed in a manner very unworthy of his genius: king James ſet him upon diſcovering, that is, gueſſing, who were the founders of Stonehenge. His ideas were all Romanized; conſequently, his partiality to his favourite people, which ought rather to have prevented him from charging them with that maſs of barbarous clumſineſs, made him conclude it a Roman temple.

In the ſame year Jones was appointed one of the commiſſioners for the repair of St Paul's; but which was not commenced till the year 1633, when Laud, then biſhop of London, laid the firſt ſtone, and Inigo the fourth. In the reſtoration of that cathedral, he made two capital faults. He firſt renewed the ſides with very bad Gothic; and then added a Roman portico, magnificent and beautiful indeed, but which had no affinity with the ancient parts that remained, and made his own Gothic appear ten times heavier. He committed the ſame error at Wincheſter, thruſting a ſcreen in the Roman or Grecian taſte into the middle of that cathedral. Jones indeed was by no means ſucceſsful when he attempted Gothic. The chapel of Lincoln's-Inn has none of the characteriſtics of that architecture. The cloyſter beneath ſeems oppreſſed by the weight of the building above.

The authors of the life of Jones place the erecting of the Banqueting-houſe in the reign of king Charles; but it appears, from the accounts of Nicholas Stone, that it was begun in 1619, and finiſhed in two years—a ſmall part of the pile deſigned for the palace of the kings of England; but ſo complete in itſelf, that it ſtands a model of the moſt pure and beautiful taſte. Several plates of the intended palace at Whitehall have been given;

but Mr Walpole thinks, from no finiſhed deſign. The four great ſheets are evidently made up from general hints; nor could ſuch a ſource of invention and taſte as the mind of Inigo ever produce ſo much ſameneſs. The whole fabric, however, was ſo glorious an idea, that one forgets for a moment (ſays Mr Walpole), in the regret for its not being executed, the confirmation of our liberties, obtained by a melancholy ſcene that paſſed before the windows of that very Banqueting-houſe.

In 1623 he was employed at Somerſet-houſe, where a chapel was to be fitted up for the Infanta, the intended bride of the Prince. The chapel is ſtill in being. The front to the river, part only of what was deſigned, and the water-gate, were erected afterwards on the deſigns of Inigo, as was the gate at York-ſtairs.

On the acceſſion of Charles, Jones was continued in his poſts under both king and queen. His fee as ſurveyor was 8s. 4d. a day, with an allowance of 46 l. a-year for houſe-rent, beſides a clerk, and incidental expences. What greater rewards he had, are not upon record.

During the proſperous ſtate of the king's affairs, the pleaſures of the court were carried on with much taſte and magnificence. Poetry, painting, muſic, and architecture, were all called in to make them rational amuſements. Mr Walpole is of opinion, that the celebrated feſtivals of Louis XIV. were copied from the ſhows exhibited at Whitehall, in his time the moſt polite court in Europe. Ben Johnſon was the laureat; Inigo Jones the inventor of the decorations; Laniere and Feraboſco compoſed the ſymphonies; the king, the queen, and the young nobility, danced in the interludes. We have accounts of many of thoſe entertainments, called *maſques*; they had been introduced by Anne of Denmark. Lord Burlington had a folio of the deſigns for theſe ſolemnities, by Inigo's own hand, conſiſting of habits, maſks, ſcenes, &c. The harmony of theſe maſks was a little interrupted by a war that broke out between the compoſers, Inigo and Ben: in which, whoever was the aggreſſor, the turbulent temper of Johnſon took care to be moſt in the wrong.

The works of Inigo Jones are not ſcarce; Surgeon's hall is one of his beſt works. One of the moſt admired is the Arcade of Covent-garden, and the Church: "Two ſtructures (ſays Mr Walpole), of which I want taſte to ſee the beauties. In the arcade there is nothing remarkable; the pilaſters are as arrant and homely ſtripes as any plaſterer would make. The barn-roof over the portico of the church ſtrikes my eyes with as little idea of dignity and beauty, as it could do if it covered nothing but a barn. It muſt be owned, that the defect is not in the architect, but in the order.—Who ever ſaw a beautiful Tuſcan building? Would the Romans have choſen that order for a temple?" The expence of building that church was 4500l.

Ambreſbury in Wiltſhire was deſigned by Jones, but executed by his ſcholar Webb. Jones was one of the firſt that obſerved the ſame diminution of pilaſters as in pillars. Lindſay-houſe in Lincoln's-Inn Fields, which he built, owes its chief grace to this ſingularity. In 1618 a ſpecial commiſſion was iſſued to the lord chancellor, the earls of Worceſter, Pembroke, Arundel, and others, to plant and reduce to uniformity, Lincoln's-Inn Fields, as it ſhall be drawn by way of map, or ground-plot, by Inigo Jones, ſurveyor-general of the works. That ſquare is laid out with a regard to ſo trifling a ſingularity, as to be of the exact dimenſions of one of the pyramids: this would have been admired in thoſe ages when the Keep at Kenelworth Caſtle was erected in the form of an horſe-fetter, and the Eſcurial in the ſhape of St Laurence's gridiron.

Coleſhill in Berkſhire, the ſeat of Sir Matthew Pleydell, built in 1650, and Cobham-hall in Kent, were Jones's. He was employed to rebuild Caſtle Aſhby, and finiſhed one front: but the civil war interrupted his progreſs there and at Stoke-park in Northamptonſhire. Shaftſbury-houſe, now the London Lying-in hoſpital, on the eaſt ſide of Alderſgate-ſtreet, is a beautiful front. The Grange, the ſeat of the lord chancellor Henley in Hampſhire, is entirely of this maſter. It is not a large houſe, but by far one of the beſt proofs of his taſte. The hall, which opens to a ſmall veſtibule with a cupola, and the ſtair-caſe adjoining, are beautiful models of the pureſt and moſt claſſic antiquity. The gate of Beaufort-garden at Chelſea, deſigned by Jones, was purchaſed by lord Burlington, and tranſported to Chiſwick. He drew a plan for a palace at Newmarket; but not that wretched hovel that ſtands there at preſent. One of the moſt beautiful of his works is the Queen's houſe at Greenwich. The firſt idea of the hoſpital is ſaid to have been taken by his ſcholar Webb from his papers.

Inigo taſted early the misfortunes of his maſter. He was not only a favourite, but a Roman Catholic: in 1646, he paid 545l. for his delinquency and ſequeſtration. Whether it was before or after this fine, it is uncertain, that he and Stone the Maſon buried their joint ſtock in Scotland-yard; but an order being publiſhed to encourage the informers of ſuch concealments, and four perſons being privy to the ſpot where the money was hid, it was taken up, and reburied in Lambeth-marſh. Grief, misfortunes, and age, put an end to his life at Somerſet-houſe, July 21. 1651. Several of his deſigns have been publiſhed by Mr Kent, Mr Colin Campbell, and Mr Iſaac Ware. He left in MS. ſome curious notes on Palladio's architecture, which are inſerted in an edition of Palladio publiſhed in 1714.

IONIA, a country of Aſia minor, bounded on the north by Æolia, on the weſt by the Ægean and Icarian ſeas, on the ſouth by Caria, and on the eaſt by Lydia and part of Caria. It was founded by colonies from Greece and particularly Attica, by the Ionians or ſubjects of Ion. Ionia was divided into 12 ſmall ſtates which formed a celebrated confederacy often mentioned by the ancients. Theſe 12 ſtates were Priene, Miletus, Colophon, Clazomenæ, Epheſus, Lebedos, Teos, Phocæa, Erythræ, Smyrna, and the capitals of Samos and Chios. The inhabitants of Ionia built a temple which they called *Pan Ionium* from the concourſe of people that flocked there from every part of Ionia. After they had enjoyed for ſome time their freedom and independence, they were made tributary to the power of Lydia by Crœſus. The Athenians aſſiſted them to ſhake off the ſlavery of the Aſiatic monarchs; but they ſoon forgot their duty and relation to their mother-country, and joined Xerxes when he invaded Greece. They were delivered from the Perſian yoke by Alexander, and reſtored to their original independence. They were reduced by the Romans under the dictator Sylla. Ionia has been always celebrated for the ſalubrity of the climate, the fruitfulneſs of the ſoil, and the genius of its inhabitants.

IONIC order. See Architecture, n° 45.

Ionic Dialect, in grammar, a manner of ſpeaking peculiar to the people Ionia.

Ionic Sect was the firſt of the ancient ſects of philoſophers; the others were the Italic and Eleatic. The founder of this ſect was Thales, who, being a native of Miletus in Ionia, occaſioned his followers to aſſume the appellation of *Ionic*: Thales was ſucceeded by Anaximander, and he by Anaximenes, both of Miletus; Anaxagoras Clazomenius ſucceeded them, and removed his ſchool from Aſia to Athens, where Socrates was his ſcholar. It was the diſtinguiſhing tenet of this ſect, that water was the principle of all natural things.

IONIUM mare, a part of the Mediterranean Sea, at the bottom of the Adriatic. It lies between Sicily and Greece. That part of the Ægean ſea which lies on the coaſts of Ionia in Aſia, is called the *Sea of Ionia*, and not the *Ionian Sea*. According to ſome authors, the Ionian ſea receives its name from Io, who ſwam acroſs there after ſhe had been metamorphoſed into a heifer.

JONK, or Jonque, in naval affairs, is a kind of ſmall ſhip, very common in the Eaſt Indies. Theſe veſſels are about the bigneſs of our fly-boats; and differ in the form of their building, according to the different methods of naval architecture uſed by the nations to which they belong. Their ſails are frequently made of mats, and their anchors are made of wood.

JONSTON (John), a learned Poliſh naturaliſt and phyſician, born in 1603. He travelled all over Europe, and procured eſteem every where by his knowledge: afterward he bought the eſtate of Ziebendorf in the duchy of Lignitz in Sileſia, where he ſpent the remainder of his days. He wrote a natural hiſtory of birds, fiſh, quadrupeds, inſects, ſerpents, and dragons, in folio; a piece upon the Hebrew and Greek feſtivals, a thaumatography, and ſome poems. He died in 1674.

JOPPA, a ſea-port town in Paleſtine, lying ſouth of Cæſarea; and anciently the only port to Jeruſalem, whence all the materials ſent from Tyre towards the building of Solomon's temple were brought hither and landed, (2. Chr. ii 16.) It is ſaid to have been built by Japhet, and from him to have taken its name *Japho*, afterwards moulded into *Joppa*; and the very heathen geographers ſpeak of it as built before the flood. It is now called *Jaffa*, ſomewhat nearer to its firſt appellation, and is but in a poor and mean condition.

JOR, the Hebrew for a river, which, joined with Dan, concurs to form the term *Jordan*. See Dan.

JORDANO (Luca), an eminent Italian painter, was born at Naples in 1632. He became very early a diſciple of Joſeph Ribera; but going afterwards to Rome, he attached himſelf to the manner of Pietro da Cortona, whom he aſſiſted in his great works. Some of his pictures being ſeen by Charles II. king of Spain, he engaged him in painting the Eſcurial; in which taſk he acquitted himſelf as a great painter. The king ſhowed him a picture of Baſſani, expreſſing his concern that he had not a companion: Luca painted one ſo exactly in Baſſani's manner, that it was taken for a performance of that maſter; and for this ſervice he was knighted, and gratified with ſeveral honourable and valuable employments. The great works he executed in Spain, gave him ſtill greater reputation when he returned to Naples; ſo that though he was a very quick workman, he could not ſupply the eager demands of the citizens. No one, not even Tintoret, ever painted ſo much as Jordano; and his generoſity carried him ſo far as to preſent altar-pieces to churches that were not able to purchaſe them. His labours were rewarded with great riches; which he left to his family, when he died, in 1705.

JORDANS (James), one of the moſt eminent painters of the Flemiſh ſchool, was born at Antwerp in 1593. He learned the principles of his art from Adam Van Ort, whoſe daughter he married; which connection hindered him from gratifying his inclination of viſiting Italy. He improved moſt under Rubens; for whom he worked, and from whom he drew his beſt principles; his taſte directed him to large pieces; and his manner was ſtrong, true, and ſweet. A great number of altar-pieces painted by him are preſerved in the churches in the Netherlands, which maintain the reputation of this artiſt. He died in 1678.

JORTIN (John), a very learned and ingenious Engliſh clergyman, was born in Huntingdonſhire, about the year 1701. Having ſome private fortune of his own, and being of a peculiar diſpoſition that could not ſolicit promotion, he remained long without preferment. In 1738, lord Wincheſter gave him the living of Eaſtwell in Kent; but the place not agreeing with his health, he ſoon reſigned it. Archbiſhop Herring, who had a great value for him, about the year 1751 preſented him to the living of St Dunſtan's in the Eaſt; and biſhop Oſbaldiſton in 1762 gave him that of Kenſington, with a prebend in St Paul's cathedral, and made him archdeacon of London. His temper, as well as his aſpect, was rather moroſe and ſaturnine; but in company that he liked, he was at all times facetious, yet ſtill with a mixture of *ſal cenſura ſuperiorum*. His ſermons were ſenſible and argumentative; and would have made more impreſſion on his hearers, had he been more attentive to the advantages flowing from a good delivery: but he appeared to greater advantage as a writer. His remarks on eccleſiaſtical hiſtory, his ſix diſſertations, his life of Eraſmus, and his ſermons, were extremely well received by the public, and have undergone ſeveral editions. He died in the year 1770.

JOSEPH, the ſon of Jacob; memorable for his chaſtity, and the honours conferred on him at the court of Egypt, &c. He died in 1635 B. C. aged 110.

JOSEPHUS, the celebrated hiſtorian of the Jews, was of noble birth, by his father Mattathias deſcended from the high-prieſts, and by his mother of the blood-royal of the Maccabees; he was born A. D. 37, under Caligula, and lived under Domitian. At 16 years of age he betook himſelf to the ſect of the Eſſenes, and then to the Phariſees; and having been ſucceſsful in a journey to Rome, upon his return to Judæa he was made captain-general of the Galilæans. Being taken priſoner by Veſpaſian, he foretold his coming to the empire, and his own deliverance by his means. He accompanied Titus at the ſiege of Jeruſalem, and wrote his "Wars of the Jews," which Titus ordered to be put in the public library. He afterwards lived at Rome, where he enjoyed the privileges of a Roman citizen, and where the emperors loaded him with favours, and granted him large penſions. Beſides the above work, he wrote, 1. Twenty books of Jewiſh antiquities, which he finiſhed under Domitian. 2. Two books againſt Appian. 3. An elegant diſcourſe on the martyrdom of the Maccabees. 4. His own life. Theſe works are excellently written in Greek.

JOSHUA, the renowned general of the Jews, who conducted them through the wilderneſs, &c. died in 1424 B. C. aged 110.

Joshua, a canonical book of the Old Teſtament, containing a hiſtory of the wars and tranſactions of the perſon whoſe name it bears. This book may be divided into three parts: the firſt of which is a hiſtory of the conqueſt of the land of Canaan; the ſecond, which begins at the 12th chapter, is a deſcription of that country, and the diviſion of it among the tribes; and the third, compriſed in the two laſt chapters, contains the renewal of the covenant he cauſed the Iſraelites to make, and the death of their victorious leader and governor. The whole comprehends a term of 17, or, according to others, of 27 years.

JOSIAH, king of Judah; the deſtroyer of idolatry, and the reſtorer of the true worſhip, an excellent magiſtrate, and a valiant general, was ſlain in battle, 609 B. C.

JOTAPATA (anc. geog.), a town of the Lower Galilee, diſtant 40 ſtadia from Gabara; a very ſtrong place, ſituated on a rock, walled round, and encompaſſed on all hands with mountains, ſo as not to be ſeen but by thoſe who came very near. It was with great difficulty taken by Veſpaſian, being defended by Joſephus, who commanded in it; when taken, it was ordered to be razed.

JOUBERT (Lawrence), conſellor and phyſician to the king of France, chancellor and judge of the univerſity of Montpelier, was born at Valance in Dauphiny in 1530. He became the diſciple of Rondelet at Montpelier; and at his death ſucceeded to the regius profeſſorſhip of that univerſity, where he had given abundant proofs of his merit, and ſtrengthened his reputation by the lectures he read in that capacity, as well as by the works he publiſhed. Henry III. who paſſionately wiſhed to have children, ſent for him to Paris, in hopes by his aſſiſtance to render his marriage fruitful; but he was diſappointed, without any loſs of repute to Joubert. Much offence was indeed taken at a piece he publiſhed under the title of *Vulgar errors*, in which he treated of virginity and generation more plainly than had ever before been done in the French language. But, though he had promiſed ſomething more on the ſame ſubject, he was ſo piqued at the clamour raiſed againſt it, that the public ſaw no more, of ſix parts promiſed, than the firſt, and part of the ſecond, though they were greatly called for. He died in 1582; and his ſon Iſaac tranſlated ſome of his Latin paradoxes into French.

JOVIAN, the Roman emperor, elected by the army, after the death of Julian the apoſtate, in 363. He at firſt refuſed, ſaying he would not command idolatrous ſoldiers; but, upon an aſſurance that they would embrace Chriſtianity, he accepted the throne, and immediately ſhut all the Pagan temples, and forbid their ſacrifices. But he did not long enjoy the dignity to which his merit had raiſed him; being ſuffocated in his bed by the fumes of a fire that had been made to dry the chamber, in 364, the 33d of his age, and the eighth month of his reign. See Constantinople, n° 67.

JOVIUS (Paul), in Italian *Giovio*, a celebrated hiſtorian, was born at Como in Italy, in the year 1483. As his father died in his infancy, he was educated by his eldeſt brother Benedict Jovius, under whom he became well ſkilled in claſſical learning; and then went to Rome: for the ſake of enjoying the benefit of the Vatican library. He there wrote his firſt piece, *De piſcibus Romanis*, which he dedicated to cardinal Lewis of Bourbon. He received a penſion of 500 crowns for many years From Francis I. king of France, whoſe favour he ſecured by his flatteries. But, in the following reign, having diſguſted the conſtable Montmorency, his name was ſtruck out of the liſt of penſioners. Jovius did not ſuffer his ſpirits to ſink under his miſfortune: he had obtained a high reputation in the learned world by his writings; and having always ſhowed great reſpect to the houſe of Medicis, on whoſe praiſes he had expatiated in his works, he applied to Clement VII. and obtained the biſhopric of Nocera. His principal piece is his hiſtory, which is that of his own time throughout the world, beginning with 1494, and extending to the year 1544. This was the chief buſineſs of his life. For he formed the plan of it in the year 1515; and continued upon it till his death, which happened at Florence in 1552. It is printed in three volumes folio. He is allowed to have been a man of wit as well as learning: he was maſter of a bright and poliſhed ſtyle, and has many curious obſervations: but being a venal writer, his hiſtories are not much credited.

JOURNAL, a day-book, regiſter, or account of what paſſes daily. See Diary.

Journal, in Merchants Accounts, is a book into which every particular article is poſted out of the waſte-book, and made debtor. This is to be very clearly worded, and fairly engroſſed. See *Book-Keeping*.

Journal, in navigation, a ſort of diary, or daily regiſter of the ſhip's courſe, winds, and weather; together with a general account of whatever is material to be remarked in the period of a ſea-voyage.

In all ſea-journals, the day, or what is called the 24 *hours*, terminates at noon, becauſe the errors of the dead-reckoning are at that period generally corrected by a ſolar obſervation. The daily compact uſually contains the ſtate of the weather; the variation, increaſe, or diminution of the wind: and the ſuitable ſhifting, reducing, or enlarging the quantity of ſail extended; as alſo the moſt material incidents of the voyage, and the condition of the ſhip and her crew; together with the diſcovery of other ſhips or fleets, land, ſhoals, breakers, ſoundings, &c.

Journal. is alſo a name common for weekly eſſays, news newſpapers, &c. as the Gray's-Inn journal, the Weſtminſter journal, &c.

Journal, is alſo uſed for the titles of ſeveral books which come out at ſtated times, and give abſtracts, accounts, &c. of the new books that are publiſhed, and the new improvements daily made in arts and ſciences; as the *Journal de Sçavans*, *Journal de Phyſique*, &c.

JOURNEY, a tract of ground paſſed over in travelling by land; properly as much as may be paſſed over in one day.

Management of a Horſe on a Journey. See Horse.

JOURNEYMAN, properly one who works by the day only; but the word is now uſed for any one who works under a maſter, either by the day, the year, or the piece.

JOUVENET (John), a celebrated French painter, was born at Rouen in 1644; where his father, who was a painter, bred him up to the ſame profeſſion; but his greateſt improvement was confeſſedly derived from the inſtructions of Nicholas Pouſſin, and ſtudying the works of that maſter. He acquired ſo good a knowledge of deſign, as qualified him for employment in ſeveral grand works in the palaces at Paris and Trianon; in many of the chuſches and convents; and in the hoſpital of invalids, where he painted the twelve apoſtles, each figure being 14 feet high. He was eſteemed to have a ready invention, to be correct in his deſigns, and to have a taſte for grandeur in his compoſitions: it is obſerved of this artiſt, that being deprived of the uſe of his right hand by a paralytic diſorder, he nevertheleſs continued to paint with his left. He died in the year 1717.

JOY, in ethics, is that paſſion which is produced by love, regarding its object as preſent, either immediately or in proſpect, in reality or imagination. This paſſion has been found to increaſe the perspiration and urine of human bodies.

JOYNERY. See Joinery.

IPECACUANHA, in the materia medica, a Weſt-Indian root, of which there are principally two kinds, diſtinguiſhed by their colour, and brought from different places; but both poſſeſſing the ſame virtues, tho' in a different degree. The one is aſh-coloured or gray, and brought from Peru; the other is brown, and is brought from the Braſils: and theſe are indifferently ſent into Europe under the general name of *ipecacuanha*.

Theſe two ſorts have been by ſome ſuppoſed to be the roots of two different plants: but, according to others, this is a miſtake; the only difference being that one grows in a different place, and in a richer and moiſter ſoil, and is better ſupplied with juices than the other. The plant they belong to is a ſpecies of Psychotria.

The aſh-coloured ipecacuan is a ſmall wrinkled root, bent and contorted into a great variety of figures, brought over in ſhort pieces full of wrinkles, and deep circular fiſſures, quite down to a ſmall white woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, looks ſmooth and reſinous upon breaking: it has very little ſmell; the taſte is bitteriſh and ſubacrid, covering the tongue as it were with a kind of mucilage. The brown ſort is ſmall, and ſomewhat more wrinkled than the foregoing; of a brown or blackiſh colour without, and white within. The firſt ſort, the aſh-coloured or grey ipecacuan, is that uſually preferred for medicinal uſe. The brown has been ſometimes obſerved, even in a ſmall doſe, to produce violent effects. A third ſort, called the *white* from its colour, has alſo been diſtinguiſhed. It is woody, has no wrinkles, and no perceptible bitterneſs in taſte. This, though taken in a large doſe, has ſcarce any effect at all. It is ſuppoſed to belong to a ſpecies of Viola. Mr Geoffroy calls this ſort *baſtard ipecacuan*, and complains that it is an impoſition upon the public. Geoffroy, Neumann, Dale, and Sir Hans Sloane, inform us, that the roots of a kind of apocynum (dogs-bane) are too frequently brought over inſtead of it; and inſtances are given of ill conſequences following from the uſe of it. But if the marks above laid down, particularly the aſh colour, brittleneſs, deep wrinkles, and bitteriſh taſte, be carefully attended to, all miſtakes of this kind may be prevented.

Ipecacuan was firſt brought into Europe about the middle of laſt century, and an account of it publiſhed about the ſame time by Piſo; but it did not come into general uſe till about the year 1686, when Helvetius, under the patronage of Louis XIV. introduced it into practice. This root is one of the mildeſt and ſafeſt emetics with which we are acquainted: and has this peculiar advantage, that if it ſhould not operate by vomit, it paſſes off by the other emunctories. It was firſt introduced among us with the character of an almoſt infallible remedy in dyſenteries, and other inveterate fluxes, as menorrhagia and leucorrhœa, and alſo in diſorders proceeding from obſtructions of long ſtanding: nor has it loſt much of its reputation by time. In dyſenteries, it almoſt always produces happy effects, and often performs a cure in a very ſhort ſpace of time. In other fluxes of the belly, in beginning dyſenteries, and ſuch as are of a malignant kind, or where the patient breathes a tainted air, it has not been found equally ſucceſsful: in theſe caſes it is neceſſary to continue the uſe of this medicine for ſeveral days, and to join with it opiates, diaphoretics, and the like. This root, given in ſubſtance, is as effectual, if not more ſo, than any of the preparations of it: the pure reſin acts as a ſtrong irritating emetic, but is of little ſervice in dyſenteries; while an extract prepared with water is almoſt of equal ſervice in theſe caſes with the root itſelf, though it has little effect as an emetic. Geoffroy concludes from hence, that the chief virtue of ipecacuan in dyſenteries depends upon its gummy ſubſtance, which lining the inteſtines with a ſoft mucilage, when their own mucus has been abraded, occaſions their exulcerations to heal, and defends them from the acrimony of the juices: and that the reſinous part, in which the emetic quality reſides, is required, where the morbific matter is lodged in the glands of the ſtomach and inteſtines. But if the virtues of this root were entirely owing to its mucilaginous or gummy part, pure gums, or mucilages, might be employed to equal advantage. Water, aſſiſted by a boiling heat, takes up from all vegetables a conſiderable portion of reſinous along with the gummy matter: if the ipecacuan remaining after the action of water be digeſted with pure ſpirit, it will not yield half ſo much reſin as at firſt: ſo that the aqueous extract differs from the crude root only in degree, being proportionally leſs reſinous, and having leſs effect, both as an emetic, and in the cure of dyſenteries. The virtues of ipecacuan, in this diſorder, depend upon its promoting perſpiration, the freedom of which is here of the utmoſt importance, and an increaſe of which, even in healthful perſons, is generally obſerved to ſuppreſs the evacuation by ſtool. In dyſenteries, the ſkin is for the moſt part dry and tenſe, and perſpiration obſtructed: the common diaphoretics paſs off without effect through the inteſtinal canal: but ipecacuan, if the patient after a puke or two be covered up warm, brings on a plentiful ſweat. After the removal of the dyſentery, it is neceſſary to continue the uſe of the medicine for ſome time longer, in order to prevent a relapſe; for this purpoſe, a few grains divided into ſeveral doſes, ſo as not to occaſion any ſenſible evacuation, may be exhibited every day; by this means the cure is effectually eſtabliſhed. And indeed ſmall doſes given, even from the beginning, have been found to have better effects in the cure of this diſeaſe than larger ones. Geoffroy informs us from his own experience, that he has obſerved ten grains of the powder to act as effectually as a ſcruple or two; and therefore confines the doſe betwixt ſix and ten grains: it has lately been found, that even ſmaller doſes prove ſufficiently emetic. The only officinal preparation of this root is a tincture made in wine, which accordingly has now the appellation of *vinum ipecacuanhæ*, both in the London and Edinburgh pharmacopœias.

Many ingenious experiments have been made on the ſubject of ipecacuan by Dr Irving, for which he obtained the prize medal of the Harveian Society at Edinburgh for 1784. He has aſcertained, that while this root contains a gummy reſinous matter, yet that the gummy exiſts in a much greater proportion than the reſinous part; that the gummy part is much more powerfully emetic than the reſinous; that although the cortical part of the root be more active than the ligneous, yet that even the pure ligneous part poſſeſſes a conſiderable emetic power; and that the whole of the root poſſeſſes conſiderable influence, both as an antiſeptic and aſtringent. To determine whether the emetic power of ipecacuan was of a volatile or fixed nature, Dr Irving ſubjected it to diſtillation. The water obtained by diſtillation was found to have very little influence; but the decoction which remained in the ſtill, not only operated violently as an emetic, but produced rigours, cold ſweats, and other alarming ſymptoms. By long continued boiling, the activity of the root itſelf is almoſt totally deſtroyed; but Dr Irving found, that the emetic property of ipecacuan was moſt effectually counteracted by means of the acetous acid, inſomuch that thirty grains of the powder taken in two ounces of vinegar produced only ſome looſe ſtools.

Ipecacuan, particularly in the ſtate of powder, is now advantageouſly employed in almoſt every diſeaſe in which full vomiting is indicated; and when combined with opium under the form of the pulvis ſudorificus, it furniſhes us with the moſt uſeful and active ſweating medicine which we poſſeſs. It is alſo often given with advantage in very ſmall doſes, ſo as neither to operate by vomiting, purging, nor ſweating.

The full doſe of the powder is a ſcruple or half a dram, and double that in form of watery infuſion. The full doſe is recommended in the paroxyſm of ſpaſmodic aſthma, and a doſe of three or four grains every morning in habitual aſthmatic indiſpoſition. A doſe of $\frac{1}{5}$ or $\frac{1}{4}$ grain rubbed with ſugar, and given every four hours or oftener, is recommended in uterine hemorrhagy, cough, pleuriſy, hæmoptoë, &c. and has often been found highly ſerviceable.

IPHIGENIA, a daughter of Agamemnon and Clytemneſtra. When the Greeks going to the Trojan war were detained by contrary winds at Aulis, they were informed by one of the ſoothſayers, that to appeaſe the gods they muſt ſacrifice Iphigenia Agamemnon's daughter to Diana. The father, who had provoked the goddeſs by killing her favourite ſtag, heard this with the greateſt horror and indignation; and rather than to ſhed the blood of his daughter, he commanded one of his heralds, as chief of the Grecian forces, to order all the aſſembly to depart each to his reſpective home. Ulyſſes and the other generals interfered, and Agamemnon conſented to immolate his daughter for the common cauſe of Greece. As Iphigenia was tenderly loved by her mother, the Greeks ſent for her on pretence of giving her in marriage to Achilles. Clytemneſtra gladly permitted her departure, and Iphigenia came to Aulis. Here ſhe ſaw the bloody preparations for the ſacrifice. She implored the forgiveneſs and protection of her father; but tears and entreaties were unavailing. Calchas took the knife in his hand; and as he was going to ſtrike the fatal blow, Iphigenia ſuddenly diſappeared, and a god of uncommon ſize and beauty was found in her place for the ſacrifice. This ſupernatural change animated the Greeks, the wind ſuddenly became favourable, and the combined fleet ſet ſail for Aulis.

IPICRATES, general of the Athenians, had that command conferred on him at 20 years of age, and became famous for the exactneſs of his military diſcipline. He made war on the Thracians; reſtored Senthes, who was an ally of the Athenians; attacked the Lacedæmonians; and, on many other occaſions, gave ſignal proofs of his conduct and courage. Many ingenious repartees have been mentioned of this general: a man of good family with no other merit than his nobility, reproaching him one day for the meanneſs of his birth, he replied, "I ſhall be the firſt of my race, and thou the laſt of thine." He died 380 B. C.

IPOMEA, QUAMOCLIT, or *Scarlet Convolvulus*: A genus of the monogynia order, belonging to the pentandria claſs of plants; and in the natural method ranking under the 29th order, *Campanaceæ*. The corolla is funnel-ſhaped; the ſtigma round-headed; the capſule trilocular. There are ſeveral ſpecies; but not more than one, (the coccinea), cultivated in Engliſh gardens. This hath long, ſlender, twining ſtalks, riſing upon ſupport ſix or ſeven feet high. The leaves are heart-ſhaped, pointed, and angulated at the baſe, and from the ſides of the ſtalks and branches ariſe many ſlender footſtalks; each ſupporting ſeveral large and beautiful funnel-ſhaped and ſcarlet flowers. There is a variety with orange-coloured flowers. Both of them are annual, riſing from ſeed in ſpring, flowering in July and Auguſt, ripening their ſeeds in September and October, and totally periſhing in a ſhort time after. They are tender, and muſt be brought up in a hot-bed till the latter end of May or beginning of

June, when they may be planted out to adorn the borders, or ſome may be planted in pots to move occaſionally to adorn any particular place; but in either caſe, there muſt be ſticks for them to twine upon.

IPSWICH, the capital of the county of Suffolk in England, ſeated in E. Long. 1. 6. N. Lat. 52. 12. The name comes from the Saxon *Gypſwick*, that is, a town ſituated upon the Gyppen, now called *Orwell*. It had once 21 churches, but now has only 12. It was plundered by the Danes in 991, and afterwards beſieged by king Stephen. It had charters and a mint in the reign of king John, but its laſt charter was from Charles II. The remains of a wall and ſix or ſeven religious houſes are ſtill to be ſeen. Though it is not in ſo flouriſhing a ſtate as formerly when the harbour was more commodious, yet it is ſtill a large well-built town. Beſides the churches already mentioned, it has ſeveral meeting-houſes, two chapels, a town-hall, council-chamber, a large market-place with a croſs in the middle of it, a ſhire-hall for the county ſeſſions, a library, ſeveral hoſpitals, a free-ſchool, a handſome ſtone-bridge over the river, ſtately ſhambles in the market-place built by cardinal Wolſey, who was a native of the town and a butcher's ſon, and who alſo began to build a college here on the ruins of a ſmall college of black canons, which ſtill bears his name, though it was never finiſhed. Here are alſo ſeveral alms-houſes, three charity-ſchools, and a convenient key and cuſtom-houſe. By virtue of Charles II.'s charter, the town is governed by two bailiffs, a recorder, 12 portmen, of whom the bailiffs are two, a town-clerk, two coroners, and 24 common council. The bailiffs and 4 of the portmen are juſtices of the peace. The town enjoys a great many privileges, as paſſing fines and recoveries, trying criminal, and even crown and capital cauſes among themſelves, ſettling the aſſize of bread, wine, and beer. No freeman is obliged to ſerve on juries out of the town, or bear any office for the king, except that of the ſheriff, or to pay tolls or duties in any other part of the kingdom. They have an admiralty juriſdiction beyond Harwich on the Eſſex coaſt, and on both ſides the Suffolk coaſt, by which they are intitled to all goods caſt on ſhore. The bailiffs even hold an admiralty-court beyond Landguard-fort. By a trial in king Edward III.'s time, it appears that the town had a right to the cuſtom-duties for all goods coming into Harwich-haven. They claim a right alſo to all waifes and ſtrays, &c. The manufactures of the town are chiefly woollen and linen cloth. It has ſtill a conſiderable foreign trade. The tide riſes pretty high, and brings great ſhips within a ſmall diſtance of the town. They export a great deal of corn to London, and ſometimes to Holland. Formerly, they had a great trade in ſhip-building; but that having declined, they now ſend great quantities of timber to the king's yard at Chatham. It has ſeveral great fairs for cattle, cheeſe, and butter; and is admirably ſituated for the trade to Greenland, becauſe the ſame wind that carries them out of the river will carry them to Greenland. It is worth remarking, that it is one of the beſt places in England for perſons in narrow circumſtances, houſe-rent being eaſy, proviſions cheap and plentiful, the paſſage by land or water to London, &c. convenient, and the company of the place good. It gives title of viſcount, as well as Thetford, to the duke of Grafton; and ſends two members to parliament.

IRASCIBLE, in the old philoſophy, a term applied to an appetite or a part of the ſoul, where anger and the other paſſions, which animate us againſt things difficult or odious, were ſuppoſed to reſide.

Of the eleven kinds of paſſions attributed to the ſoul, philoſophers aſcribe five to the iraſcible appetite; viz. wrath, boldneſs, fear, hope, and deſpair; the other ſix are charged on the concupiſcible appetite, viz. pleaſure, pain, deſire, averſion, love, and hatred.

Plato divided the ſoul into three parts; the reaſonable, iraſcible, and concupiſcible parts. The two laſt, according to that philoſopher, are the corporeal and mortal parts of the ſoul, which give riſe to our paſſions.

Plato fixes the ſeat of the iraſcible appetite in the heart; and the concupiſcible in the liver; as the two ſources of blood and ſpirits, which alone affect the mind.

IRELAND, one of the Britannic iſlands, ſituated between the 5th and 10th degrees of weſt longitude, and between the 51ſt and 56th of north latitude, extending in length about 300 miles, and about 150 in breadth.

The ancient hiſtory of this iſland is involved in ſo much obſcurity, that it has been the object of contention among the antiquarians for upwards of a century and a half. The Iriſh hiſtorians pretend to very great antiquity. According to them, the iſland was firſt inhabited about 322 years after the flood. At that time Partholanus the ſon of Scara landed in Munſter on the 4th of May with 1000 ſoldiers, and ſome women, from Greece. This voyage he had undertaken on account of his having killed his father and mother in his native country. The ſame hiſtorians inform us, that a great number of lakes broke out in Ireland during the reign of Partholanus, which had no exiſtence when he came into the iſland, with many other particulars not worth mentioning; but the moſt ſurpriſing circumſtance is, that about 300 years after the arrival of this Grecian colony, all of them periſhed by a plague, not a ſingle perſon remaining to tell the fate of the reſt; in which caſe it is wonderful how the cataſtrophe ſhould have been known.

1 Origin of the Iriſh according to their own hiſtorians.

After the extinction of this firſt colony, Ireland remained a perfect wilderneſs for 30 years; when another colony arrived from the eaſt, under the direction of one Nemedius. He ſet ſail from the Euxine ſea with 30 tranſports, each manned with 40 heroes; and at laſt arrived on the coaſts of Ireland, after a very tedious and ſtrange navigation. During his reign alſo many lakes were formed in the country, which had no exiſtence before; the moſt material circumſtance, however, was an unſucceſsful war in which he was engaged with ſome African pirates, who in the end enſlaved his people. The victors proved ſuch inſupportable tyrants, that the Iriſh found themſelves under a neceſſity of quitting the iſland altogether. They embarked on board a fleet of 1130 ſhips, under the command of three grandſons of Nemedius, viz. Simon Breac, To Chath, and Briaian Moal. The firſt returned to Greece, the ſecond ſailed to the Northern parts of Europe,

rope, and the third landed in the north of Scotland, and from him the iſland of Britain is ſaid to have taken its name, and the Welſh their origin.

About 216 years after the death of Nemedius, the deſcendents of Simon Breac returned from Greece into Ireland. They were conducted by five princes of great reputation, who divided the iſland into five kingdoms. nearly equal in ſize. Theſe kingdoms were called *Munſter, Deinſter, Connaught, Meath,* and *Ulſter;* and the ſubjects of theſe kings are called by the Iriſh hiſtorians *Firbolgs.*

The Firbolgs were in proceſs of time expelled or totally ſubdued, after the loſs of 100,000 men in one battle, by the *Tuath de Dannan*, a nation of necromancers who came from Attica, Bœotia, and Achaia, into Denmark; from Denmark to Scotland; and from Scotland to Ireland. Theſe necromancers were ſo completely ſkilled in their art, that they could even reſtore the dead to life, and bring again into the field thoſe warriors who had been ſlain the day before. They had alſo ſome curioſities which poſſeſſed a wonderful virtue. Theſe were a ſword, a ſpear, a cauldron, and a marble chair, on which laſt were crowned firſt the kings of Ireland, and afterwards thoſe of Scotland. But neither the powerful virtues of theſe Daniſh curioſities, nor the more powerful ſpells of the magic art, were able to preſerve the *Tuath de Dannans* from being ſubdued by the Gadelians when they invaded Ireland.

The Gadelians were deſcended from one Gathelns, from whom they derived their name. He was a man of great conſequence in Egypt, and intimately acquainted with Moſes the Jewiſh legiſlator. His mother was Scota, the daughter of Pharaoh, by Niul the ſon of a Scythian monarch cotemporary with Nimrod. The Gadelians, called alſo *Scots*, from Scota abovementioned, conquered Ireland about 1300 B. C. under Heber and Heremon, two ſons of Mileſius king of Spain, from whom were deſcended all the kings of Ireland down to the Engliſh conqueſt, and who are therefore ſtyled by the Iriſh hiſtorians princes of the *Mileſian race.*

From this period the Iriſh hiſtorians trace a gradual refinement of their countrymen from a ſtate of the groſſeſt barbarity, until a monarch, named *Ollam Fodla*, eſtabliſhed a regular form of government, erected a grand ſeminary of learning, and inſtituted the *Fes*, or triennial convention of provincial kings, prieſts, and poets, at Feamor or Tarah in Meath, for the eſtabliſhment of laws and regulation of government. But whatever were the inſtitutions of this monarch, it is acknowledged that they proved inſufficient to withſtand the wildneſs and diſorder of the times. To Kimbath, one of his ſucceſſors, the annaliſts give the honour of reviving them, beſides that of regulating Ulſter, his family province, and adorning it with a ſtately palace at Eamannia near Armagh. His immediate ſucceſſor, called *Hugony*, is ſtill more celebrated for advancing the work of reformation. It ſeems, that, from the earlieſt origin of the Iriſh nation, the iſland had been divided into the five provincial kingdoms abovementioned, and four of theſe had been ſubject to the fifth, who was nominal monarch of the whole iſland. Theſe four, however, proved ſuch obſtinate diſturbers of the peace, that Hugony, to break their power, parcelled out the country into 25 dynaſties, binding them by oath to accept no other monarch but one of his own family. This precaution proved ineffectual. Hugony himſelf died a violent death, and all his ſucceſſors for a ſeries of ages were aſſaſſinated, ſcarcely with one exception.

About 100 B. C. the pentarchal government was reſtored, and is ſaid to have been ſucceeded by a conſiderable revolution in politics. The Iriſh bards had for many ages diſpenſed the laws, and the whole nation ſubmitted to their deciſions: but as their laws were exceedingly obſcure, and could be interpreted only by themſelves, they took occaſion from thence to oppreſs the people, until at laſt they were in danger of being totally exterminated by a general inſurrection. In this emergency they fled to Convocar-Mac-Neſſa, the reigning monarch, who promiſed them his protection in caſe they reformed; but at the ſame time, in order to quiet the juſt complaints of his people, he employed the moſt eminent among them to compile an intelligible, equitable, and diſtinct, body of laws, which were received with the greateſt joy, and dignified with the name of *celeſtial deciſions*. Theſe deciſions ſeem to have produced but very little reformation among the people in general. We are now preſented with a new ſeries of barbarities, murders, factions, and anarchy; and in this diſordered ſituation of affairs it was, according to the Iriſh hiſtorians, that the chieftain mentioned by Tacitus addreſſed himſelf to Agricola, and encouraged him to make a deſcent on Ireland. This ſcheme happened not to ſuit the views of the Roman general at that time, and therefore was not adopted; and ſo confident are theſe hiſtorians of the ſtrength of their country even in its then diſtracted ſtate, that they treat the notion of its being ſubdued by a Roman legion and ſome auxiliaries (the force propoſed to Agricola), as utterly extravagant; acquainting us at the ſame time, that the Iriſh were ſo far from dreading a Roman invaſion, that they ſailed to the aſſiſtance of the Picts, and having made a ſucceſsful incurſion into South Britain, returned home with a conſiderable booty.

In the ſame ſtate of barbarity and confuſion the kingdom of Ireland continued till the introduction of Chriſtianity by St Patrick, about the middle of the fifth century. This miſſionary, according to the adverſaries of the Iriſh antiquity, firſt introduced letters into Ireland, and thus laid the foundation of a future civilization. On the other hand, the advocates for that antiquity maintain, that the Iriſh had the knowledge of letters, and had made conſiderable progreſs in the arts, before the time of St Patrick; though they allow, that he introduced the Roman characters, in which his copies of the Scripture and liturgies were written. To enter into the diſpute would be contrary to our plan. It is ſufficient to obſerve, that, excepting by ſome of the Iriſh themſelves, the hiſtory already given is generally reckoned entirely fabulous, and thought to have been invented after the introduction of Chriſtianity. An origin of the Iriſh nation hath been found out much nearer than Aſia, Greece, or Egypt; namely, the iſland of Britain, from whence it is now thought that Ireland was firſt peopled. A diſpute hath ariſen concerning the place from whence the firſt emiants from Britain ſet ſail for Ireland. The honour of being the mother-country of the Iriſh hath been diſputed between the North and South Britons. Mr Macpherſon has argued ſtrenuouſly for the former, and Mr Whitaker for the latter. For an account of their diſpute, however, we muſt refer to the works of theſe gentlemen. Mr Whitaker claims the victory, and challenges to himſelf the honour of being the firſt who clearly and truly demonſtrated the origin of the Iriſh.

2
Early hiſtory of Ireland by Mr Whitaker.

The name of Ireland, according to Mr Whitaker, is obviouſly derived from the word *Jar* or *Eir*, which in the Celtic language ſignifies "weſt." This word was ſometimes pronounced *Iver*, and *Hiver*; whence the names of *Iris*, *Ierna*, *Juverna*, *Iverna*, *Hibernia*, and *Ireland*; by all of which it hath at ſome time or other been known.

About 350 B. C. according to the ſame author, the Belgæ croſſed the channel, invaded Britain, and ſeized the whole extended line of the ſouthern coaſt, from Kent to Devonſhire. Numbers of the former inhabitants, who had gradually retired before the enemy, were obliged at laſt to take ſhipping on the weſtern coaſt of England, and paſſed over into the uninhabited iſle of Ireland. Theſe were afterwards joined by another body of Britons driven out by the Belgæ under Divitiacus, about 100 B. C. For two centuries and a half afterwards, theſe colonies were continually reinforced with freſh ſwarms from Britain; as the populouſneſs of this iſland, and the vicinity of that invited them to ſettle in the one, or the bloody and ſucceſſive wars in Britain during this period naturally induced them to relinquiſh the other: and the whole circuit of Ireland appears to have been completely peopled about 150 years after Chriſt: and as the inhabitants had all fled equally from the dominion of the Belgæ, or for ſome other cauſe left their native country, they were diſtinguiſhed among the Britons by one general and very appoſite name, viz, that of *Scuites*, or *Scots*, "the wanderers, or refugees."

3
Names and ſituation of the tribes by which it was inhabited.

Mr Whitaker alſo informs us, "that in the times of the Romans Ireland was inhabited by 18 tribes; by one upon the northern and three on the ſouthern ſhore, ſeven upon the weſtern, ſix on the eaſtern, and one in the centre,

"Along the eaſtern coaſt, and the Vergivian or internal ocean, were ranged the Damnii, the Voluntii, and the Eblani, the Caucii ,the Menapii, and the Coriondii. The firſt inhabited a part of the two counties of Antrim and Down, extending from Fair-head, the moſt north-eaſterly extremity of the iſland, to Iſamnum Promontorium, or the point of Ardglaſs haven in the county of Down; and having the Logia or Lagan, which falls into Carrickfergus bay, within their poſſeſſions and Dunum or Down-patrick for their capital. The Voluntii poſſeſſed the coaſt from the point of that haven to the river Buvinda or Boyne, the remainder of Down, the breadth of Ardmagh, and all Louth; having the Vinderus or Carlingford river in their dominions, and the town of Laberus near the river Deva (Atherdee in the county of Louth) for their metropolis. And the Eblani reached from the Boyne to the Læbius, Læv-ui, or Liffy; reſiding in Eaſt-Meath, and in the large portion of Dublin county which is to the north of this river; and acknowledging Mediolanum, Eblana, or Dublin, for their principal town. The Caucii ſpread from the Liffy to the Letrim, the Oboca of the ancients; had the reſt of Dublin county, and ſuch parts of Wicklow as lie in the north of the latter; and owned Dunum or Rath Downe for their chief city. The Menapii occupied the coaſt betwixt the Letrim and Cancarne-point, all the reſt of Wicklow, and all Wexford to the point; their chief town, Menapia, being placed upon and to the eaſt of Modona, Slanus, or Slane. And the Coriondii inhabited at the back of the Caucii and Menapii, to the weſt of the Slane and Liffy, and in all Kildare and all Catherlogh; being limited by the Boyne and Barrow on the weſt, the Eblani on the north, and the Brigantes on the ſouth.

"Upon the ſouthern ſhore and along the verge of the Cantabrian ocean, lay the Brigantes, the Vodiæ, and the Ibernii. The firſt owned the reſt of Wexford and all Waterford: extending to the Blackwater, Aven-More, or Dabrona, on the ſouth-weſt; having the great mouth of the Barrow within their territories, and Brigantia, Waterford, or ſome town near it, for their firſt city; and giving name of *Brigas* to the Suir or Swire, their limitary ſtream on the north, and the appellation of *Bergie* to their own part of the county of Wexford. The Vodiæ poſſeſſed the ſhire of Corke from the Blackwater to the Ban, the river of Kinſale, and the Dobona or Dubana of the ancients; and affixed the name of *Vodium Promontorium* to the point of Balycotton iſland. And the Ibernii inhabited the remainder of Corke, and all that part of Kerry which lies to the ſouth-eaſt of Dingle-ſound; having Ruſina or Ibaune for their capital, the Promontorium Auſtrinum or Miſſen-Head about the middle of their dominions, and the river Ibernus or Dingle-ſound for their northern barrier; and leaving their names to the three diviſions of Ibaune, Beare, and Iveragh.

"Upon the weſtern ſhore of the iſland and along the Great Britannic or Atlantic ocean, were the Lucanii or Lucenii, the Velaborii, and the Cangani, the Auterii, the Nagnatæ, the Hardinii, and Venicnii. The Lucinii inhabited the peninſula of land that lies along the river Ibernus or Dingle-ſound, and perhaps ſome adjoining parts of Kerry. The Velaborii ranged along the ſmall remainder of the latter, and over the whole of Limerick to the Senus or Shannon; having the Durius or Caſheen flowing through their dominions, and Regia, Limerick or ſome town near it, for their metropolis. And the latter was probably that city near Limerick, the ſite of which is ſtill famous, and retains the appellation of *Cathair*, or the fortreſs; and where the remains of ſtreets, and other marks of a town, may yet be traced. The Cangani lived in the county of Clare: Macolicum near the Shannon, perhaps Feakle or Melic, being their principal town; a headland in the bay of Galway, near Glaniny, being denominated *Beniſamnum Promontorium*; and the adjoining iſles of Arran called *Inſulæ Canganæ*. The Auterii were ſettled in the county of Galway; winding along the deep receſs of the Sinus Auſoba or bay of Galway; ſtretching towards the north as far as the Libnius,or the river that bounds the ſhire in that part; and poſſeſſing the ſmall portion of Mayo which lies to the ſouth of it. And theſe were ſubject to Auterium, anciently Aterith, and now Athenree; and have left their name to the diviſion of Athenree. The Nagnatæ occupied the reſt of the large county of Mayo, all Sligo and all Roſcommon, all Letrim as far as Logh Allin on the ſouth-eaſt, and all Fermanagh to Balyſhannon and Logh Erne; being bounded by the Rhebius or river of Balyſhannon, and the Lake Rhebius or Logh Erne; having a deep bay, called *Magnus Sinus*, that curves along Mayo, Sligo, and Letrim counties; and acknowledgeging Nagnat, Necmaht, or Alnecmaht, the town of the Nagnatæ, for their capital. And the Hardinii and Venicnii were confederated together under the title of the *Venicnian Nations*, extended from Balyſhannon to the North-Cape, and poſſeſſed all Donnegalle, except the two whole diviſions of Raphoe and Enis-Owen, and the eaſtern part of Killmacrenen. The Venicnii lay along the immediate margin of the ſhore, giving name to the Promontorium Venicnium or Cape Horn, and to the Inſula Venicnia or North-Arran iſland. And their metropolis Rheba was ſeated upon the lake Rhebius, and in the country of the Hardinii on the ſouth-eaſt.

"Upon the northern ſhore and along the margin of the Deucaledonian ocean, were only the Robogdii; inhabiting the reſt of Donegalle, all Derry, and all Antrim to the Fair-Head, and the Damnii; and giving their own name to the former and the diviſion of Raphoe. And they had the rivers Vidua or Ship-harbour, Arigta or Logh Swilly, Darabouna or Logh Foile, and Banna or Ban, in their territories; and acknowledged Robogdium, Robogh, or Raphoe, for their chief city.

"The central regions of the iſland, all Tyrone, the remainder of Fermanagh and Letrim, all Monaghan, and the reſt of Ardmagh; all Cavan, all Longford, and all Weſt-meath; all the King's and Queen's county, all Kilkenny, and all Tipperary; were planted by the Scoti. The Shannon, Logh Allin, and Logh Erne, were their great boundaries on the weſt; the Barrow, Boyne, and Logh Neagh, on the eaſt; the Swire and Blackwater on the ſouth; and a chain of mountains on the north. And the two greateſt of their towns were Rheba, a city ſeated, like the Rheba of the Venicnians, upon the lake and river Rhebius, but on a different part of them, and ſomewhere in the north of Cavan; and Ibernia, a town placed a little to the eaſt of the Shannon, and ſomewhere in the county of Tipperary."

4
Invaſion of the Danes.

But whether we are to receive as truth the accounts given by Mr Whitaker, thoſe of the Iriſh annaliſts, or any other, it is certain, that, till little more than a century ago, Ireland was a ſcene of confuſion and ſlaughter. The Iriſh hiſtorians acknowledge this, as we have already ſeen. Very few of their monarchs eſcaped a violent death. The hiſtories of their kings indeed amount to no more than this, viz. that they began to reign in ſuch a year, reigned a certain number of years, and were ſlain in battle by the valiant prince who ſucceeded to the throne. The introduction of Chriſtianity ſeems to have mended the matter very little, or rather not at all. The ſame wars between the chiefs continued; and the ſame murders and treacheries took place among the inhabitants, till they were invaded by the Danes or Normans, about the end of the eighth century. At this time, we are told, that the monarchical power was weak, by reaſon of the factions and aſſuming diſpoſition of the inferior dynaſties: but that the evils of the political conſtitution had conſiderably ſubſided by the reſpect paid to religion and learning. The firſt invaſions of the Danes were made in ſmall parties for the ſake of plunder, and were repelled by the chieftain whoſe dominions were invaded. Other parties appeared in different parts of the iſland, and terrified the inhabitants by the havoc they committed. Theſe were in like manner put to flight, but never failed to return in a ſhort time; and in this manner was Ireland haraſſed for the Space of 20 years, before the inhabitants thought of putting an end to their inteſtine conteſts, and uniting againſt the common enemy. The northern pirates, either by force or treaty, gradually obtained ſome ſmall ſettlements on the iſland; till at length Turget, or Turgeſius, a warlike Norwegian, landed with a powerful armament in the year 815. He divided his fleet and army, in order to ſtrike terror in different quarters. His followers plundered, burned, and maſſacred, without mercy, and perſecuted the clergy in a dreadful manner on account of their religion. The Danes already ſettled in Ireland, flocked to the ſtandard of Turgeſius, who was thus enabled to ſeat himſelf in Armagh, from which he expelled the clergy, and ſeized their lands. The Iriſh, in the mean time, where infatuated by their private quarrels; till at laſt, after ſome ill-conducted and unſucceſsful efforts, they ſunk into a ſtate of abject ſubmiſſion; and Turgeſius was proclaimed monarch of the whole iſland in 845.

The new king proved ſuch a tyrant, that he ſoon became intolerable. A conſpiracy was formed againſt him; and he was ſeized by Melachline prince of Meath in a time of apparent peace. An univerſal inſurrection enſued; the Danes were maſſacred or diſperſed; their leader condemned to death for his cruelties, and drowned in a lake. The foreigners, however, were not exterminated, but the remains of them were allowed to continue on the iſland as ſubjects or tributaries to ſome particular chieftains. A new colony ſoon arrived, but under pretence of peaceable intentions, and a deſign of enriching the country by commerce. The Iriſh, through an infatuated policy, ſuffered them to become maſters of Dublin, Limeric, Waterford, and other maritime places, which they enlarged and fortified with ſuch works as had till then been unknown in Ireland. The Danes did not fail to make uſe of every opportunity of enlarging their territories, and new wars quickly enſued. The Iriſh were ſometimes victorious and ſometimes not; but were never able to drive out their enemies, ſo that they continued to be a very diſtinguiſhed and powerful *ſept*, or tribe, in Ireland. The wars with the Danes were no ſooner at an end, than the natives, as uſual, turned their arms againſt each other. The country was haraſſed by the competitions of the chiefs; laws and religion loſt their influence, and the moſt horrid licentiouſneſs and immorality prevailed. Thus the whole iſland ſeemed ready to become a prey to the firſt invader, when an attempt was made upon it by Magnus king of Norway. This attempt miſcarried, through his own raſhneſs; for, having landed without oppoſition, he advanced into the country without the leaſt apprehenſion. The conſequence of this was, that he was ſurrounded and cut to pieces with all his followers. His death, however, proved of little benefit to Ireland;

the ſame diſorders which had gradually reduced the kingdom to a ſtate of extreme weakneſs, ſtill continued to operate, and to facilitate the ſucceſs of the Engliſh invaſion, which happened in the reign of Henry II.

5
Henry II. of England meditates an invaſion of Ireland.

The firſt motives which induced this monarch to think of an expedition againſt Ireland are not well known. It was ſuppoſed that he had been provoked by ſome aſſiſtance which the Iriſh princes had given to the French; but, whatever might be in this, it is certain that the deſign was conceived ſoon after he aſcended the throne; and his flatterers ſoon furniſhed him with ſufficient reaſons for conſidering the Iriſh as his ſubjects. It was affirmed that they had originally poſſeſſed themſelves of their country by permiſſion of Gurguntius a Britiſh king; and that, as deſcendents of the Britons, they were the natural and rightful ſubjects of the Engliſh monarch. It was alſo ſuggeſted, that the renowned King Arthur, Egfred the Northumbrian prince, and Edgar one of the Saxon kings of England, had all led their armies into Ireland, and there made valuable acquiſitions, which their ſucceſſor was in honour bound to recover and maintain. All theſe ſuggeſtions, however, or whatever elſe had occurred to himſelf, ſeemed yet inſufficient to Henry; and therefore he took the moſt effectual method to enſure his reputation, namely, by an application to the pope. To him he repreſented, that the inhabitants of Ireland were ſunk into the moſt wretched ſtate of corruption, both with regard to morals and religion; that Henry, zealous for the honour and enlargement of God's kingdom, had conceived the pious deſign of erecting it in this unhappy country; was ready to devote himſelf and all his powers to this meritorious ſervice; implored the benediction of the pontiff; and requeſted his permiſſion and authority to enter Ireland, to reduce the diſobedient and corrupt, to eradicate all ſin and wickedneſs, to inſtruct the ignorant, and ſpread the bleſſed influence of the goſpel in all its purity and perfection; promiſing at the ſame time to pay a yearly tribute to St Peter from the land thus to be reduced to his obedience, and to the holy ſee. Adrian, the reigning pope, rejoiced at this application which tended ſo much to the advancement of his own power.

6
Is inveſted with the ſovereignty by the pope.

A bull was therefore immediately formed, conformable to the moſt ſanguine wiſhes of Henry, which was ſent to England without delay, together with a ring, the token of his inveſtiture as rightful ſovereign of Ireland. But whatever inclination the king of England or the pope might at this time (A. D. 1156) have for the ſubjection of Ireland, the ſituation of the Engliſh affairs obliged him to defer it for ſome time.

7
State of Ireland at that time.

The ſtate of Ireland, as we have already obſerved, was at this time extremely favourable for an invaſion. The monarch enjoyed little more than a titular dignity, being haraſſed by a faction, and oppoſed by powerful rivals. A number of chieftains who aſſumed the title and rights of royalty, paid a precarious tribute to their ſuperior, and united, if they were diſpoſed to unite, with him, rather as his allies than his ſubjects. In Ulſter, the family of the northern *Hi Nial*, as it was called, exerciſed an hereditary juriſdiction over the counties now called *Tirone*, *Derry*, and *Donnegal*. They alſo claimed a right of ſupremacy over the lords of Fermanagh, Antrim, and Argial, which included the counties of Armagh, Monaghan, Lowth, and ſome adjacent diſtricts: while Dunleve, prince of Uladh (now Down), diſputed the ſuperiority of this family, and affected an independent ſtate. In Munſter reigned the deſcendants of O'Brien, a famous ſovereign of former times, impatient to recover the honours of their family; but at laſt, being confined by powerful rivals to the territory of North Munſter, they were obliged to leave the family of Mac Arthy ſovereigns of Deſmond, the ſouthern diviſion. In Connaught, the princes known by the name of *O'Connor* were acknowledged ſovereigns of the eaſtern territory. Tiernan O'Ruarc, an active and reſtleſs military chief, had the ſupremacy in Breffney, containing the modern county of Leitrim, and ſome adjacent diſtricts. Meath or the ſouthern Hi-Nial, was ſubject to the family of Clan-Colman, Murchard O'Malachlyn, and his ſucceſſors. Leinſter, divided into ſeveral principalities, was ſubject to Dermod, a fierce, haughty, and oppreſſive tyrant. His father had governed with great cruelty. Seventeen of his vaſſal lords had been either put to death, or had their eyes put out, by his order in one year; and Dermod ſeemed to inherit too great a portion of the ſame temper. His ſtature and bodily ſtrength made him admired by the inferior orders of his ſubjects, and theſe he was careful to protect and favour. His donations and endowments of religious houſes recommended him to the clergy; but his tributary chieftains felt the weight of his pride and tyranny, and to them his government was extremely odious.

The chief competitors for the rank of monarch of Ireland, in the mean time, were the heirs of the two houſes of O'Connor, and the northern Hi-Nial. Torlogh O'Connor was in poſſeſſion; but he was not generally recogniſed, and was oppoſed by his rival O'Lochlan: notwithſtanding which, he maintained his dignity with magnificence and vigour, till a deciſive victory gained by him over O'Brien raiſed O'Lochlan's jealouſy ſo much, that he obliged him in a convention of the ſtates, to allow him the ſovereignty of the northern diviſion. In conſequence of this partition, it was reſolved to transfer the territory of O'Ruarc to a perſon more inclined to the intereſts of the two ſovereigns. An expedition was accordingly undertaken; O'Ruarc was ſurpriſed, defeated, and driven from his dominions, Dermod, who had conceived an unlawful paſſion for Dervorghal, the wife of O'Ruarc, took the opportunity of her huſband's diſtreſſes to carry her off in triumph. O'Ruarc conceived the moſt implacable reſentment againſt Dermod: and therefore applying himſelf to Torlogh, promiſed an inviolable attachment to his intereſt; and prevailed on him not only to reinſtate him in his poſſeſſions, but to revenge the inſult offered by Dermod, and to reſtore his wife. By means of ſuch a powerful ally, O'Ruarc found frequent opportunities of haraſſing his antagoniſt till the death of Torlogh, which happened in 1156, upon which O'Lochlan ſucceeded to the ſovereignty. Dermod was the firſt to acknowledge the authority of this new ſovereign, by whoſe means he hoped to be able to revenge himſelf on O'Ruarc. He ſoon found, however, that he had acted too precipitately. His patron, having treacherouſly ſeized and put out the eyes of Dunleve prince of Down, the neighbouring chieftains took arms, in order to ſecure themſelves from his barbarity. O'Lochlan was defeated and killed; upon which the monarchy devolved on Roderic the ſon of the late Torlogh O'Connor.

8 Dermod, an exiled prince, ſolicits aſſiſtance from Henry II.

The new prince had acquired the reputation of valour, and was determined to eſtabliſh this reputation by ſome remarkable exploit in the beginning of his reign. Having therefore engaged in his ſervice the Oſtmen, or deſcendants of the Danes, he marched againſt Dermod as the chief partizan of his fallen rival. The king of Leinſter was ſeized with the utmoſt conſternation; and in deſpair ſet fire to his own town of Ferns, leſt the enemy ſhould have the ſatisfaction of ſpoiling it. Roderic ſtill advanced, attended by O'Ruarc, Dermod's implacable enemy, and ſoon over-ran the whole province. All the inferior lords at once acknowledged Roderic's authority. Dermod was depoſed, as a man utterly unworthy of his ſtation; another of his family was raiſed to the throne; and the unfortunate prince, finding it impoſſible to ſtay with ſafety in Ireland, embarked with 60 of his followers for England, and ſoon arrived at the port of Briſtol, with a deſign to ſolicit aſſiſtance from king Henry.

In England, Dermod's character was unknown, and he was regarded as an injured prince driven from his throne by an iniquitous confederacy. The clergy received him as the benefactor of their order, and entertained him in the monaſtery of Auguſtines with great hoſpitality. Having learned that Henry was then in Aquitain, he immediately went thither, and in a very abject manner implored his aſſiſtance, promiſing to acknowledge him as his liege lord, and to hold his dominions, which he was thus confident of regaining, in vaſſalage to Henry and his heirs.

Though nothing could be more flattering to the ambition of the king of England than this ſervile addreſs, yet the ſituation of his own affairs rendered it impoſſible for him at that time to reap from it any of the advantages with which it flattered him. He therefore diſmiſſed the Iriſh prince with large preſents, and a letter of credence addreſſed to all his ſubjects; notifying his grace and protection granted to the king of Leinſter; and declaring; that whoſoever within his dominions ſhould be diſpoſed to aid the unfortunate prince in the recovery of his kingdom, might be aſſured of his free licence and royal favour.

9 Perſuades ſome adventurers to follow him to Ireland.

Dermod returned to England highly pleaſed with the reception he had met with; but notwithſtanding the king's letter, none of the Engliſh ſeemed to be diſpoſed to try their fortunes in Ireland. A month elapſed without any proſpect of ſuccours, ſo that Dermod began to deſpair. At laſt, however, he perſuaded, with great promiſes, Richard Earl of Chepſtow, or, as it was formerly called, *Strigul*, a nobleman of conſiderable influence in Wales, but of broken fortune, to aſſiſt him with a conſiderable force to be tranſported next ſpring into Ireland. Overjoyed at this firſt inſtance of ſucceſs, he advanced into South Wales, where, by the influence of the biſhop of St David's he procured many other friends. Robert Fitz-Stephen, a brave and experienced officer, covenanted with him to engage in his ſervice with all his followers, and Maurice Fitz-Gerald his maternal brother; while Dermod, on his part, promiſed to cede to the two principal leaders, Fitz-Stephen and Fitz-Gerald, the entire dominion of the town of Wexford, with a large adjoining territory, as ſoon as by their aſſiſtance he ſhould be reinſtated in his rights.

The Iriſh prince having now accompliſhed his purpoſe, ſet ſail for Ireland in the winter of 1169, and recovered a ſmall part of his dominions even before the arrival of his new allies; but being attacked with a ſuperior force by his old enemies Roderic and O'Ruarc, he found himſelf obliged to feign ſubmiſſion till the Engliſh allies came to his aſſiſtance. The expected ſuccours arrived in the month of May 1170, in a creek called the *Bann*, near the city of Wexford. Robert Fitz-Stephen commanded 30 knights, 60 men in armour, and 300 archers. With theſe came Harvey of Mountmorris, nephew to earl Richard. He had no military force along with him; but came ſolely with a view of diſcovering the nature of the country, and reporting it to his uncle. Maurice of Pendergaſt commanded 10 knights and 200 archers: and thus the Engliſh force which was to contend with the whole ſtrength of Ireland, amounted to no more than 600 men.

10 Their ſucceſs.

Trifling as this aſſiſtance may ſeem, it nevertheleſs changed the face of affairs almoſt inſtantaneouſly. Numbers of Dermod's ſubjects, who had abandoned him in his diſtreſs, now flocked to his ſtandard. Wexford was immediately, attacked, and ſurrendered in a few days; Fitz-Stephen and Fitz-Gerald were jointly inveſted with the lordſhip of this city and its domain; and Harvey of Mountmorris was declared lord of two conſiderable diſtricts on the coaſt. After three or four weeks ſpent in feaſting and rejoicing, a new expedition was undertaken againſt the prince of Oſſory (a diſtrict of Leinſter), who had not only revolted from Dermod, but put out the eyes of one of his ſons, and that with ſuch cruelty, that the unhappy youth expired under the operation. The allied army was now increaſed to 3000 men, who were oppoſed by the prince of Oſſory at the head of 5000, ſtrongly entrenched among woods and moraſſes. By the ſuperior conduct of the Engliſh troops, however, the Iriſh were decoyed from their advantageous ſituation, and thus were entirely defeated. The Engliſh were for keeping the field till they had totally reduced their enemies: but Dermod, accuſtomed only to ravage and plunder, contented himſelf with deſtroying the country; and a ſudden reverſe of fortune ſeemed ready to take place. The prince of Oſſory, though defeated, ſtill appeared in arms, and only waited for an opportunity of again oppoſing the enemy in the field. Maurice Pendergaſt alſo joined him with his whole troop, being provoked by Dermod, who had refuſed him leave to return to Wales. This defection, however, was in part ſupplied by the arrival of Fitz-Gerald with 10 knights, 30 horſemen, and 100 archers. Pendergaſt in a ſhort time repented of his new alliance, and retired into Wales; ſo that the prince was obliged to make his ſubmiſſion to Dermod, which the latter with ſome reluctance accepted.

In the mean time, Roderic, having ſettled all his other affairs, advanced againſt the allies with a powerful army. Dermod was thrown into deſpair; but, encouraged by Fitz-Stephen, he encamped in a very ſtrong ſituation, where he was ſoon beſieged by Roderic. The latter, however, dreading the valour of the Engliſh, condeſcended to treat firſt with them, and then with Dermod, in order to detach them from the intereſts of each other: but as this proceeded evidently from fear; his offers were rejected by both parties; upon which he began to prepare for battle: but at the very time when the engagement ſhould have commenced, either through the ſuggeſtions of his clergy, or of his own fears, Roderic entered into a new negociation;

11 Peace concluded.

which at laſt terminated in a peace. The terms were, that Dermod ſhould acknowledge the ſupremacy of Roderic, and pay him ſuch ſervice as the monarchs of Ireland had uſually received from inferior princes; and as a ſecurity for his faithful performance of this article, he delivered up his favourite ſon as an hoſtage to Roderic: but in order to eſtabliſh this accommodation on the firmeſt baſis, the latter obliged himſelf to give his daughter in marriage to the young prince as ſoon as Leinſter ſhould be reduced, and the peace of the iſland effectually reſtored. By a ſecret article, Dermod engaged to diſmiſs the Britiſh forces immediately after the ſettlement of his own province, and in the mean time not to bring over any further reinforcements from England.

Thus ended the firſt Britiſh expedition into Ireland; the conſequences of which were ſo little dreaded at that time by the natives, that their hiſtorians, though they dwell upon the principal wars and conteſts in other parts of the iſland, ſpeak of the ſettlement of the Welſhmen in Leinſter with a careleſs indifference. But though the ſettlement of this colony ſeemed very little alarming to the generality, it could not eſcape the obſervation of diſcerning perſons, that a man of Dermod's character would not long keep his treaties; and that on the firſt emergency he would have recourſe to his former allies, who thus would eſtabliſh themſelves more and more, till at laſt they would reduce the country entirely under their ſubjection. Theſe reflections, if any ſuch were then made, were in a ſhort time verified.

12 New machinations of Dermod.

Dermod was ſcarce ſettled in his own dominions, when he began to aſpire at the ſovereignty, and form ſchemes for dethroning Roderic. He applied to Fitz-Stephen and Fitz-Gerald; by whom he was again directed to apply to Richard earl of Chepſtow, more commonly known by the name of *Strongbow*, on account of his feats of archery. Richard was very much inclined to accept of his invitation: but thought it incumbent upon him firſt to obtain the conſent of king Henry. The king, however, did not incline that his ſubjects ſhould make conqueſts for themſelves in any other country, and therefore diſmiſſed Richard with an equivocal anſwer; but the latter being willing to underſtand his ſovereign's words in the moſt favourable ſenſe, immediately ſet about the neceſſary preparations for his expedition.

13 A new body of Engliſh arrive in Ireland.

In May 1171, Raymond le Groſs, Richard's domeſtic friend, and the near relation of Fitz-Stephen and Fitz-Gerald, landed at a place called *Dondonalſ*, near Waterford, with 10 knights and 70 archers; and along with them came Harvey of Mountmorris, attended by a ſmall train. The Engliſh immediately intrenched themſelves, and erected a temporary fort for themſelves: which proved a very neceſſary precaution; for the natives, juſtly attributing this new debarkation to the practices of Dermod, inſtantly formed a tumultuous army, and marched to expel the invaders. The Engliſh prepared to meet them; but when they perceived the great ſuperiority of the enemy, they thought proper to retire to their fort. Here, however, they muſt have been totally cut off, had they not luckily collected a numerous herd of cattle from the neighbouring country for their ſubſiſtence.

14 Their ſucceſs and cruelty.

Theſe they drove with fury among the Iriſh, who were thus put into the utmoſt confuſion. The invaders ſeized the favourable moment; and, falling upon their diſordered enemies, put them to flight, and drove great numbers of them into the ſea, where they periſhed. Seventy priſoners were taken, all of them principal citizens of Waterford; who, though they offered large ſums for their ranſom, and even that the city ſhould be delivered up to the Engliſh, were all barbarouſly put to death. This ſucceſs and cruelty ſo intimidated the Iriſh, that they ſuffered theſe mercileſs invaders to maintain their ſtation unmoleſted, and wait for the arrival of their aſſociates.

Richard in the mean time having aſſembled his vaſſals, led them through Wales, where he was joined by great numbers of other adventurers; but, when juſt on the point of embarking, he was ſurpriſed by a poſitive command from the king, to deſiſt from his intended enterprize, on pain of forfeiture of his lands and honours. He was now, however, too much intereſted in his ſcheme to retract; and therefore pretended to diſbelieve the authenticity of the royal mandate.

15 Earl Richard arrives with a powerful reinforcement.

On the eve of the feaſt of St Bartholomew, he landed at Waterford with 200 knights and 1200 infantry, all choſen and well appointed ſoldiers. They were immediately joined by Raymond and his troops; and the very next day it was reſolved to make an attempt upon Waterford. The city was taken by ſtorm, and a dreadful maſſacre enſued; to which the cruel Dermod had the merit of putting an end. The marriage of Richard with Eva, the daughter of Dermod, was ſolemnized without delay, and a ſcene of joy and feſtivity ſucceeded the calamities of war.

A new expedition was now undertaken againſt Dublin; the inhabitants of which had either manifeſted ſome recent diſaffection to Dermod, or had never been thoroughly forgiven for their old defection. Roderic advanced againſt the allied army with a formidable body, conſiſting, as is ſaid, of 30,000 men: but, fearing to come to a general engagement, he contented himſelf with ſome ſlight ſkirmiſhes; after which, great part of his vaſſals forced him to diſmiſs them, and Dublin was left to its fate. The inhabitants were treated very ſeverely; however, a conſiderable body of them, with Heſculph their governor, had the good fortune to gain ſome veſſels lying in the harbour, and made their eſcape to the northern iſlands. Earl Richard was now inveſted with the lordſhip of Dublin; and appointed Milo de Cogan, a brave Engliſh knight, his governor; while he himſelf, in conjunction with the forces of Dermod, over-ran the country of Meath, committing every where the moſt horrid cruelties. Roderic, in the mean time, unable to oppoſe them in the field, ſent deputies to Dermod, commanding him to retire, and putting him in mind that his ſon was in his hands, and muſt anſwer with his life for the breach of thoſe treaties which his father made ſo little ſcruple to violate. Natural affection, however, had very little place in the breaſt of Dermod. He expreſſed the utmoſt indifference about his ſon; and, with the greateſt arrogance, claimed the ſovereignty of all Ireland: Roderic, provoked at this anſwer, cut off the young prince's head.

16 All the adventurers recalled by the king.

This piece of impotent cruelty ſerved only to make the king odious to his own ſubjects, while Dermod and his Engliſh allies committed every where the greateſt devaſtations, and threatened to ſubdue the whole iſland. This indeed they would probably have accompliſhed, had not the extraordinary ſucceſs of Strongbow alarmed king Henry; who, fearing that he might render himſelf totally independent on the crown of Britain, iſſued his royal edict, ſtrictly forbidding any Engliſh veſſel from paſſing into Ireland with men, arms, or proviſions; and commading all his ſubjects at that time reſident in Ireland, of whatever rank or degree, to return to their country before the enſuing feaſt of Eſther, on pain of forfeiting their lands, and being declared traitors.

17 Diſtreſs of the Engliſh.

Our adventurers were plunged into the greateſt diſtreſs by this peremptory edict. They now found themſelves cut off from all ſupplies in the midſt of their enraged enemies, and in danger of being forſaken by thoſe who had attached themſelves to them during their ſucceſs. Raymond was diſpatched with a moſt ſubmiſſive meſſage to the offended monarch; but before he received any favourable anſwer, every thing was thrown into confuſion by the death of Becket *, ſo that the king had neither leiſure nor inclination to attend to the affairs of Ireland. About the ſame time the death of Dermod their great ally ſeemed almoſt to give a finiſhing ſtroke to the Engliſh affairs. An univerſal defection took place among their aſſociates; and before they had time to concert any proper meaſures, Heſculph, who had formerly eſcaped from Dublin, appeared before that city with a formidable body of troops armed after the Daniſh manner. A furious attack enſued; which at laſt ended in the defeat and captivity of Heſculph, who was immediately put to death. This danger, however, was ſoon followed by one ſtill greater. Roderic had formed a powerful confederacy with many of the Iriſh chieftains, and the kings of the northern iſles, in order to extirpate the Engliſh totally from the iſland. The harbour of Dublin was blocked up by a fleet of 30 ſhips from the northern iſles; while the confederated Iriſh took their ſtations in ſuch a manner as to ſurround the city, and totally cut off all ſupplies of proviſions. In two months time the Engliſh were reduced to great ſtraits. On the firſt alarm, Richard had ſent for aſſiſtance to Fitz-Stephen; who having weakened his own force, in order to ſerve the earl, the people of Wexford had riſen and beſieged Fitz-Stephen in his fort called *Carrig* near that city. A meſſenger now arrived, informing Strongbow that his friend was in the utmoſt danger, and muſt fall into the hands of his enemies if not aſſiſted within three days; upon which a council of war was called, in order to deliberate on the meaſures neceſſary to be purſued in this deſperate emergency. It was ſoon reſolved to enter into a treaty with Roderic upon any terms that were not totally ſervile or oppreſſive. Laurence prelate of Dublin was appointed to carry the terms; which were, that Richard propoſed to acknowledge Roderic as his ſovereign, and to hold the province of Leinſter as his vaſſal, provided he would raiſe the ſiege. Laurence ſoon returned with an anſwer, probably of his own framing; namely, that Dublin, Waterford, Wexford, and all the forts poſſeſſed by the Britiſh, ſhould be immediately given up; and that the earl and his aſſociates ſhould depart with all their forces by a certain day, leaving every part of the iſland free from their uſurpations, and abſolutely renouncing all their pretended claims. On theſe conditions they were to be ſpared; but the leaſt reluctance or delay would determine the beſiegers to ſtorm the city.

18 They totally defeat their enemies.

Theſe terms, though they contained nothing inſolent or unreaſonable, conſidering the preſent ſituation of the Engliſh, were yet intolerable to theſe indigent adventurers. After ſome time ſpent in ſilence, Milo de Cogan, ſuddenly ſtarting up, declared his reſolution to die bravely rather than ſubmit to the mercy of barbarians. The ſpirit of deſperate valour was inſtantly caught by the whole aſſembly; and it was reſolved to riſk their whole fortune on one deſperate effort, by ſallying out againſt the enemy, and to make their attack upon that quarter where Roderic himſelf commanded. Accordingly, having perſuaded a body of the townſmen to take part in this deſperate enterpriſe, they marched out againſt their enemies, who expected nothing leſs than ſuch a ſudden attack. The beſiegers were ſecure and careleſs, without diſcipline or order; in conſequence of which, they were unable to ſuſtain the furious aſſault of the Engliſh. A terrible ſlaughter enſued, and the Iriſh inſtantly fled in the greateſt confuſion; their monarch himſelf eſcaping only by mixing half naked with the crowd. The other chieftains who were not attacked caught the panic, and broke up their camps with precipitation; while the victors returned from the purſuit to plunder, and among other advantages gained as much proviſion as was ſufficient to ſupport them a whole year.

19 Earl Richard ſummoned to England.

Strongbow being thus relieved from his diſtreſs, committed the government of Dublin to Milo de Cogan, while he proceeded immediately to Wexford in order to relive Fitz-Stephen: but in this he was diſappointed; for that brave officer, having often repulſed his enemies, was at laſt treacherouſly deceived into ſubmiſſion and laid in irons. Strongbow, however, continued to advance; and was again attacked by the Iriſh, whom he once more defeated. On his arrival at Wexford, he found it burnt to the ground; the enemy having retired with Fitz-Stephen and the reſt of the priſoners to Holy Iſland, a ſmall Iſland in the middle of the harbour, from whence they ſent a deputation threatening to put all the priſoners to death if the leaſt attempt was made to moleſt them in their preſent ſituation. The earl then proceeded to Waterford, and from thence to Ferns; where he for ſome time exerciſed a regal authority, rewarding his friends and puniſhing his enemies. A more important object, however, ſoon engaged his attention. The king of England having ſettled his affairs as well as he could, now determined to conquer Ireland for himſelf. A ſummons was inſtantly diſpatched to earl Richard, expreſſing the greateſt reſentment at his preſumption and diſobedience, and requiring his immediate preſence in England. The earl found himſelf under the neceſſity of obeying; and having made the beſt diſpoſitions the time would permit for the ſecurity of his Iriſh poſſeſſions, embarked for England, and met the king at Newham near Glouceſter. Henry at firſt affected great diſpleaſure; but ſoon allowed himſelf to be pacified by a ſurrender of the city of Dublin, and a large territory adjacent, together with all the maritime towns and forts acquired by Strongbow: while on his part he conſented that the earl ſhould have all other poſſeſſions granted in perpetuity, to be held of the king and his heirs. The other adventurers made their peace in a ſimilar manner; while the Iriſh chieftains, inſtead of uniting in the defence of their country, only thought how to make the moſt of the approaching invaſion, or at leaſt how to avert the threatened evil from their own particular diſtricts. They ſaw the power of their own ſovereign on the point of total diſſolution; and they ſaw it with indifference, if not with an envious and malignant ſatisfaction. Some were even ready to prevent their invader, and to ſubmit before he appeared on the coaſt. The men of Wexford, who had poſſeſſed themſelves of Fitz-Stephen, reſolved to avert the conſequences of their late perfidy and cruelty, by the forwardneſs of their zeal for the ſervice of the king of England, and the readineſs of their ſubmiſſions. Their deputies caſt themſelves at Henry's feet; and, with the moſt paſſionate expreſſions of obedience, humbly intreated that he would accept them as his faithful vaſſals, ready to reſign themſelves, their lands, and poſſeſſions, to his abſolute diſpoſal. "They had already (they ſaid) endeavoured to approve their zeal by ſeizing Robert Fitz-Stephen, a traitor to his ſovereign, who had lately entered their territory by force of arms without any due warrant or fair pretence, had ſlaughtered their people, ſeized their lands, and attempted to eſtabliſh himſelf independent of his liege lord. They kept him in chains, and were ready to deliver him to the diſpoſal of his ſovereign."—The king received them with expreſſions of the utmoſt grace and favour; commended their zeal in repreſſing the unwarrantable attempts of Fitz-Stephen; declared that he ſhould ſoon inquire into his crimes, and the wrongs they had ſuſtained, and inflict condign puniſhment for every offence committed by his undutiful ſubjects.—Thus were the Iriſhmen diſmiſſed in the utmoſt joy and exultation; and the artifice of Henry, while it inſpired theſe men with diſpoſitions favourable to his intereſts, proved alſo the moſt effectual means of ſaving Fitz-Stephen from their cruelty.

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* See *England*, n° 119, 120.

20 King Henry lands in Ireland.

Henry, having completed the preparations neceſſary for his expedition, embarked at Milford with ſeveral of his barons, 400 knights, and about 4000 ſoldiers, on board a fleet of 240 ſail. He landed at Waterford on the feaſt of St Luke in October 1172; with a profeſſed deſign not to conquer, but to take poſſeſſion of a kingdom already his own, as being granted him by the pope. Moſt of the Iriſh indeed ſeemed to be of the ſame opinion, and therefore ſubmitted without the leaſt reſiſtance. Strongbow ſet them an example, by making a formal ſurrender of Waterford, and doing homage to the king for the territory of Leinſter, Fitz-Stephen was delivered up, with many accuſations of tyranny and injuſtice. He was at firſt ſent to priſon; but ſoon purchaſed his liberty, by ſurrendering Wexford, and doing homage for the reſt of his poſſeſſions to the king. The prince of Deſmond was the firſt Iriſh chieftain who ſubmitted. On the very day after the king's arrival, he attended his court, reſigned the city of Corke, did him homage, and ſtipulated to pay a tribute for the reſt of bis territory. An Engliſh governor and garriſon were immediately appointed to take poſſeſſion of his capital; and the king diſplayed his power and magnificence by marching to Liſmore, where he choſe a ſituation and gave the neceſſary orders for building a fort. The prince of Thomond next ſubmitted and did homage. He was followed by the princes of Oſſory, Decies, and all the inferior chiefs of Munſter.

21 Many Iriſh chieftains ſubmit to him.

The king, after having provided for the ſecurity of all his newly acquired territories, and put garriſons in the cities of Limerick, Corke, Waterford, and Wexford, proceeded to take poſſeſſion of Dublin, which had been ſurrendered by Strongbow. The neighbouring lords took the opportunity of ſubmitting as he advanced. O'Carrol of Argial, a chieftain of great conſequence, repaired to his camp, and engaged to become his tributary; and even O'Ruarc, whom Roderic had made lord of a conſiderable part of Meath, voluntarily ſubmitted to the new ſovereign.

22 Roderic ſtill holds out.

Roderic, though ſurpriſed at the defection of ſo many of his allies, ſtill determined to maintain his own dignity, and at leaſt preſerve his province of Connaught, ſeeing he could no longer call himſelf monarch of the whole iſland. With this deſign he entrenched himſelf on the banks of the Shannon; and now, when diſencumbered from a crowd of faithleſs and diſcontented followers, he appears to have acted with a ſpirit and dignity becoming his ſtation. Hugh de Lacy and William Fitz-Andelm were commiſſioned by the king to reduce him: but Roderic was too ſtrong to be attacked with any probability of ſucceſs by a detachment from the Engliſh army; and he at leaſt affected to believe, that his ſituation was not yet ſo totally deſperate as to reduce him to the neceſſity of reſigning his dignity and authority, while his own territory remained inviolate, and the brave and powerful chiefs of Ulſter ſtill kept retired in their own diſtricts without any thoughts of ſubmiſſion. Henry in the mean time attempted to attach the Iriſh lords to his intereſt by elegant and magnificent entertainments, ſuch as to them appeared quite aſtoniſhing. Some hiſtorians pretend that he eſtabliſhed the Engliſh laws in all thoſe parts which had ſubmitted to his juriſdiction; but this muſt appear extremely improbable, when we conſider how tenacious a rude and barbarous people are of their ancient laws and cuſtoms. The Iriſh lords had been accuſtomed to do homage to a ſuperior; and they had made no ſubmiſſion to Henry which they had not formerly done to Roderic, and probably thought their ſubmiſſion to the king of England more honourable than that to their Iriſh monarchs; and it cannot be ſuppoſed, that a wiſe and politic monarch, ſuch as Henry undoubtedly was, ſhould form at once ſuch an extravagant ſcheme as altering the laws of a great number of communities, none of which he had ſubdued by force of arms. By his tranſactions both with the natives and adventurers, however, Henry had attained the abſolute dominion of ſeveral maritime cities and their dependencies; ſo that he had both a conſiderable number of real ſubjects, and a large extent of territory, in the iſland. To theſe ſubjects indeed Henry granted the Engliſh laws; and gave the city of Dublin by charter to the inhabitants of Briſtol, to be held of

him

him and his heirs, with the ſame liberties and free cuſtoms which they enjoyed at Briſtol, and throughout all his land. And, by another charter, executed ſoon after, he confirmed to his burgeſſes of Dublin all manner of rights and immunities throughout his whole land of England, Normandy, Wales, and Ireland, wherever they and their effects ſhall be, to be freely and honourably enjoyed by them as his free and faithful ſubjects. And as it was not eaſy to induce his Engliſh ſubjects immediately to ſettle in theſe maritime towns, he permitted the Oſtmen to take poſſeſſion of Waterford; and to them he granted a particular right of denization, whereby they were inveſted with the rights and privileges of free ſubjects, and for the future to be governed by the laws of his realm. For the better execution of theſe new laws, the king alſo made a diviſion of the diſtricts now ſubject to him into ſhires or counties; which was afterwards improved and enlarged, as the extenſion of the Engliſh ſettlements and the circumſtances of the country required. Sheriffs were appointed both for the counties and cities, with itinerant judges, and other miniſters of juſtice, and officers of ſtate, and every appendage of Engliſh government and law. To complete the whole ſyſtem, a chief governor, or repreſentative of the king, was appointed. His buſineſs was to exerciſe the royal authority, or ſuch parts of it as might be committed to him in the king's abſence; and, as the preſent ſtate of Ireland, and the apprehenſions of war or inſurrections, made it neceſſary to guard againſt ſudden accidents, it was provided, That in caſe of the death of any chief governor, the chancellor, treaſurer, chief-juſtice, and chief baron, keeper of the rolls, and king's ſerjeant at law, ſhould be empowered, with conſent of the nobles of the land, to elect a ſucceſſor, who was to exerciſe the full power and authority of this office, until the royal pleaſure ſhould be further known.

23 Henry obliged to leave Ireland.

But while Henry was thus regulating the government of his new dominions, he received the unwelcome news, that two cardinals, Albert and Theodine, delegated by the pope, had arrived in Normandy the year before, to make inquiſition into the death of Becket; that having waited the king's arrival until their patience was exhauſted, they now ſummoned him to appear without delay, as he would avert the dreadful ſentence of excommunication, and preſerve his dominions from a general interdict. Such denunciations were of too great conſequence to admit of his longer ſtay in Ireland; he therefore ordered his forces and the officers of his houſehold to embark without delay, reſerving three ſhips for the conveyance of himſelf and his immediate attendants. Having therefore but a ſhort time to ſecure his Iriſh intereſts, he addreſſed himſelf to the original Engliſh adventurers, and by grants and promiſes laboured to detach them from Strongbow, and to bind them firmly to himſelf. To make amends for what he had taken from Fiz-Stephen, he granted him a conſiderable diſtrict in the neighbourhood of Dublin, to be held by knight's ſervice; at the ſame time entruſting the maritime towns to his own immediate dependants. Waterford was committed to Humphrey de Bohun, Robert Fitz-Bernard, and Hugh de Gundville, with a train of 20 knights. In Wexford were ſtationed William Fitz-Andelm, Philip of Haſtings, and Philip de Braoſa, with a like number of attendants. Hugh de Lacy had a grant of all the territory of Meath, where there was no fortified place, and where of conſequence no particular reſervation was neceſſary, to be held of the king and his heirs, by the ſervice of 50 knights, in as full a manner as it had been enjoyed by any of the Iriſh princes. He alſo conſtituted him lord governor of Dublin, with a guard of 20 knights. Robert Fitz-Stephen and Maurice Fitz-Gerald were appointed his coadjutors, with an equal train; and theſe, with others of the firſt adventurers, were thus obliged, under the pretence of an honourable employment, to reſide at Dublin, ſubject to the immediate inſpection of de Lacy, in whom Henry ſeems to have placed his chief confidence. Lands were aſſigned in the neighbourhood of each city for the maintenance of the knights and ſoldiers. Orders were given to build a caſtle in Dublin, and fortreſſes in other convenient places; and to John de Courcey, a baron diſtinguiſhed by his enterpriſing genius and abilities for war, was granted the whole province of Ulſter, provided he could reduce it by force of arms.

24 Diſorders enſue on the king's departure.

Henry was no ſooner gone, than his barons began to contrive how they might beſt ſtrengthen their own intereſts, and the Iriſh how they might beſt ſhake off the yoke to which they had ſo readily ſubmitted. De Lacy parcelled out the lands of Meath to his friends and adherents, and began to erect forts to keep the old inhabitants in awe. This gave offence to O'Ruarc, who ſtill enjoyed the eaſtern part of this territory as a tributary prince. He repaired to Dublin, in order to obtain redreſs from Lacy for ſome injuries real or pretended; but, as the parties could not come to an agreement, another conference was appointed on a hill called *Taragh*. Both parties came with a conſiderable train of armed followers; and the event was a ſcuffle, in which O'Ruarc and ſeveral of his followers were killed, and which ſerved to render the Engliſh not a little odious to the natives.

The ſpirit of diſaffection had ſoon after an opportunity of ſhowing itſelf on the rebellion of king Henry's ſons, of which an account is given under the article ENGLAND, n° 121. & *ſeq.* The king had been obliged to weaken his forces in Ireland, by withdrawing ſeveral of his garriſons. The ſoldiers who remained were alſo diſcontented with their general Hervey of Mountmorris, on account of his ſeverity in diſcipline, and reſtraining them from plunder, to which they imagined themſelves intitled on account of the deficiencies of their pay. Raymond le Gros, the ſecond in command, was much more beloved by the ſoldiery: and to ſuch a height had the jealouſies between the commanders ariſen, that all effectual oppoſition to the Iriſh chieftains was prevented; and the event might have been fatal to the Engliſh intereſt, had not Henry found out a remedy. 25 Strongbow the firſt governor of Ireland, He ſummoned earl Richard to attend him at Rouen in Normandy, and communicated his intentions of committing the affairs of Ireland to his ſole direction. The earl expreſſed the utmoſt readineſs to ſerve his maſter; but obſerved, that he had already experienced the envy and malignity of his ſecret enemies; that if he ſhould appear in ſuch a diſtinguiſhed character as that of the king's deputy in Ireland, their inſidious practices would be renewed, and his conduct miſrepreſented. He therefore requeſted that a colleague might be appointed in the commiſſion: and recommended Raymond as a perſon of approved loyalty and abilities, as well as highly acceptable to the ſoldiery. The king replied, with an affected air of regard and confidence, that he had his free conſent to employ Raymond in any ſervice he ſhould deem neceſſary, not as a colleague, but as an aſſiſtant; but that he relied entirely on the earl himſelf, and implicitly truſted every thing to his direction. To reward his ſervice, he granted him the town of Wexford, together with a fort erected at Wicklow; and then diſmiſſed him with the moſt gracious expreſſions of favour.

The earl landed at Dublin, where he was received with all the reſpect due to the royal commiſſion. He ſignified the king's pleaſure, that Robert Fitz-Bernard, with the garriſon of Waterford, ſhould inſtantly embark and repair to Normandy; that Robert Fitz-Stephen, and Maurice Pendergaſt, ſhould attend the ſervice of their ſovereign in England; and, agreeably to the king's inſtructions, took on him the cuſtody of the cities of Dublin, Waterford, and Wexford. Hugh de Lacy, and Milo de Cogan, were, with the other lords, commanded to repair to England for the ſervice of the king; by which the earl's forces were conſiderably weakened, and he ſoon found himſelf under a neceſſity of appointing Raymond to the chief command. The new general proved ſucceſsful in ſome enterprizes againſt the rebellious Iriſh; but having preſumed upon his merits to demand in marriage Baſilia the earl's ſiſter, Richard refuſed his conſent, and Raymond retired into Wales.

26
A general revolt of the Iriſh.

27
Roderic ſubmits to king Henry.

Thus the ſupreme command again devolved upon Hervey of Mountmorris; who, being ſenſible that his character had ſuffered much from a compariſon with that of Raymond, determined to emulate his ſucceſſes by ſome bold attempt againſt the rebels. A detachment of 400 of his men, however, had the misfortune to be ſurprized and cut off by the enemy; and this ſucceſs ſerved as a ſignal for a general revolt. Several of the Leinſter chieftains, who had lately made their ſubmiſſions, and bound themſelves to the ſervice of king Henry, now openly diſclaimed all engagements. Even Donald Kevanagh, ſon to the late king Dermod, who had hitherto adhered to the Engliſh in their greateſt difficulties, now declared againſt them, and claimed a right to the kingdom of Leinſter; while Roderic, on his part, was active in uniting the princes of Ulſter, the native lords of Meath, and other chiefs, againſt their common enemy. This produced the immediate recal of Raymond; and Richard no longer refuſed his conſent to the marriage with his ſiſter, which was ſolemnized immediately on Raymond's arrival. The very next morning, the bridegroom was obliged to take the field againſt Roderic, who had committed great devaſtations in Meath. By the vigorous conduct of the Engliſh commander, however, he was not only prevented from doing further miſchief, but at laſt convinced of the folly of reſiſtance; and therefore determined to make a final ſubmiſſion. Yet, conſcious of his dignity, he diſdained to ſubmit to a ſubject; and therefore, inſtead of treating with earl Richard, he ſent deputies directly to the king. The deputies were, Catholicus archbiſhop of Tuam, the abbot of St Brandan, and *Maſter Lawrence*, as he is ſtyled, chancellor to the king of Connaught.

21
Terms of his ſubmiſſion.

The terms of this ſubmiſſion, by which Henry became ſole monarch of Ireland, were as follow: Roderic conſented to do homage and pay tribute, as liege-man to the king of England; on which condition he was allowed to hold the kingdom of Connaught, as well as his other lands and ſovereignties, in as ample a manner as he had enjoyed them before the arrival of Henry in Ireland. His vaſſals were to hold under him in peace, as long as they paid their tribute and continued faithful to the king of England; in which Roderic was to enforce their due obedience, and for this purpoſe to call to his aſſiſtance the Engliſh government, if neceſſary. The annual tribute to be paid was every 10th merchantable hide, as well from Connaught as from the reſt of the iſland; excepting thoſe parts under the immediate dominion of the king of England and his barons, viz. Dublin and Meath with their appurtenances, Wexford and all Leinſter, and Waterford with its lands as far as Dungarvan incluſive; in all which diſtricts Roderic was not to interfere, nor claim any power or authority. The Iriſh who had fled from theſe diſtricts were to return, and either pay their tribute, or perform the ſervices required by their tenures, at the option of their immediate lords; and, if refractory, Roderic, at the requiſition of their lords, was to compel them to return. He was to take hoſtages from his vaſſals, ſuch as he and his liege-lord ſhould think proper; and on his part to furniſh either theſe or others to the king according to the royal pleaſure. His vaſſals were to furniſh hawks and hounds annually to the Engliſh monarch; and were not to detain any tenant of his immediate demeſnes in Ireland, contrary to his royal pleaſure and command. This treaty was ſolemnly ratified in a grand council of prelates and temporal barons, among whom we find the archbiſhop of Dublin one of the ſubſcribing witneſſes. As metropolitan of Leinſter, he was now become an Engliſh ſubject and was probably ſummoned on this occaſion as one obliged to attend, and who had a right to aſſiſt in the king's great council. It is alſo obſervable, that Henry now treated with Roderic not merely as a powerful prince, but as monarch of Ireland. This is evidently implied and ſuppoſed in the articles; although his monarchical powers and privileges were little more than nominal, frequently diſregarded and oppoſed by the Iriſh toparchs. Even by their ſubmiſſions to Henry, many of them in effect diſavowed and renounced the ſovereignty of Roderic; but now his ſupremacy ſeems to be induſtriouſly acknowledged, that the preſent ſubmiſſion might appear virtually the ſubmiſſion of all the ſubordinate princes, and thus the king of England be inveſted with the ſovereignty of the whole iſland. The marks of ſovereignty, however, were no more than homage and tribute: in every other particular, the regal rights of Roderic were left inviolate. The Engliſh laws were only to be enforced in the Engliſh pale: and, even there, the Iriſh tenant might live in peace, as the ſubject of the Iriſh monarch; bound only to pay his quota of tribute, and not to take arms againſt the king of England.

But though the whole iſland of Ireland thus became ſubject to the king of England, it was far from being

29 Cauſes of the ſubſequent diſtreſſes of Ireland.

being ſettled in tranquillity, or indeed from having the ſituation of its inhabitants mended almoſt in any degree. One great occaſion of diſturbance was, that the Engliſh laws were confined only to thoſe parts which had been ſubdued by force of arms; while the chieftains that had only ſubmitted to pay tribute, were allowed to retain the ancient Iriſh laws within the limits of their own juriſdictions. By theſe old Iriſh laws, many crimes accounted capital with us, ſuch as robbery, murder, &c. might be compenſated by a ſum of money. Hence it happened, that very unequal puniſhments were inflicted for the ſame offence. If one Engliſhman killed another, he was puniſhed with death; but if he killed an Iriſhman, he was puniſhed only by a fine. If an Iriſhman, on the other hand, killed an Engliſhman, he was certainly puniſhed with death; and as in times of violence and outrage, the crime of murder was very frequent, the circumſtance juſt mentioned tended to produce an implacable hatred between the original inhabitants and the Engliſh. As the Iriſh laws were thus more favourable to the barbarity natural to the tempers of ſome individuals, many of the Engliſh were alſo tempted to lay aſide the manners and cuſtoms of their countrymen altogether, and to aſſociate themſelves with the Iriſh, that, by becoming ſubject to their laws, they might thus have an opportunity of gratifying their brutal inclinations with leſs controul than formerly; and in proceſs of time, theſe *degenerate Engliſh*, as they were called, proved more bitter enemies to their countrymen than even the Iriſh themſelves.

Another cauſe of the diſtreſſes of Ireland was, the great power of the Engliſh barons, among whom Henry had divided the greateſt part of his Iriſh dominions. The extent of their authority only inflamed them with a deſire for more; and, inſtead of contributing their endeavours to increaſe the power of their ſovereign, or to civilize the barbarous people over whom they were placed, they did every thing in their power to counteract and deſtroy each other. Henry himſelf, indeed, ſeems to have been infected with a very fatal jealouſy in this reſpect; for, though the abilities and fidelity of Raymond had abundantly maniſeſted themſelves, the king never could allow himſelf to continue him in the government of the iſland: and the conſequence of degrading him never failed to be a ſcene of uproar and confuſion. To theſe two reaſons we muſt likewiſe add another; namely, that in thoſe parts of the kingdom where the Iriſh chieftains enjoyed the ſovereignty, they were at full liberty to make war upon each other as formerly, without the leaſt reſtraint. This likewiſe induced many of the Engliſh to degenerate, that they might have an opportunity of ſharing the plunder got by theſe petty wars; ſo that, on the whole, the iſland was a perpetual ſcene of horror, almoſt unequalled in the hiſtory of any country.

30 Fitz-Andelm's bad government.

After the death of earl Richard, Raymond was immediately elected to ſucceed him; but was ſuperſeded by the king who appointed William Fitz-Andelm, a nobleman allied to Raymond, to ſucceed in his place. The new governor had neither inclination nor abilities to perform the taſk aſſigned to him. He was of a rapacious temper, ſenſual and corrupt in his manners; and therefore only ſtudied to enrich himſelf. The native Iriſh, provoked by ſome depredations of the Engliſh, commenced hoſtilities; but Fitz-Andelm, inſtead of repreſſing theſe with vigour in the beginning, treated the chieftains with affected courteſy and flattery. This they had ſufficient diſcernment to ſee, and to deſpiſe; while the original adventurers had the burden of the whole defence of the *Engliſh pale*, as the Engliſh territories were called, thrown upon them, at the ſame time that the bad conduct of the governor was the cauſe of perpetual diſorders. The conſequence of this was, that the lords avowed their hatred of Fitz-Andelm: the ſoldiers were mutinous, ill-appointed, and unpaid: and the Iriſh came in crowds to the governor with perpetual complaints againſt the old adventurers, which were always decided againſt the latter; and this deciſion increaſed their confidence, without leſſening their diſaffection.

In this unfavourable ſtate of affairs, John de Courcey, a bold adventurer, who had as yet reaped none of the benefits he expected, reſolved to undertake an expedition againſt the natives, in order to enrich himſelf with their ſpoils. The Iriſh at that time were giving no offence; and therefore pleaded the treaty lately concluded with King Henry: but treaties were of little avail, when put in competition with the neceſſities of an indigent and rapacious adventurer. The conſequence was, that the flame of war was kindled through the whole iſland. The chieftains took advantage of the war with the Engliſh, to commence hoſtilities againſt each other. Deſmond and Thomond, in the ſouthern province, were diſtracted by the jealouſies of contending chiefs, and the whole land was waſted by unnatural and bloody quarrels. Treachery and murder were revenged by practices of the ſame kind, in ſuch a manner as to perpetuate a ſucceſſion of outrages the moſt horrid, and the moſt diſgraceful to humanity. The northern province was a ſcene of the like enormities; though the new Engliſh ſettlers, who were conſidered as a common enemy, ought to have united the natives among themſelves. All were equally ſtrangers to the virtues of humanity; nor was religion, in the form it then aſſumed, capable of reſtraining theſe violences in the leaſt.

31 He is ſuperſeded by Hugh de Lacey.

Ireland was thus in a ſhort time reduced to ſuch a ſtate, that Henry perceived the neceſſity of recalling Fitz-Andelm, and appointing another governor. He was recalled accordingly; and Hugh de Lacey appointed to ſucceed him. He left his government without being regretted, and is ſaid by the hiſtorians of thoſe times to have done only one good action during the whole courſe of his adminiſtration. This action was nothing more important, than the removing of a relic, called the *ſtaff of Jeſus*, from the cathedral of Armagh to that of Dublin; probably that it might be in greater ſafety, as the war raged violently in Ulſter. De Lacey, however, was a man of a quite different diſpoſition, and every way qualified for the difficult government with which he was inveſted: but at the ſame time, the king by inveſting his ſon John with the lordſhip of Ireland, gave occaſion to greater diſturbances than even thoſe which had already happened. The nature of this lordſhip hath been much diſputed; but the moſt probable opinion is, that the king's ſon was now to be inveſted with all the rights and powers which had formerly belonged to Roderic,

32 Prince John made lord of Ireland.

who was allowd the title of *king of Ireland.* It doth not appear, indeed, that Henry had any right to deprive Roderic of theſe powers, and ſtill leſs had he to diſpoſe of any of the territories of thoſe chieftains who had agreed to become his tributaries; which nevertheleſs he certainly did, and which failed not to be productive of an immediate war with theſe chiefs.

The new governor entered on his office with all that ſpirit and vigour which was neceſſary; but being miſrepreſented to the king by ſome factious barons, he was in a ſhort time recalled, and two others, totally unfit for the government, appointed in his room. This error was ſoon corrected, and Lacey was replaced in three months. The ſame jealouſy which produced his firſt degradation, ſoon produced a ſecond; and Philip de Braoſa, or *Philip of Worceſter*, as he is called, a man of a moſt avaricious diſpoſition, was appointed to ſucceed him. This governor behaved in ſuch a manner, that his ſuperſtitious ſubjects expected every moment that the vengeance of heaven would fall upon him, and deliver them from his tyranny. His power, however, was of ſhort duration; for now prince John prepared to exerciſe the authority with which his father had inveſted him in Ireland. He was attended by a conſiderable military force: his train was formed of a company of gallant Normans in the pride of youth; but luxurious, inſolent, and followed by a number of Engliſhmen, ſtrangers to the country they were to viſit, deſperate in their fortunes, accuſtomed to a life of profligacy, and filled with great expectations of advantage from their preſent ſervice. The whole aſſembly embarked in a fleet of 60 ſhips; and arrived at Waterford after a proſperous voyage, filling the whole country with the greateſt ſurpriſe and expectation.

33
His indiſcretion.

The young prince had not yet arrived at the years of diſcretion; nor indeed, from his ſubſequent conduct, doth it appear that his diſpoſition was ſuch as qualified him in the leaſt for the high dignity to which he was raiſed. The hardy Welchmen who firſt migrated into Ireland, immediately waited upon him to do him homage; but they were diſagreeable to the gay courtiers, and to the prince himſelf, who minded nothing but his pleaſures. The Iriſh lords were at firſt terrified by the magnificent repreſentation of the force of the Engliſh army; and being reconciled to ſubmiſſion by the dignity of the prince's ſtation, haſtened in crowds to Waterford to do him homage. They exhibited a ſpectacle to the Norman courtiers, which the latter did not fail to treat with contempt and ridicule. The Iriſh lords, with uncouth attire, thick buſhy beards, and hair ſtanding on end, advanced with very little ceremony; and according to their own notions of reſpect, offered to kiſs the young prince. His attendants ſtepped in, and prevented this horrid violation of decorum by thruſting away the Iriſhmen. The whole aſſembly burſt into peals of laughter, pulled the beards, and committed ſeveral other indignities on the perſons of the gueſts; which were immediately and ſeverely reſented. The chieftains left the court, boiling with indignation; and meeting others of their countrymen haſtening to do homage to the prince, they informed them of the reception they themſelves had met with. A league was inſtantly formed to extirpate the Engliſh, and the whole nation flew to arms; while John and his courtiers inſtead of oppoſing the enemy, employed themſelves in haraſſing and oppreſſing thoſe who were under their immediate juriſdiction. The country was therefore over-run by the barbarians, agriculture entirely neglected, and a dreadful famine threatened to follow the calamities of war.

34
A general revolt.

This terrible devaſtation had continued for eight months before the king was fully acquainted with it. He then determined to recal his ſon; but was at a loſs whom he ſhould name for his ſucceſſor. Lacey had been murdered by an Iriſh peaſant, and the king was at laſt obliged to have recourſe to John de Courcey, whoſe boiſterous valour ſeemed now to be abſolutely neceſſary to prevent the Engliſh from being totally exterminated. The new governor was obliged at firſt to act on the defenſive; but as his enemies ſoon forgot their league, and began their uſual hoſtilities againſt each other, he was at laſt enabled to maintain the authority of the Engliſh government, and to ſupport their acquiſitions in Ireland, though not to extend them.

35
Suppreſſed by John de Courcey.

36
Miſerable ſtate of Ireland under Richard I.

In this ſituation were the affairs of Ireland when Henry II. died, and was ſucceeded by his ſon Richard I. The new king was determined on an expedition to the holy land, which left him no leiſure to attend to the affairs of Ireland. John, by virtue of the powers granted him by his father, took upon him the management of Iriſh affairs; and immediately degraded de Courcey from his government, appointing in his place Hugh de Lacey the younger. De Courcey, provoked at this indignity, retired into Ulſter, where he was immediately engaged in a furious war with the natives, and at laſt almoſt entirely detached himſelf from the Engliſh government. The greateſt confuſion enſued; Hugh de Lacey was recalled from his government, and William Petit, earl marſhal of England, appointed in his place. Petit's adminiſtration proved more unfortunate than that of any of his predeceſſors. Confederacies every where took place againſt the Engliſh; the latter were every where defeated, their towns taken; and their power would certainly have been annihilated, had not the Iriſh, as uſual, turned their arms againſt each other.

37
Somewhat better under John.

In this deſperate ſituation matters continued during the whole reign of king Richard; and part of the reign of John, while the diſtreſſes of the country were increaſed by the diſſenſions and diſaffection of the Engliſh lords, who aſpired at independency, and made war upon each other like Iriſh chieftains. The prudent conduct of a governor named *Meiler Fitz-Henry*, however, at laſt put an end to theſe terrible commotions; and about the year 1208, the kingdom was more quiet that it had been for a long time before. In 1210, John came over to Ireland in perſon with an army, with a deſign, as he ſaid, to reduce his refractory nobles to a ſenſe of their duty. More than 20 Iriſh chiefs waited upon him immediately to do him homage; while three of the Engliſh barons, Hugh and Walter de Lacey and William de Braoſa fled to France. The king, at the deſire of his Iriſh ſubjects, granted them, for their information, a regular code and charter of laws, to be depoſited in the exchequer of Dublin, under the king's ſeal. For the regular and effectual execution of theſe laws, beſides the eſtabliſhment of the kings courts of judicature in Dublin, there was now made a new and more ample diviſion of the king's lands of Ireland into counties, where ſheriffs, and many other officers, were appointed. Theſe counties were, Dublin, Meath, Kildare, Argial, now called *Lowth*, Katherlagh, Kilkenny, Wexford, Waterford, Cork, Kerry, Limeric, Tipperary; which marks the extent of the Engliſh dominions at this time as confined to a part of Leinſter and Munſter, and to thoſe parts of Meath and Argial which lie in the province of Ulſter, as now defined. Before his departure, the king gave liberty to John de Grey, biſhop of Norwich, whom he appointed governor, to coin money of the ſame weight with that of England; and which, by royal proclamation, was made current in England as well as Ireland.

38 Relapſes into its former ſtate under Henry III.

This eccleſiaſtical governor is ſaid to have managed affairs ſo happily, that during the violent conteſts between John and his barons, Ireland enjoyed an unuſual degree of tranquillity. We are not to imagine, however, that this unhappy country was at this or indeed any other period, till the end of Queen Elizabeth's reign, perfectly free from diſorders, only they were confined to thoſe diſtricts moſt remote from the Engliſh government. In 1219, the commotions were renewed, thro' the immeaſurable ambition and contentions of the Engliſh barons, who deſpiſed all controul, and oppreſſed the inhabitants in a terrible manner. The diſorders in England during the reign of Henry III. encouraged them to deſpiſe the royal authority; they were ever the ſecret enemies, and ſometimes the avowed adverſaries, of each other; and in many places where they had obtained ſettlements, the natives were firſt driven into inſurrections by their cruelty, and then puniſhed with double cruelty for their reſiſtance. The Engliſh laws, which tended to puniſh the authors of theſe outrages, were ſcorned by an imperious ariſtocratic faction, who, in the phrenzy of rapine and ambition, trampled on the moſt ſalutary inſtitutions. In 1228, a remonſtrance was preſented to the king againſt this dangerous neglect and ſuſpenſion of the laws; which he anſwered by a mandate to the chief governor, directing that the whole body of nobility, knights, free tenants, and bailiffs of the ſeveral counties, ſhould be convened: that the charter of Engliſh laws and cuſtoms received from king John, and to which they were bound by oath, ſhould be read over in their preſence; that they ſhould be directed for the future ſtrictly to obſerve and adhere to theſe; and that proclamation ſhould be made in every county of Ireland, ſtrictly enjoining obedience, on pain of forfeiture of lands and tenements. How little effect was produced by this order, we may learn from another, dated in 1246, where the barons are commanded, for the peace and tranquillity of the land, to *permit* it to be governed by the laws of England.

39 Exceſſive depravation of manners.

Nothing indeed can be conceived more terrible than the ſtate of Ireland during the reign of Henry III. People of all ranks appear to have been ſunk in the loweſt degree of depravity. The powerful Engliſh lords not only ſubverted the peace and ſecurity of the people, by refuſing to admit the ſalutary laws of their own country, but behaved with the utmoſt injuſtice and violence to the natives who did not enjoy the benefits of the Engliſh conſtitution. The clergy appear to have been equally abandoned with the reſt: nor indeed could it be otherwiſe: for through the partialities of Henry himſelf, the neglected, the worthleſs, and the depreſſed among the Engliſh clergy, found refuge in the church of Ireland. What were the manners of theſe clergy, will appear from the following petition of a widow to king Edward I.

"Margaret le Blunde, of Caſhel, petitions our lord the king's grace, that ſhe may have her inheritance which ſhe recovered at Clonmell before the king's judges, &c. againſt David Macmackerwayt biſhop of Caſhel.

"*Item*, the ſaid Margaret petitions redreſs on account that her father was killed by the ſaid biſhop.

"*Item*, for the impriſonment of her grandfather and mother, whom he ſhut up and detained in priſon until they periſhed by famine, becauſe they attempted to ſeek redreſs for the death of their ſon, father of your petitioner, who had been killed by the ſaid biſhop.

"*Item*, for the death of her ſix brothers and ſiſters, who were ſtarved to death by the ſaid biſhop, becauſe he had their inheritance in his hands at the time he killed their father.

"And it is to be noted, that the ſaid biſhop had built an abbey in the city of Caſhel, on the king's lands granted for this purpoſe, which he had filled with robbers, who murder the Engliſh, and depopulate the country; and that when the council of our lord the king attempts to take cognizance of the offence, he fulminates the ſentence of excommunication againſt them.

"It is to be noted alſo, that the ſaid Margaret has five times croſſed the Iriſh ſea. Wherefore, ſhe petitions for God's ſake, that the king's grace will have compaſſion, and that ſhe may be admitted to take poſſeſſion of her inheritance.

"It is further to be noted, that the aforeſaid biſhop hath been guilty of the death of many other Engliſhmen beſides that of her father; and that the aforeſaid Margaret hath many times obtained writs of our lord the king, but to no effect, by reaſon of the influence and bribery of the ſaid biſhop.

"She further petitions, for God's ſake, that ſhe may have coſts and damages, &c."

40 Little alteration under Edward I.

Matters continued in the ſame deplorable ſtate during the reign of Edward I. with this additional grievance, that the kingdom was infeſted by invaſions of the Scots. The Engliſh monarch indeed poſſeſſed all that prudence and valour which were neceſſary to have reduced the iſland to a ſtate of tranquillity; but his project of conquering Scotland left him but little leiſure to attend to the diſtracted ſtate of Ireland. Certain it is, however, that the grievous diſtreſs of that country gave him great uneaſineſs ſo that he tranſmitted his mandate to the prelates of Ireland, requiring them to interpoſe their ſpiritual authority for compoſing the public diſorders. About the ſame time, the Iriſh who lay contiguous to the Engliſh, and who dwelt among them, preſented a petition to the king, offering to pay him 8000 merks, upon condition that they were admitted to the privileges of Engliſh ſubjects. To this petition he returned a favourable anſwer; but his good intentious were defeated by the licentions nobility, who knew that theſe laws would have circumſcribed their rapacious views, and controuled their violence and oppreſſion. Petitions of the ſame kind were ſeveral times repeated during this reign, but as often defeated; though ſome means were uſed for the peace of this kingdom, ſuch as the frequent calling of parliaments, appointing ſheriffs in ſome new counties, &c.

Theſe means were not altogether without effect. They ſerved to give ſome check to the diſorders of the realm, though by no means to terminate or ſubdue them. The incurſions of the natives were repreſſed, and the Engliſh lords began to live on better terms with each other; and, in 1311, under Edward II. the moſt powerful of them were reconciled by the marriage of Maurice and Thomas Fitz John, afterwards the heads of the illuſtrious houſes of Deſmon and Kildare, to two daughters of the earl of Ulſter.

41 Invaſion of the Scots in the reign of Edward II.

But juſt at this happy period, when the nation ſeemed to have ſome proſpect of tranquillity, more dreadful calamities than any hitherto related were about to take place. The Scots had juſt recovered their liberty under Robert Bruce, and were now in no danger of being again enſlaved by a foreign power. Edward, the king's brother, as a recompence for his ſervices, demanded a ſhare of the royal authority. This was refuſed by Robert, and Edward was for the preſent ſatisfied by being declared heir apparent to the crown. But the king, wiſely conſidering the neceſſity of finding out ſome employment for a youth of ſuch an aſpiring and ambitious diſpoſition, pointed out to his brother the iſland of Ireland, the conqueſt of which would be eaſy, on account of the diſtracted ſtate in which it almoſt always was, and which would make him an independent ſovereign. This propoſal was eagerly embraced by Edward, and every thing neceſſary for the expedition immediately got ready. On the 25th of May 1315, he landed on the north-eaſtern coaſt of Ireland with 6000 men, to aſſert his claim to the ſovereignty of this kingdom. The Iriſh lords of Ulſter, who had invited and encouraged him to this enterprize, were now prepared to receive their new monarch, flocked with eagerneſs to his ſtandard, and prepared to wreak their vengeance on the common enemy. Their progreſs was marked by deſolation and carnage. The Engliſh ſettlers were ſlaughtered, or driven from their poſſeſſions, their caſtles levelled with the ground, and their towns ſet on fire. The Engliſh lords were neither prepared to reſiſt the invaſion, nor ſufficiently united among themſelves. The conſequence was, that the enemy for ſome time met with no interruption. An intolerable ſcarcity of proviſions, however, prevented Bruce from purſuing his advantages; and though his brother landed in Ireland with a powerful army, the famine prevented him from being of any eſſential ſervice. The forces which he left behind him, however, proved of conſiderable advantage; and by means of this reinforcement, he was enabled to take the city of Carrickfergus.

The terrible devaſtations committed by Bruce and his aſſociates, now induced ſome Engliſh lords to enter into an aſſociation to defend their poſſeſſions, and repel theſe invaders. For this purpoſe, they raiſed a conſiderable body of forces; which coming to an engagement with Fedlim prince of Connaught, one of Bruce's principal allies, entirely defeated and killed him with 8000 of his men. This defeat, however, had very little effect on the operation of Bruce himſelf. He ravaged the country to the walls of Dublin, traverſed the diſtrict of Oſſory, and penetrated into Munſter, deſtroying every thing with fire and ſword. The Engliſh continued to augment their army, till at laſt it amounted to 30,000 men; and then Bruce, no longer able to oppoſe ſuch a force, found it neceſſary to retire into the province of Ulſter. His retreat was effected with great difficulty; and during the time of his inactivity, the diſtreſſes of his army increaſed to ſuch a degree, that they are ſaid to have fed upon the bodies of their dead companions.

42 They are totally defeated.

At laſt an end was put to the ſufferings and the life of this adventurer in the battle of Dundalk, in 1318, where he was defeated and killed by the Engliſh under Sir Robert Birmingham. A brave Engliſh knight named *Maupas*, had ruſhed forward to encounter Bruce himſelf, and both antagoniſts had killed each other; the body of Maupas being found, after the battle, ſtretched upon that of Bruce. The king of Scotland had been advancing with powerful ſuccours to his brother: but Edward, confident of victory, refuſed to wait his arrival; and Robert, on hearing of his brother's death, inſtantly retired.

The defeat of the Scottiſh invaders did not put an end to the diſturbances of this unhappy country. The contentions of the Engliſh with one another, of the Iriſh with the Engliſh, and among themſelves, ſtill kept the iſland in a ſtate of the utmoſt barbarity and confuſion. An attempt was made indeed, in the reign of Edward II. to eſtabliſh an univerſity in Dublin; but for want of proper encouragement the inſtitution for ſome time languiſhed, and then expired amidſt the confuſion and anarchy of the country.

43 Miſeries of the Iriſh under Edward III.

The reign of Edward III. proved not much more favourable than preceding times had been. He was too much taken up with the idea of conquering France, to pay much regard to the intereſts of Ireland. The unhappy people, indeed, ſenſible of their own miſeries, petitioned the king to admit all his ſubjects in Ireland to a participation of the Engliſh laws; but the petition being delivered as uſual to the chief governor, and laid before the parliament, it was either clandeſtinely defeated or openly rejected. A new ſcene of tumult and bloodſhed immediately enſued; which at laſt produced an order from the king, prohibiting all Iriſhmen, or Engliſhmen married and having eſtates in Ireland, from bearing any public office whatever.—This, inſtead of having a tendency to promote peace, made the diſorders much greater than before; and at laſt produced a remonſtrance from the ſtates met at Kilkenny, in which they grievouſly complain not only of the diſorders of the kingdom, but alſo of the conduct of the king himſelf in the edict abovementioned: and to this remonſtrance the king thought proper to give a gracious and condeſcending anſwer, in order to procure from Ireland the ſuccours he wanted in his expedition againſt France.

It is not to be ſuppoſed, that mere promiſes, unaſſiſted by any vigorous exertion, could make the leaſt alteration in the ſtate of a kingdom involved in ſo much miſery. The diſorders, however, at laſt became inſupportable to the inhabitants themſelves; and a parliament was ſummoned in 1367, the reſult of which was the famous ſtatute of Kilkenny. The preamble

44 Statute of Kilkenny.

to this act recites, that the Engliſh had become mere Iriſh in their language, names, apparel, and manner of living; had rejected the Engliſh laws, and ſubmitted to thoſe of the Iriſh, with whom they had united by marriage-alliance, to the ruin of the common-wealth. —It was therefore enacted, that marriage, nurture of infants, &c. with the Iriſh, ſhould be conſidered and puniſhed as high treaſon.—Again, if any man of Engliſh race ſhall uſe an Iriſh name, the Iriſh language, or the Iriſh apparel, or any mode or cuſtom of the Iriſh, the act provides, that he ſhall forfeit lands and tenements, until he hath given ſecurity in the court of chancery to conform in every particular to the Engliſh manners; or if he have no lands, that he ſhall be impriſoned till the like ſecurity be given. The Brehon law was pronounced to be a pernicious cuſtom and innovation lately introduced among the Engliſh ſubjects; and it was therefore ordained, that in all their controverſies they ſhould be governed by the common law of England; and that whoever ſhould ſubmit to the Iriſh juriſdiction, ſhould be adjudged guilty of high treaſon. As the Engliſh had been accuſtomed to make war or peace with the bordering Iriſh at pleaſure, they were now expreſsly prohibited from levying war without ſpecial warrant from the ſtate.—It was alſo made highly penal for the Engliſh to permit their Iriſh neighbours to graze their lands, to preſent them to eccleſiaſtical benefices, or to receive them into monaſteries or religious houſes; to entertain their bards, who perverted their imaginations by romantic tales; or their news-tellers, who ſeduced them by falſe reports.—It was made felony to impoſe or ceſs any forces upon the Engliſh ſubject againſt his will. And as the royal liberties and franchiſes were become ſanctuaries for malefactors, expreſs power was given to the king's ſheriffs to enter into all franchiſes, and there to apprehend felons and traitors.—Laſtly, becauſe the great lords, when they levied forces for the public ſervice, acted with partiality, and laid unequal burdens upon the ſubjects, it was ordained, that four wardens of the peace in every county ſhould adjudge what men and armour every lord or tenant ſhould provide.—The ſtatute was promulged with particular ſolemnity; and the ſpiritual lords, the better to enforce obedience, denounced an excommunication on thoſe who ſhould preſume to violate it in any inſtance.

This ſtatute, it is evident, could not tend to promote the peace of the kingdom. This could only have been done by removing the animoſity between the native Iriſh and Engliſh; but ſo far was the ſtatute of Kilkenny from having any tendency of this kind, that it manifeſtly tended to increaſe the hatred between them. During the whole of this reign, therefore, the ſtate of the Iriſh government continued to be greatly diſordered and embroiled. The Engliſh intereſt gradually declined; and the connections of the king's ſubjects with the original inhabitants, occaſioned by their vicinity and neceſſary intercourſe, in deſpite of all legal injunctions, obliged the king to relax the ſeverity of the ſtatutes of Kilkenny, in caſes where they proved impracticable, or oppreſſive in the execution. The perpetual hoſtility, however, in which the different parties lived, proved an effectual bar to the introduction of thoſe arts which contribute to the comfort and refinement of mankind. Even foreign merchants could not venture into ſuch a dangerous country without particular letters of protection from the throne. The perpetual ſucceſſion of new adventurers from England, led by intereſt or neceſſity, ſerved only to inflame diſſention, inſtead of introducing any eſſential improvement. Lawyers ſent from England were notoriouſly inſufficient, if not corrupt; and, as ſuch, had frequently been the objects of complaint. The clergy were a mean grovelling race, totally influenced by the crown. Even prelates were commonly made the inferior agents of government in collecting forces, and raiſing war againſt the Iriſh enemy; but were not to be enticed into this ſervice, except by remittances from the exchequer. Attendance in parliament they dreaded as the greateſt hardſhip; and either recurred to mean excuſes to avert the penalty of abſence, or ſued to the king to be exempted by patent from contributing or aſſenting to thoſe laws by which they were to be governed.

45 Power of the Engliſh revives under Henry VII.

46 Poyning's law.

In this deplorable ſituation the kingdom continued till the time of Henry VII. who laid the foundation of the future civilization of the Iriſh, as he alſo did of the Engliſh nation. This he effected by enacting ſome ſalutary laws, and appointing faithful and active governors to ſee them put in execution. Of theſe governors Sir Edward Poynings contributed more than any other to the tranquillity of the ſtate. During his adminiſtration was enacted the law known by the name of *Poyning's Law*, and which hath ſince been the ſubject of much political debate. The purport of it was, That no parliament ſhould be held in that iſland without firſt giving notice to the king of England, and acquainting him with the acts to be paſſed in that parliament: neither ſhould any act paſſed, or any parliament held, without the approbation of the king and council, be deemed valid. Thus was the power of the turbulent barons greatly broken; and the governor, not having it in his power to aſſemble parliaments when he pleaſed, became a perſon of much leſs conſequence. The whole Iriſh legiſlation alſo became dependent on that of England, and hath ever ſince continued to be ſo.

From this time we may date the revival of the Engliſh power in Ireland; which from the Scottiſh war in the time of Edward II. had gradually declined into a miſerable and precarious ſtate of weakneſs. The authority of the crown, which had at laſt been defied, inſulted, and rejected, even in the Engliſh territory, was reſtored and confirmed, and the rebellious vigorouſly oppoſed and ſuppreſſed. The ſeigniory of the Britiſh crown over the whole body of the Iriſh, which in former reigns ſeemed to have been totally forgotten, was now formally claimed and aſſerted, and ſome of the moſt ferocious chieftains by their marriage connections became the avowed friends of the Engliſh power. An ignominious tribute, called the *Black Rent*, was indeed ſtill paid to ſome chieftains; but their hoſtilities were oppoſed and chaſtiſed, and even in their own diſtricts they were made to feel the ſuperiority of Engliſh government.

During the reign of Henry VIII. the Iriſh affairs were neglected; and the diſorders, which had only been checked, and never thoroughly eradicated, returned as uſual. They were further promoted by the innovations in religion which the king introduced, and which were exceedingly diſagreeable both to Engliſh and Iriſh. The Reformation, however, continued to make ſome progreſs, though ſlowly, during the reign of Edward VI. and even in the reign of queen Mary; for as the perſecution did not reach thither, many Proteſtants fled to Ireland in order to avoid the queen's cruelty. The machinations of the Spaniards againſt queen Elizabeth excited the Iriſh to freſh inſurrections. The king of Spain, indeed, not only encouraged the natives in thoſe inſurrections, but actually ſent over troops to aſſiſt them in driving out the Engliſh altogether. This they had well nigh effected; but the Spaniards, upon ſeeing an army of Iriſh defeated by an handful of their enemies, were ſo much provoked that they ſurrendered all the places they had made themſelves maſters of, and even offered to aſſiſt the Engliſh in reducing the rebels; though it was not thought proper to accept of their aſſiſtance. The conſequence of this was, that the Iriſh, abandoned by theſe allies, were unable to carry on the war; and the grand rebel O'Neal of Tirowen, or Tirone, after much treachery, evaſion, and many pretended ſubmiſſions, was at laſt obliged to ſubmit in good earneſt. He fell upon his knees before the deputy, and petitioned for mercy with an air and aſpect of diſtreſs. He ſubſcribed his ſubmiſſion in the moſt ample manner and form. He implored the queen's gracious commiſeration; and humbly ſued to be reſtored to his dignity, and the ſtate of a ſubject, which he had juſtly forfeited. He utterly renounced the name of *O'Neal*, which he had aſſumed on account of the great veneration in which it was held among the Iriſh. He abjured all foreign power, and all dependency except on the crown of England; reſigned all claim to any lands excepting ſuch as ſhould be conferred upon him by letters patent; promiſing at the ſame time to aſſiſt the ſtate in aboliſhing all barbarous cuſtoms, and eſtabliſhing law and civility among his people. The lord deputy, on the part of the queen, promiſed a full pardon to himſelf and all his followers; to himſelf the reſtoration of his blood and honours, with a new patent for his lands, except ſome portions reſerved for certain chieftains received into favour, and ſome for the uſe of Engliſh garriſons.

47 All the diſorders ended in the reign of queen Elizabeth.

No inſurgent now remained in this kingdom who had not obtained or ſued for mercy. Many, indeed, were driven by neceſſity to the continent, and earned a ſubſiſtence by ſerving in the armies of Spain; and thus a race of Iriſh exiles was trained to arms, filled with a malignant reſentment againſt the Engliſh. Thus the honour of reducing all the enemies of the crown of England in this iſland, after a continued conteſt for 440 years, was reſerved for the arms of Elizabeth. The ghaſtlineſs of famine and deſolation was now ſomewhat enlivened by the reſtoration of tranquillity. Indeed, from the moſt authentic accounts, the prices of proviſions were ſo high, that conſidering the value of money at that time, it is ſurpriſing how the inhabitants could ſubſiſt. From an account of the rates of proviſions taken by the mayor of Dublin in 1602, it appears, That wheat had riſen from 36 s. to 9 l. the quarter; barley-malt from 10 s. to 43 s. the barrel; oat-malt, from 5 s. to 22 s. the barrel; peaſe from 5 s. to 40 s. the peck; oats from 3 s. 4 d. to 20 s. the barrel; beef from 26 s. 8 d. to 8 l. the carcaſe; mutton from 3 s. to 26 s. the carcaſe; veal from 10 s. to 29 s. the carcaſe; a lamb from 12 d. to 6 s.; a pork from 8 s. to 20 s.

48 Exorbitant prices of proviſions at that time.

49 The Iriſh civilized by James I.

Under James I. Ireland began to aſſume a quite different appearance. That monarch valued himſelf upon promoting the arts of peace, and made it his ſtudy to civilize his barbarous Iriſh ſubjects. By repeated conſpiracies and rebellions, a vaſt tract of land had eſcheated to the crown in ſix northern counties, Tyrconnel, now called *Donnegal*, Tirone, Derry, Farmanagh, Cavan, and Armagh, amounting to about 500,000 acres; a tract of country covered with woods, where rebels and banditti found a ſecure refuge, and which was deſtined to lie waſte without the timely interpoſition of government. James reſolved to diſpoſe of theſe lands in ſuch a manner as might introduce all the happy conſequences of peace and cultivation. He cauſed ſurveys to be taken of the ſeveral counties where the new ſettlements were to be eſtabliſhed; deſcribed particularly the ſtate of each; pointed out the ſituations proper for the erections of towns and caſtles; delineated the characters of the Iriſh chieftains, the manner in which they ſhould be treated, the temper and circumſtances of the old inhabitants, the rights of the new purchaſers, and the claims of both; together with the impediments to former plantations, and the methods of removing them.

At his inſtance it was reſolved, that the perſons to whom lands were aſſigned ſhould be either new undertakers from Great Britain, eſpecially from Scotland, or *ſervitors*, as they were called; that is, men who had for ſome time ſerved in Ireland, either in civil or military offices; or old Iriſh chieftains or captains. Among the laſt were included even thoſe Iriſh who had engaged in the rebellion of Tirone, and ſtill harboured their ſecret diſcontents. To gain them, if poſſible, by favour and lenity, they were treated with particular indulgence. Their under-tenants and ſervants were allowed to be of their own religion; and, while all the other planters were obliged to take the oath of allegiance, they were tacitly excepted. The ſervitors were allowed to take their tenants either from Ireland or Britain, provided no Popiſh recuſants were admitted. The Britiſh undertakers were confined to their own countrymen.

In the plantations which had been formerly attempted, the Iriſh and Engliſh had been mixed together, from a fond imagination that the one would have learned civility and induſtry from the other. But experience had now diſcovered, that this intercourſe ſerved only to make the Iriſh envy the ſuperior comforts of their Engliſh neighbours, and to take the advantage, of a free acceſs to their houſes to ſteal their goods and plot againſt their lives. It was therefore deemed neceſſary to put them in ſeparate quarters; and in the choice of theſe ſituations, the errors of former times were carefully corrected. The original Engliſh adventurers, on their firſt ſettlement in Ireland, were captivated by the fair appearance of the plain and open diſtricts. Here they erected their caſtles and habitations; and forced the old natives into the woods and mountains, their natural fortreſſes. There they kept themſelves unknown, living by the milk of their kine, without huſbandry or tillage; there they increaſed to in-

incredible numbers by promiſcuous generation; and there they held their aſſemblies, and formed their conſpiracies, without diſcovery. But now the northern Iriſh were placed in the moſt open and acceſſible parts of the country, where they might lie under the cloſe inſpection of their neighbours, and be gradually habituated to agriculture and the mechanic arts. To the Britiſh adventurers were aſſigned places of the greateſt ſtrength and command; to the ſervitors, ſtations of the greateſt danger, and greateſt advantage to the crown: but as this appeared a peculiar hardſhip, they were allowed guards and entertainment, until the country ſhould be quietly and completely planted.

The experience of ages had ſhown the inconvenience of enormous grants to particular lords, attended with ſuch privileges as obſtructed the adminiſtration of civil government: and, even in the late reign, favourite undertakers had been gratified with ſuch portions of land as they were by no means able to plant. But, by the preſent ſcheme, the lands to be planted were divided in three different proportions; the greateſt to conſiſt of 2000 Engliſh acres, the leaſt of 1000, and the middle of 1500. One half of the eſcheated lands in each county was aſſigned to the ſmalleſt, the other moiety divided between the other proportions: and the general diſtributions being thus aſcertained, to prevent all diſputes between the undertakers, their ſettlements in the reſpective diſtricts were to be determined by lot. Eſtates were aſſigned to all, to be held of them and their heirs. The undertakers of 2000 acres were to hold of the king *in capite;* thoſe of 1500, by knights ſervice; thoſe of 1000, in common ſoccage. The firſt were to build a caſtle, and incloſe a ſtrong court yard, or *bawn* as it was called, within four years; the ſecond, to finiſh an houſe and a bawn within two years; and the third, to incloſe a bawn; for even this rude ſpecies of fortification was accounted no inconſiderable defence againſt an Iriſh enemy. The firſt were to plant upon their lands, within three years, 48 able men of Engliſh or Scottiſh birth, to be reduced to 20 families; to keep a demeſne of 600 acres in their own hands; to have four fee farmers on 120 acres each; ſix leaſe holders, each on 100 acres; and on the reſt, eight families of huſbandmen, artificers, and cottagers. The others were under the like obligations proportionably. All were, for five years after the date of their patents, to reſide upon their lands either in perſon, or by ſuch agents as ſhould be approved by the ſtate, and to keep a ſufficient qantity of arms for their defence. The Britiſh and ſervitors were not to alienate their lands to mere Iriſh, or to demiſe any portions of them to ſuch perſons as ſhould refuſe to take the oaths to government; they were to let them at determined rents, and for no ſhorter term than 21 years or three lives. The houſes of their tenants were to be built after the Engliſh faſhion, and united together in towns or villages. They had power to erect manours, to hold courts-baron, and to create tenures. The old natives, whoſe tenures were, granted in fee-ſimple, to be held in ſoccage, were allowed the like privileges. They were enjoined to ſet their lands at certain rents, and for the like terms as the other undertakers; to take no Iriſh exactions from their inferior tenants, and to oblige them to forſake their old Scythian cuſtom of wandering with their cattle from place to place for paſture, or *creaghting*, as they called it; to dwell in towns, and conform to the Engliſh manner of tillage and huſbandry. An annual rent from all the lands was reſerved to the crown for every 60 Engliſh acres, ſix ſhillings and eight pence from the undertakers, ten ſhillings from ſervitors, and 13 ſhillings and four pence from Iriſh natives. But for two years they were exempt from ſuch payments, except the natives, who were not ſubject to the charge of tranſportation. What gave particular credit to this undertaking, was the capital part which the city of London was perſuaded to take in it. The corporation accepted of large grants in the county of Derry; they engaged to expend L.20,000 on the plantation, to build the cities of Derry and Colerain, and ſtipulated for ſuch privileges as might make their ſettlements convenient and reſpectable. As a competent force was neceſſary to protect this infant plantation, the king, to ſupport the charge, inſtituted the order of baronets, an hereditary dignity, to be conferred on a number not exceeding 200; each of whom, on paſſing his patent, was to pay into the exchequer ſuch a ſum as would maintain 30 men in Ulſter, for three years, at 8 *d.* daily pay.

But ſcarcely had the lands been allotted to the different patentees, when conſiderable portions were reclaimed by the clergy as their rightful property. And ſo far had the eſtates of the northern biſhoprics been embarraſſed, both by the uſurpations of the Iriſh lords, and the claims of patentees, that they ſcarcely afforded a competent, much leſs an honourable, proviſion for men of worth and learning, while the ſtate of the parochial clergy was ſtill more deplorable. Moſt of the northern churches had been either deſtroyed in the late wars or had fallen to ruin: the benefices were ſmall, and either ſhamefully kept by the biſhops in the way of commendam or ſequeſtration; or filled with miniſters as ſcandalous as their income. The wretched flock was totally abandoned; and for many years divine ſervice had not been uſed in any pariſh church of Ulſter, except in cities and great towns. To remedy theſe abuſes, and to make ſome proper proviſion for the inſtruction ot a people immerſed in lamentable ignorance, the king ordained, that all eccleſiaſtical lands ſhould be reſtored to their reſpective ſees and churches, and that all lands ſhould be deemed eccleſiaſtical from which biſhops had in former times received rents or penſions: that compoſitions ſhould be made with the patentees for the ſite of cathedral churches, the reſidences of biſhops and dignitaries, and other church-lands which were not intended to be conveyed to them; who were to receive equivalents if they compounded freely; or elſe to be deprived of their patents as the king was deceivd in his grant, and the poſſeſſions reſtored to the church. To provide for the inferior clergy, the biſhops were obliged to reſign all their impropriations, and relinquiſh the tythes paid them out of pariſhes, to the reſpective incumbents; for which ample recompence was made out of the king's lands. Every proportion allotted to undertakers was made a pariſh, with a parochial church to each. The incumbents, beſides their tythes and duties, had glebe-lands aſſigned to them of 60, 90, or 120 acres, according to the extent of their pariſhes. To provide for a ſucceſſion of worthy paſtors, free-ſchools were endowed in the principal towns, and conſiderable grants of lands conferred on the univerſity of Dublin, which had been re-eſtabliſhed by queen Elizabeth, together with the advowſon of ſix parochial churches, three of the largeſt, and three of the middle proportion in each county.

Such was the general ſchems of this famous northern plantation, ſo honourable to the king, and of ſuch conſequence to the realm of Ireland. Its happy effects were immediately perceived, although the execution by no means correſponded with the original idea. Buildings were ſlowly erected; Britiſh tenants were difficult to be procured in ſufficient numbers; the old natives were at hand, offered higher rents, and were received into thoſe diſtricts from which it was intended to exclude them. In this particular, the Londoners were accuſed of being notoriouſly delinquent. They acted entirely by agents; their agents were intereſted and indolent, and therefore readily countenanced this dangerous intruſion of the natives; an error of which ſufficient cauſe was afterwards found to repent. For the preſent, however, a number of loyal and induſtrious inhabitants was poured into the northern counties, conſiderable improvements made by the planters, and many towns erected. To encourage their induſtry, and advance his own project, the king was pleaſed to incorporate ſeveral of theſe towns, ſo that they had a right of repreſentation in the Iriſh parliament.

50 State of Ireland ſince that time.

The only diſturbance that now enſued was from the Popiſh party, who never could bear to ſee the Proteſtant religion eſtabliſhed in preference to their own, while they had power to reſiſt. After numberleſs ineffectual machinations and complaints, their fury broke out in a terrible maſſacre of the new Engliſh ſettlers in the year 1641*. (See *Britain*, n° 103—106.) The affairs of Britain were at that time in ſuch confuſion, that the rebellion could not be quelled in leſs than ten years; during which time the country was reduced to a moſt deplorable ſituation. It recovered again under Cromwell, Charles II. and the ſhort reign of James II. On the acceſſion of William III. matters were once more thrown into confuſion by an attempt made in favour of the exiled monarch, who came over thither in perſon, and whoſe bad ſucceſs is related under the article BRITAIN, n° 309—325. Since that time, Ireland hath recovered from the miſerable ſituation to which it was ſo long reduced. As yet, however, it is far from being in ſuch a flouriſhing ſtate as either South or North Britain. One great obſtacle to the improvement of the kingdom is the extreme poverty and oppreſſion of the common people. The produce of the kingdom, either in corn or cattle, is not above two thirds at moſt of what by good cultivation it might yield. The high roads throughout the ſouthern and weſtern parts are lined with beggars, who live in huts or cabbins without chimnies, or any covering capable of defending the wretched inhabitants from the cold, wind, and rain. "It is a ſcandal (ſays a judicious traveller, who lately viſited Ireland) to the proprietors of this fertile country, that there is not the greateſt plenty of good corn and hay in it; but ſome of the beſt land in the king's dominions is ſuffered to be torn in pieces, and cultivated in the vileſt manner, by a ſet of abject miſerable occupiers; who are abſolutely no better than ſlaves to the deſpicable, lazy, and oppreſſive ſubordinate landlords."

51 Origin of the Iriſh diſcontents

Another cauſe conſiſted in the various reſtrictions which it had been thought proper to lay upon the Iriſh trade, and the conſtant and great preference given by government to the Engliſh manufacturers, at laſt produced the moſt grievous diſcontents and diſtreſſes. 52 State of the argument for and againſt the Iriſh. On the part of England it was ſuppoſed, that as Ireland had been ſubdued by force of arms, the inhabitants ought in every reſpect to be ſubject to the victorious ſtate; and that the intereſt of the Engliſh ought on all occaſions to be conſulted, without regarding the inconveniences which might enſue to the Iriſh. A very different idea, however, was entertained by the Iriſh themſelves, or at leaſt by the patriotic party among them. They rejected all notions of dependence upon the Britiſh miniſtry and parliament; and though they did not ſcruple to acknowledge the king's right of conqueſt, they moſt poſitively denied that the Britiſh parliament had any authority whatever over them; and therefore looked upon the reſtrictions laid upon their trade as the moſt grievous and intolerable oppreſſion.

53 Cauſe of Sherlock and Anneſley in 1719.

In the year 1719, according to Mr Crawford, the oppreſſion and grievances of Ireland became altogether inſupportable. A cauſe relative to an eſtate, betwixt Heſter Sherlock and Maurice Anneſley, was tried before the court of exchequer in Ireland. Here the latter obtained a decree in his favour; but, on an appeal, the ſentence was reverſed by the lords. Anneſley appealed from them to the Engliſh peers; who having reverſed the judgment of thoſe of Ireland, he was put in poſſeſſion of the ſubject in diſpute. Sherlock appealed again to the Iriſh lords, and the matter became very ſerious. It was propoſed to the conſideration of the judges, Whether by the laws of the land an appeal lies from a decree of the court of exchequer in Ireland to the king and parliament in Britain. This queſtion being determined in the negative, Sherlock was again put in poſſeſſion of the eſtate. A petition was ſome time after preſented to the houſe by Alexander Burrowes ſheriff of Kildare, ſetting forth, "That his predeceſſor in office had put Sherlock in poſſeſſion of the premiſſes; that, upon his entering into office, an injunction, agreeable to the order of the Engliſh peers, iſſued from the exchequer, requiring him to reſtore Maurice Anneſley to the poſſeſſion of the abovementioned lands; and that, not daring to act in contradiction to the order of the houſe, he was fined. In conſequence of this, being afraid leſt he ſhould be taken into cuſtody, he durſt not come in to paſs his accounts; and for this he was fined L.1200." 54 Diſpute betwixt the peers of Ireland and England. His conduct was applauded by the Iriſh lords, who commanded the fines impoſed upon him to be taken off; and in a ſhort time after drew up a memorial to be preſented to his majeſty. In this they ſet forth, that having ſubmitted to Henry II. as their liege lord, they had from him obtained the benefit of Engliſh law, with many other privileges, particularly that of having a diſtinct parliament. In conſequence of this conceſſion, the Engliſh had been encouraged to come over and ſettle in Ireland, where they were to enjoy the ſame privileges as in their own country. They farther inſiſted, that though the imperial crown of Ireland was annexed to that of Britain, yet being a diſtinct dominion, and no part of the kingdom of England, none could determine with regard to its affairs, but ſuch as were authoriſed by its known laws and cuſtoms, or the expreſs conſent of the king. It was an invaſion of his majeſty's prerogative for any court of judicature to take upon them to declare, that he could not by his authority in parliament determine all controverſies betwixt his ſubjects of this kingdom; or that, when they appealed to his majeſty in parliament, they did not bring their cauſe before a competent judicature: and they repreſented, that the practice of appeals from the Iriſh parliament to the Britiſh peers was an uſurped juriſdiction aſſumed by the latter; the bad conſequences of which they pointed out very fully.

55 Bill paſſed for the better ſecuring the dependence of Ireland.

This repreſentation being laid before his majeſty in parliament, it was reſolved, that the barons of exchequer in Ireland had acted with courage and fidelity, according to law, &c. and an addreſs was preſented to his majeſty, praying him to confer on them ſome mark of his royal favour as a recompence for the injuries they had ſuſtained from the Iriſh legiſlature. This was followed by a bill for the better ſecuring the dependency of Ireland upon the crown of Great Britain. By this it was determined, "That the houſe of lords of Ireland have not, nor of right ought to have, any juriſdiction to judge of, affirm, or reverſe, any judgement, ſentence, or decree, given or made in any court within the kingdom; and that all proceedings before the ſaid houſe of lords, upon any ſuch judgment or decree, are utterly null and void to all intents and purpoſes whatever." It was alſo determined in this bill, that "the king's majeſty, by and with the advice and conſent of the lords ſpiritual and temporal, and commons of Great Britain in parliament aſſembled, had, hath, and of right ought to have, full power and authority to make laws and ſtatutes of ſufficient force and validity to bind the people of Ireland."

56 The bill generally abhorred.

57 Farther diſcontents on account of Wood's patent.

This bill was looked upon by the Iriſh to be equivalent to a total annihilation of their liberties; and they were ſtill farther exaſperated in the year 1724, by the patent granted to one Wood an Engliſhman to coin halfpence and farthings for the uſe of Ireland. In this affair Wood is ſaid to have acted very diſhonourably; inſomuch that a ſhilling of the halfpence he made were ſcarcely worth a penny. Great quantities of this baſe coin were ſent over; and it was uſed not only to change, but accounts were likely to be paid in it, ſo that dangerous conſequences ſeemed ready to enſue. The Iriſh parliament, in an addreſs to the king, repreſented that they were called upon by their country to lay before his majeſty the ill conſequences of Wood's patent, and that it was likely to be attended with a diminution of the revenue and the ruin of trade. The ſame was ſet forth in an application made to his majeſty by the privy council. In ſhort, the whole nation ſeemed to unite their efforts in order to remedy an evil of ſuch dangerous tendency, the effects of which already began to be felt.

58 Dr Swift in danger on account of his oppoſition to Wood.

Among the controverſial pieces which appeared on this occaſion, thoſe of Dr Swift were particularly diſtinguiſhed. His Drapier's letters are to this day held in grateful remembrance by his countrymen; but he was in danger of ſuffering deeply in the cauſe. He had been at particular pains to explain an argument uſed by the Iriſh on this occaſion, *viz.* that braſs money, being illegal, could not be forced upon the nation by the king, without exceeding the limits of his prerogative. Hence the oppoſite party took occaſion to charge the Iriſh with a deſign of caſting off their dependence on Britain altogether: but Swift having examined the accuſation with freedom, pointed out the encroachments made by the Britiſh parliament on the liberties of Ireland; and aſſerted, that any dependence on England, except that of being ſubjects to the ſame king, was contrary to the law of reaſon, nature, and nations, as well as to the law of the land. This publication was ſo diſagreeable to government, that they offered a reward of L.300 for the diſcovery of the author; but as nobody could be found who would give him up, the printer was proſecuted in his ſtead: however, he was unanimouſly acquitted by a jury of his countrymen.

59 Diſpute with government about the fund for payment of the national debt.

The Iriſh continued to be jealous of their liberties, while the Britiſh miniſtry ſeemed to watch every opportunity of encroaching upon them as far as poſſible. Apprehenſions being entertained of a deſign upon Ireland by the partiſans of the pretender in 1715, a vote of credit to government was paſſed by the houſe of commons to a conſiderable amount. This laid the foundation of the national debt of that kingdom, which was quickly augmented to ſeveral hundred thouſand pounds; for diſcharge of which a fund had been provided by adminiſtration. An attempt was made during the adminſtration of Lord Carteret (who governed Ireland till 1730), to veſt this fund in the hands of his majeſty and of his heirs for ever, redeemable by parliament. This was oppoſed by the patriotic party, who inſiſted, that it was inconſiſtent with the public ſafety, and unconſtitutional, to grant it longer than from ſeſſion to ſeſſion. In 1731 another attempt was made to veſt the ſame in the crown for 21 years; but when the affair came to be debated, the ſtrength of both parties was found to be equally balanced. Immediately before the vote, however, Colonel Tottingham having rode poſt on the occaſion, arrived in the houſe, and determined the queſtion againſt government.

60 Excellent conduct of Lord Cheſterfield.

The behaviour of Lord Cheſterfield, who was made governor of Ireland in 1745, is highly extolled on account of his moderation, and the favour he ſhowed to the liberties of the people. As the apprehenſions of government were then very conſiderable, on account of the rebellion which raged in Scotland, his lordſhip was adviſed to augment the military force of Ireland by 4000 men. Inſtead of this, however, he ſent four battalions to the duke of Cumberland, and encouraged the volunteer aſſociations which formed in different parts for the defence of their country. Theſe battalions he replaced by additional companies to the regiments already on the eſtabliſhment; by which means he ſaved a conſiderable expence to the nation, without augmenting the influence of the crown. The ſupplies aſked by him were ſmall, and raiſed in the moſt eaſy and agreeable manner to the people, expending the money at the ſame time with the utmoſt economy. There was even a ſaving, which he applied to the uſe of the public. It had been a cuſtom with many of the lieutenant governors of Ireland to beſtow reverſionary grants, in order to purchaſe the aſſiſtance of friends in ſupport of their meaſures. Lord Cheſterfield, how-

61 His humanity to the Roman Catholics.

ever, being convinced that this practice was prejudicial to the intereſt of the nation, put a ſtop to it; but the moſt remarkable part of his adminiſtration was, the humanity with which he treated the Roman Catholics. Before his arrival, the Romiſh chapels in Dublin had been ſhut up; their prieſts were commanded by proclamation to leave the kingdom; and ſuch as diſobeyed had been ſubjected to impriſonment and other penalties. Lord Cheſterfield, however, convinced that the affection is to be engaged by gentle uſage, permitted them to exerciſe their religion without diſturbance. The accuſations brought againſt them of forming plans againſt government, were diſregarded; and ſo much was his moderation and uprightneſs in this reſpect applauded by all parties, that, during the whole time of his adminiſtration, the national tranquillity was not once interrupted by the ſmalleſt internal commotion. On his leaving the iſland, his buſt was placed at the public expence in the caſtle of Dublin.

62 Account of Mr Lucas the celebrated patriot.

Lord Cheſterfield having left Ireland in the ſpring of 1746, the iſland continued to be governed by lords juſtices until the 13th of September, when William earl of Harrington came over with the powers of lord lieutenant. A conteſt in the election of repreſentatives for the city of Dublin this year called forth the abilities of Mr Charles Lucas, ſo much celebrated for his partriotic virtues. Having ſome years before been admitted a member of the common council, he reſolved to exert himſelf in behalf of the privileges of his fellow-citizens. The powers of this city-corporation, as well as of others, had been changed by authority derived from an act in the time of Charles II. and among other innovations, for the purpoſe of augmenting the influence of the crown, they deprived the commons of the power of chooſing the city magiſtrates. This was now veſted in the board of Aldermen, which being ſubject in the exerciſe of its juriſdiction to the approbation of the privy council, was conſequently dependent on government. Mr Lucas complained loudly of the injury; but as this law could not be altered, he ſet himſelf to inquire, whether encroachments, which could not be juſtified by law, had not been made on the rights of the citizens? Having ſatisfied himſelf, by ſearching diligently into ancient records, that his apprehenſions were well-founded, he publiſhed his diſcoveries, explained the nature of the evidence reſulting from them, and encouraged the people to take the proper ſteps for obtaining redreſs.

The conſequence of this was a conteſt between the commons and aldermen, which laſted two years. The former ſtruggled in vain to recover their loſt privileges; but the exertions of Lucas in every ſtage of the diſpute had rendered him ſo reſpectable among his countrymen, that on the death of Sir James Somerville he was encouraged to declare himſelf a candidate for a ſeat in parliament. This being highly agreeable to his wiſhes, he was elected accordingly; and diſtinguiſhed himſelf not only by the boldneſs and energy of his ſpeeches, but more eſpecially by a number of addreſſes to his countrymen. In ſome of theſe he particularly conſidered the ſeveral branches of the conſtitution, and pointed out the encroachments of the Britiſh legiſlature. Government, alarmed at his boldneſs, dermined to cruſh him by the hand of power; for which reaſon the moſt obnoxious paragraphs were extracted from his works, and made the foundation of a charge before parliament. The commons voted him an enemy to his country; and addreſſed the lord lieutenant for an order to proſecute him by the attorney-genneral. The univerſal eſteem in which he was held could not ſcreen him from miniſterial vengeance: he was driven from Ireland; but having ſpent ſome years in baniſhment; he was once more enabled, through the exertions of his friends, to preſent himſelf as a candidate for the city of Dublin. Being again elected, he continued to diſtinguiſh himſelf by the ſame virtuous principles for which he had been from the beginning ſo remarkable, and died with the character which he had preſerved through life, the *incorruptible* Lucas.

63 Diſpute with government concerning previous conſent.

In the year 1753, a remarkable conteſt took place betwixt government and the Iriſh parliament relative to previous conſent. As the taxes for defraying ſtate expences are impoſed by the repreſentatives of the people, it thence naturally follows, that they have a right to ſuperintend the expenditure of them; and by an inſpection of the journals of the houſe of commons, it appeared that from the year 1692 they had exerciſed a right of calling for and examining the public accounts. When any ſurplus remained in the treaſury, it was alſo cuſtomary to diſpoſe of it by bill for the good of the public. In the year 1749, however, a conſiderable ſum having remained in the treaſury, the diſpoſal of this money in future became an object to miniſtry. In 1751, it was intimated to parliament by the lord-lieutenant, the duke of Dorſet, that his majeſty would graciouſly conſent and recommend it to them, that ſuch part of the money as then remained in the treaſury ſhould be applied to the reduction of the national debt." As this implied a right inherent in his majeſty to diſpoſe of the money as he thought proper, the propoſal was accounted an invaſion of the privileges of the houſe of commons. No notice was therefore taken of the direction given by Dorſet, but the bill was ſent over to England as uſual without any notice taken of his majeſty's conſent. In England, however, this very material alteration was made, and the word *conſent* introduced into it. The commons at this time did not take any notice of ſuch an eſſential alteration; but next year, on its being, repeated, the bill was rejected. Government were now at the utmoſt pains to defend the meaſure they had adopted, and pamphlets were publiſhed in which it was juſtified on various grounds. The event at laſt, however, was, that his majeſty by letter took the money which had been the ſubject of diſpute out of the treaſury.

64 Invaſion by Thurot in 1760.

In the year 1760 Ireland ſuſtained an inconſiderable hoſtile invaſion, the firſt that had been experienced in the kingdom for 70 years. The armament conſiſted originally of five ſhips; one of 48 guns, two of 36, and two of 24; having on board 1270 land-forces. They were commanded by the celebrated Thurot, whoſe reputation, as captain of a privateer, had advanced him to this dignity. The ſquadron, however, was driven by adverſe winds to Gottenburgh; where having continued a few days, they ſet ſail for the place of their deſtination. On their arrival on the coaſt of Ireland, they were obliged to ſhelter themſelves in Lough Foyle from a violent ſtorm which again overtook them. The wind, however, having ſhifted, and continuing to blow tempeſtuouſly, they were obliged to keep out to ſea. Two of the ſhips were thus ſeparated from the reſt by the violence of the ſtorm, and returned to France; but the remaining three directed their courſe to the iſland of Ilay, where they anchored; and having repaired their damages, took in a ſupply of proviſions, and thence ſailed to Carrickfergus.

In the mean time, an officer belonging to the ſmall number of troops at that time in Carrickfergus took poſt on a riſing ground, with an advanced party, to obſerve the motions of the enemy. A ſkirmiſh enſued betwixt this party and Thurot's men, until the former, having expended all their ammunition, were obliged to retire into the town. Having in vain attempted to prevent the enemy from taking poſſeſſion of it, the Britiſh troops ſhut themſelves up in the caſtle, where they were ſoon obliged to capitulate, after having killed about 100 of their enemies, with the loſs of only three on their own part. The French having plundered the town, ſet ſail on the 26th of February; and three days after were all taken by Captain Elliot, Thurot himſelf being killed in the engagement.

65
Riſe of the White Boys.

Soon after the acceſſion of George III. Ireland firſt began to be diſturbed by a banditti who ſtyled themſelves *White Boys*; and as theſe were generally of the Romiſh perſuaſion, the prejudices againſt that ſect broke forth in the uſual manner. A plot was alleged to have been formed againſt government: French and Spaniſh emiſſaries to have been ſent over to Ireland, and actually to be employed to aſſiſt in carrying it into execution. The real cauſe of this commotion, however, was as follows: About the year 1739 the murrain broke out among the horned cattle in the duchy of Holſtein, from whence it ſoon after ſpread through the other parts of Germany. From Germany it reached Holland, from whence it was carried over to England, where it raged with great violence for a number of years. The mitigation of the penal laws againſt the Papiſts about this time encouraged the natives of the ſouth of Ireland to turn their thoughts towards agriculture, and the poor began to enjoy the neceſſaries of life in a comfortable manner. A foreign demand for beef and butter, however, having become uncommonly great, by reaſon of the cattle diſtemper juſt mentioned, ground appropriated to grazing became more valuable than that employed in tillage. The cotters were every where diſpoſſeſſed of their little poſſeſſions, which the landlords let to monopolizers who would afford a higher rent. Whole baronies were now laid open to paſturage, while the former inhabitants were driven deſperate by want of ſubſiſtence. Numbers of them fled to the large cities, or emigrated to foreign countries, while thoſe who remained took ſmall ſpots of land, about an acre each, at an exorbitant price, where they endeavoured if poſſible to procure the means of protracting a miſerable exiſtence for themſelves and families. For ſome time theſe poor creatures were allowed by the more humane landlords the liberty of commonage: but afterwards this was taken away, in deſpite of juſtice and a poſitive agreement; at the ſame time, the payment of tythes, and the low price of labour, not exceeding the wages in the days of Queen Elizabeth, aggravated the diſtreſſes of the unhappy ſufferers beyond meaſure.

In ſuch a ſituation, it is no wonder that illegal methods were purſued in expectation of redreſs. The people, covered with white ſkirts, aſſembled in parties at night, turned up the ground, deſtroyed bullocks, levelled the incloſures of the commons, and committed other acts of violence. Theſe unavailing efforts were conſtrued into a plot againſt the government; numbers of the rioters were apprehended in the counties of Limerick, Cork, and Tipperary, and ſome of them condemned and executed. In different places theſe unhappy wretches, inſtead of being looked upon as objects of compaſſion, were proſecuted with the utmoſt ſeverity. Judge Aſton, however, who was ſent over to try them, executed his office with ſuch humanity as did him the higheſt honour. A moſt extraordinary and affecting inſtance of this was, that on his return from Dublin, for above ten miles from Clonmell, both ſides of the road were lined with men, women, and children; who, as he paſſed along, kneeled down and implored the bleſſing of heaven upon him as their guardian and protector.

In the mean time, the violences of the White Boys continued, notwithſtanding that many examples were made. The idea of rebellion was ſtill kept up; and, without the ſmalleſt foundation, gentlemen of the firſt rank were publicly charged with being concerned in it, inſomuch that ſome of them were obliged to enter bail, in order to protect themſelves from injury. The Catholics of Waterford gave in a petition to Lord Hertford, the governor in 1765, in behalf of themſelves and brethren, proteſting their loyalty and obedience to government; but no effectual ſtep was taken either to remove or even to inveſtigate the cauſe of the diſturbances.

66
Of the Oak Boys.

About two years after the appearance of the White Boys, a ſimilar commotion aroſe in Ulſter; which, however, proceeded in part from a different cauſe, and was of much ſhorter duration. By an act of parliament, the making and repairing of highways in Ireland was formerly a grievous oppreſſion on the lower ranks of people. An houſekeeper who had no horſe was obliged to work at them ſix days in the year; and if he had a horſe, the labour of both was required for the ſame ſpace of time. Beſides this oppreſſion, the poor complained that they were frequently obliged to work at roads made for the convenience of individuals, and which were of no ſervice to the public. Nor were theſe the only grievances of which the inſurgents at this time complained: the tythes exacted by the clergy were ſaid to be unreaſonable, and the rent of lands was more than they could bear. In 1763, therefore, being exaſperated by a road propoſed to be made thro' a part of the county of Armagh, the inhabitants moſt immediately affected by it roſe in a body, and declared that they would make no more highways of the kind. As a mark of diſtinction, they wore oak-branches in their hats, from which circumſtance they called themſelves *Oak-boys*. The number of their partizans ſoon increaſed, and the inſurrection became general through the counties of Armagh, Tyrone, Derry, and Fermanagh. In a few weeks, however, they were diſperſed by parties of the military; and the public tranquillity was reſtored with the loſs of only two or three lives. The road-act, which had been ſo juſtly found fault with, was repealed next ſeſſion; and it was determined, that for the future the roads ſhould be made and repaired by a tax to be equally aſſeſſed on the lands of the rich and poor.

67 Of the Steel Boys.

Beſides theſe, another ſet of inſurgents called *Steel-boys* ſoon made their appearance, on the following account. The eſtate of an abſentee nobleman happening to be out of leaſe, he propoſed, inſtead of an additional rent, to take fines from his tenants. Many of thoſe, who at that time poſſeſſed his lands, were unable to comply with his terms; while others who could afford to do ſo, inſiſted upon a greater rent from the immediate tenants than they were able to pay. The uſual conſequences of this kind of oppreſſion inſtantly took place. Numbers being diſpoſſeſſed and thrown deſtitute, were forced into acts of outrage ſimilar to thoſe already mentioned. One of theſe charged with felony was carried to Belfaſt, in order to be committed to the county gaol; but his aſſociates, provoked by the uſage they had received, determined to relieve him. The deſign was eagerly entered into by great numbers all over the country; and ſeveral thouſands, having provided themſelves with offenſive weapons, proceeded to Belfaſt in order to reſcue the priſoner. To prevent this, he was removed to the barracks and put under the guard of a party of ſoldiers quartered there; but the Steel-boys preſſed forward with a determination to accompliſh their purpoſe by force, and ſome ſhots were actually exchanged between them and the ſoldiers. The conſequences would undoubtedly have been fatal, had it not been for a phyſician of highly reſpectable character, who interpoſed at the riſk of his life, and prevailed on thoſe concerned to ſet the priſoner at liberty. The tumult, however, was not thus quelled. The number of inſurgents daily increaſed, and the violences committed by them were much greater than thoſe of the other two parties. Some were taken and tried at Carrickfergus, but none condemned. It was ſuppoſed that the fear of popular reſentment had influenced the judges; for which reaſon an act was paſſed, enjoining the trial of ſuch priſoners for the future to be held in counties different from thoſe where the crimes were committed. This breach of a fundamental law of the conſtitution gave ſuch offence, that though ſeveral of the Steel-boys were afterwards taken up and carried to the caſtle of Dublin, no jury would find them guilty. This obnoxious law was therefore repealed; after which ſome of the inſurgents, being tried in their reſpective counties, were condemned and executed. Thus the commotions were extinguiſhed: but as no methods were taken to remove the cauſe, the continued diſtreſſes of the people drove many thouſands of them into America in a very few years.

68 Parliament of Ireland made octennial.

In the mean time a very material alteration had taken place, in the conſtitution of the kingdom, with regard to the duration of parliaments. At an early period theſe had continued only for a year; but afterwards they were prolonged until the death of a ſovereign, unleſs he choſe to diſſolve it ſooner by an exertion of his prerogative. Thus, from the moment of their election, the commoners of Ireland were in a manner totally independent of the people and under the influence of the crown; and government ſoon availed itſelf of this power to bribe a majority to ſerve its own purpoſes. Various methods were thought of to remedy this evil; but all proved ineffectual until the year 1768, when, during the adminiſtration of Lord Townſhend, a bill was prepared and ſent over to England, by which it was enacted, that the Iriſh parliaments thenceforth ſhould be held every ſeven years. It was returned with the addition of one year; and ever ſince the parliaments of this country have been octennial. During this ſeſſion an attempt was made by the Britiſh miniſtry to infringe the rights of the houſe of commons in a very material point. A money-bill, which had not originated in Ireland, was ſent over from Britain, but was rejected in a ſpirited manner. Its rejection gave great offence to the Lord Lieutenant, who repeatedly prorogued them till the year 1771.

69 An Engliſh money-bill rejected.

The affairs of Ireland began now to draw towards that criſis which effected the late remarkable revolution in favour of the liberties of the people. The paſſing of the octennial bill had diminiſhed, but not taken away, the influence of the crown; and the ſituation of affairs between Britain and America had inclined miniſtry to make the moſt of this influence they could. In 1773 Lord Harcourt, at that time governor of Ireland, exerted himſelf ſo powerfully in favour of adminiſtration, that the voice of oppoſition in parliament was almoſt entirely ſilenced. The difficulties, however, under which the whole nation laboured began now to be ſo ſeverely felt, that an addreſs on the ſubject was preſented by the commons to his excellency. In this they told him, that they hoped he would lay before the king the ſtate of Ireland, reſtricted in its commerce from the ſhort-ſighted policy of former times, to the great injury of the kingdom, and the advantage of the rivals, if not of the enemies, of Great Britain. Theſe hardſhips, they ſaid, were not only impolitic, but unjuſt; and they told his excellency plainly, that they expected to be reſtored to ſome, if not to all their rights, which alone could juſtify them to their conſtituents for laying upon them ſo many burdens during the courſe of this ſeſſion.

70 Diſtreſſed ſtate of Ireland laid before the lord lieutenant,

71 Account of the reſtrictions on the Iriſh trade.

This repreſentation to the Lord Lieutenant produced no effect; and Ireland for ſome years longer continued to groan under the burden of intolerable reſtrictions. Theſe had principally taken place in the reign of Charles II. At this time it was enacted, that beef or live cattle ſhould not be exported to England; neither were the commodities of Ireland to be exported to the American colonies, nor American goods to be imported to any port in Ireland without firſt unloading them in ſome part of England or Wales. All trade with Aſia was excluded by charters granted to particular companies; and reſtrictions were impoſed upon almoſt every valuable article of commerce ſent to the different ports of Europe. Towards the end of King William's reign an abſolute prohibition was laid on the exportation of Iriſh wool. This reſtriction proved diſadvantageous not only to Ireland, but to Great Britain herſelf. The French were now plentifully ſupplied by ſmuggling with Iriſh wool; and not only enabled to furniſh woollen ſtuffs ſufficient for their own conſumpt, but even to vie with the Britiſh in foreign markets. Other reſtrictions conſpired to augment the national calamity; but that which was moſt ſenſibly felt took place in 1776. "There had hitherto (ſays Mr Crawford) been exported annually to America large quantities of Iriſh linens: this very conſiderable ſource of national advantage was now ſhut up, under pretence of rendering it more difficult for the enemy to be ſupplied with the means of ſubſiſtence; but in reality, to enable a few rapacious Engliſh contractors to fulfil their engagements, an embargo, which continued, was in 1776 laid upon the exportation of proviſions from Ireland, by an unconſtitutional ſtretch of prerogative. Remittances to England, on various accounts, particularly for the payment of our forces abroad, were more than uſually conſiderable. Theſe immediate cauſes being combined with thoſe which were invariable and permanent, produced in this country very calamitous effects. Black cattle fell very conſiderably in their value; notwithſtanding that cuſtomers could not be had. The price of wool was reduced in a ſtill greater proportion. Rents every where fell; nor, in many places, was it poſſible to collect them. An univerſal ſtagnation of buſineſs enſued. Credit was very materially injured. Farmers were preſſed by extreme neceſſity, and many of them failed. Numbers of manufacturers were reduced to extreme neceſſity, and would have periſhed, had they not been ſupported by public charity. Thoſe of every rank and condition were deeply affected by the calamity of the times. Had the ſtate of the exchequer permitted, grants might have been made to promote induſtry, and to alleviate the national diſtreſs; but it was exhauſted to a very uncommon degree. Almoſt every branch of the revenue had failed. From want of money the militia law could not be carried into execution. We could not pay our forces abroad; and, to enable us to pay thoſe at home, there was a neceſſity for borrowing 50,000 l. from England. The money which parliament was forced to raiſe, it was obliged to borrow at an exorbitant intereſt. England, in its preſent ſtate, was affected with the wretched condition to which our affairs were reduced. Individuals there, who had eſtates in Ireland, were ſharers of the common calamity; and the attention of individuals in the Britiſh parliament was turned to our ſituation, who had even no perſonal intereſt in this country."

72
Iriſh affairs taken into conſideration by the Britiſh parliament.

While things were in this deplorable ſituation, earl Nugent, in the year 1778, undertook the cauſe of the Iriſh, by moving in parliament, that their affairs ſhould be taken into conſideration by a committee of the whole houſe. This motion being agreed to almoſt unanimouſly, it was followed by ſeveral others, viz. That the Iriſh may be permitted to export directly to the Britiſh plantations, or to the ſettlements on the coaſt of Africa, all goods being the produce and manufacture of the kingdom, excepting only wool, or woollen manufactures, &c. That all goods, being the produce of any of the Britiſh plantations, or of the ſettlements on the coaſt of Africa, tobacco excepted, be allowed to be imported directly from Ireland to all places, Britain excepted. That cotton yarn, the manufacture of Ireland, be allowed to be imported into Great Britain. That glaſs manufactured in Ireland be permitted to be exported to all places, Britain excepted.—With reſpect to the Iriſh ſail-cloth and cordage, it was moved, that they ſhould have the ſame privilege as for the cotton-yarn.

75
Petitions againſt the propoſed relief.

Theſe motions having paſſed unanimouſly, bills for the relief of Ireland were framed upon them accordingly. The trading and manufacturing towns of England, however, now took the alarm, and petitions againſt the Iriſh indulgence were brought forward from many different quarters, and members inſtructed to oppoſe it. In conſequence of this a warm conteſt took place on the ſecond reading of the bills. Mr Burke ſupported them with all the ſtrength of his eloquence; and as the miniſter ſeemed to favour them, they were committed; though the violent oppoſition to them ſtill continued, which induced many of their friends at that time to deſert their cauſe.

76
New attempt in favour of the Iriſh.

Though the efforts of thoſe who favoured the cauſe of Ireland thus proved unſucceſsful for the preſent, they renewed their endeavours before the Chriſtmas vacation. They now urged, that, independent of all claims from juſtice and humanity, the relief of Ireland was enforced from neceſſity. The trade with Britiſh America was now loſt for ever; and it was indiſpenſably requiſite to unite the remaining part of the empire in one common intereſt and affection. Ireland had hitherto been paſſive; but there was danger that, by driving her to extremities, ſhe would caſt off the yoke altogether; or, even if this ſhould not happen, the tyranny of Britain would be of little advantage; as, on the event of a peace, the people would deſert a country in which they had experienced ſuch oppreſſion, and emigrate to America, where they had a greater proſpect of liberty. On the other hand, they inſiſted, that very conſiderable advantages muſt enſue to Britain by the emancipation of Ireland; and every benefit extended to that country would be returned with accumulated intereſt. The buſineſs was at laſt ſummed up in a motion made by lord Newhaven, in February 1779, that liberty ſhould be granted to the Iriſh to import ſugars from the Weſt Indies. This was carried; but the merchants of Glaſgow and Mancheſter having petitioned againſt it, it was again loſt through the interference of the miniſter, who now exerted his influence againſt the relief he had formerly declared in favour of. Various other efforts, however, were made to effect the intended purpoſe; but nothing more could be obtained than a kind of compromiſe, by which lord Gower pledged himſelf, as far as he could anſwer for the conduct of others, that, during the receſs, ſome plan ſhould be fallen upon for accommodating the affairs of Ireland to the ſatisfaction of all parties.

77
New petitions againſt them.

78
An univerſal ferment enſues throughout the kingdom.

79
Aſſociations formed againſt importing Britiſh commodities.

In the mean time the affairs of this country haſtened to a criſis; which forced the Britiſh miniſtry to give that relief ſo long ſolicited, and which they ſo often promiſed without any intention of performing their promiſes. As long as the affairs of the country were under conſideration of the Britiſh parliament, the inhabitants preſerved ſome degree of patience; but, when they found themſelves deſerted by the miniſter, their diſcontent was inflamed beyond meaſure. The laws he had paſſed in their favour, viz. an allowance to plant tobacco, and a bill for encouraging the growth of hemp, were conſidered as mockery inſtead of relief, and it was now reſolved to take ſuch meaſures as ſhould effectually convince the miniſtry that it was not their intereſt to tyrannize any longer. With this view, aſſociations againſt the importation of Britiſh commodities, which had been entered into in ſome places before, now became univerſal throughout the kingdom; and ſuch as preſumed to oppoſe the voice of the people in this reſpect, had the mortification to find themſelves expoſed to public obloquy and contempt on that account. Thus the Iriſh manufactures began to revive; and the people of Britain found themſelves obliged ſeriouſly to take into conſideration the relief of that country, and to look upon it as a matter very neceſſary to their own intereſt. 80 Riſe of the military aſſociations in Ireland. To this alſo they were ſtill more ſeriouſly diſpoſed by the military aſſociations, which had taken place ſome time before, and now aſſumed a moſt formidable appearance. Theſe at firſt were formed by accidental cauſes. The ſituation of Britain, for ſome time, had not admitted of any effectual method being taken for the defence of Ireland. Its coaſts had been inſulted, and the trading ſhips taken by the French and American privateers; nor was it at all improbable that an invaſion might ſoon follow. "The miniſter (ſays Mr Crawford) told us, that the ſituation of Britain was ſuch as rendered her incapable of protecting us. The weakneſs of government, from the following circumſtance, was ſtrikingly obvious. The mayor of Belfaſt having tranſmitted a memorial to the Lord Lieutenant, ſetting forth the unprotected ſtate of the coaſt, and requeſting a body of the military for its defence, received for anſwer, that he could not afford him any other aſſiſtance than half a troop of diſmounted horſe and half a company of invalids." In this dilemma, a number of the inhabitants of the town aſſociated for the purpoſe of ſelf-defence; and on the ſame principle, a few volunteer companies were formed in different parts of the kingdom. Theſe choſe their own officers, purchaſed their own uniforms and arms, and, with the aſſiſtance of perſons properly qualified, aſſembled regularly on the parade to acquire a knowledge in the military art. Their reſpectable appearance, and the zeal they ſhowed in the ſervice of their country, ſoon excited curioſity and attracted reſpect. Their number increaſed every day; and people of the firſt conſequence became ambitious of being enrolled among them. As no foreign enemy appeared, 81 They reſolve to deliver their country from the tyranny of Britain. againſt whom they might exerciſe their military proweſs, theſe patriotic bands ſoon began to turn their thoughts towards a deliverance from domeſtic oppreſſion. No ſooner was this idea made known, than it gave new vigour to the ſpirit of volunteering; inſomuch that, by the end of 1778, the military aſſociations were thought to amount to at leaſt 30,000 men. But, while thus formidable from their numbers, and openly avowing their intention to demand a reſtitution of their rights from the Britiſh miniſtry, they profeſſed the utmoſt loyalty and affection to the king; and with regard to ſobriety and decent demeanour, they were not only unexceptionable, but exemplary. Inſtead of exciting diſorder themſelves, they reſtrained every kind of irregularity, and exerted themſelves with unanimity and vigour for the execution of the laws.

That ſuch a body of armed men, acting without any command or ſupport from government, ſhould be an object of apprehenſion to the miniſtry, is not to be wondered at. In the infancy of their aſſociations indeed they might have been ſuppreſſed; but matters had been ſuffered to proceed too far; and, as they ſtood at preſent, all reſiſtance was vain. As the volunteers could not be controuled, ſome attempts were made to bring them under the influence of the crown; but this being found impoſſible, miniſtry thought proper to treat them with an appearance of confidence; and, accordingly, orders were iſſued for ſupplying them with 16,000 ſtand of arms. 82 They are ſupplied with arms by the miniſtry.

83 The parliament addreſs the king for relief. The Iriſh parliament, thus encouraged by the ſpirit of the nation, and preſſed by the difficulties ariſing from the diminiſhed value of their eſtates, reſolved to exert themſelves in a becoming manner, in order to procure relief to their country. At their meeting in October 1779, an addreſs to his Majeſty was drawn up; in which it was expreſsly declared, that "it was not by temporary expedients, but by a free trade alone, that Ireland was now to be ſaved from impending ruin." When this addreſs was carried up to the Lord Lieutenant, the ſtreets of Dublin were lined with volunteers, commanded by the duke of Leinſter, in their arms and uniform. But, though a general expectation of relief was now diffuſed, an anxious fear of diſappointment ſtill continued. If the uſual ſupply was granted for two years, there was danger of the diſtreſſes continuing for all that time; and after it was granted, the prorogation of parliament might put a ſtop to the expected relief altogether. The people, however, were not now to be trifled with. 84 Riot in Dublin. As the court-party ſhowed an averſion to comply with the popular meaſures, a mob roſe in Dublin, who, among other acts of violence, pulled down the houſe of the attorney-general, and did their utmoſt to compel the members to promiſe their countenance to the matter in hand. When the point therefore came to be debated, ſome eſpouſed the popular ſide from principle, others from neceſſity; ſo that on the whole a majority appeared in favour of it. A ſhort money bill was paſſed and tranſmitted to England; where, though very mortifying to the miniſter, it paſſed alſo.

85 Affairs of Ireland again conſidered by the Britiſh parliament, On the meeting of the Britiſh parliament in December, the affairs of Ireland were firſt taken into conſideration in the houſe of peers. The neceſſity of granting relief to that kingdom was ſtrongly ſet forth by the lord who introduced them. He ſaid, the Iriſh, now conſcious of poſſeſſing a force and conſequence to which they had hitherto been ſtrangers, had reſolved to apply it to obtain the advantages of which the nation, by this ſpirited exertion, now ſhowed themſelves worthy. Had they for ſome time before been gratified in leſſer matters, they would now have received with gratitude, what they would, as affairs ſtood at preſent, conſider only as a matter of right. He then moved for a vote of cenſure on his Majeſty's miniſters for their neglect of Ireland. This motion was rejected; but Earl Gower, who had now deſerted the cauſe of miniſtry, declared, that there did not exiſt in his mind a ſingle doubt that the vote of cenſure was not well founded. He added, in his own vindication, that early in the ſummer he had promiſed that relief ſhould be granted to Ireland, and had done every thing in his power to keep his word; but that all his efforts had proved fruitleſs.

In the houſe of commons the miniſter found himſelf ſo hard preſſed by the arguments of the minority, and the ſhort money-bill from Ireland, that he was obliged to declare, that in leſs than a week he intended to move for a committee of the whole houſe to take the affairs of Ireland into conſideration. On the 13th of December he accordingly brought forward his propoſitions

86 Lord North's propoſitions in favour of the kingdom.

poſitions in favour of this kingdom. The deſign of theſe was to repeal the laws prohibiting the exportation of Iriſh manufactures made of wool or wool flocks; to repeal as much of the act of 19th Geo. II. as prohibited the importation of glaſs into Ireland, except of Britiſh manufacture, or the exportation of glaſs from Ireland; and to permit the Iriſh to export and import commodities to and from the Weſt Indies and the Britiſh ſettlements on the coaſt of Africa, ſubject to ſuch reſolutions and reſtrictions as ſhould be impoſed by the Iriſh parliament.

87 His obſervations upon them.

On theſe propoſitions his lordſhip made ſeveral remarks by way of explanation. One object of them, he ſaid, was to reſtore to Ireland the wool export and woollen manufacture. In 1692, from jealouſy or ſome other motive, an addreſs had been preſented by the Engliſh parliament, recommending a kind of compact between the two kingdoms; the terms of which were, that England ſhould enjoy the woollen manufacture, and Ireland the linen, excluſively. But notwithſtanding this agreement, it was certain, that England carried on the linen manufacture to as great extent as Ireland, while at the ſame time the former retained the monopoly of woollens. The firſt ſtep taken, in conſequence of this agreement, was to lay a heavy duty, equal to a prohibition, upon all wool and woollens exported; and when this act, which was but a temporary one by way of experiment, expired, the Engliſh parliament paſſed a ſimilar one, and made it perpetual; by means of which and ſome others a total end was put to the woollen trade of Ireland.

With regard to the trade of Ireland his lordſhip obſerved, that, upon an average of the ſix years from 1766 to 1772, the export to Ireland was ſomewhat more than two millions; and, in the ſucceeding ſix years, from 1772 to 1778, about as much more; nearly one half being Britiſh manufacture and produce; the other half certified articles, of which this country was the medium of conveyance. The native produce, on an average, was ſomewhat more than 900,000 l. but of this only 200,000 l. were woollens. The woollen manufacture of Ireland therefore would long continue in a ſtate of infancy; and though cloths had been manufactured ſufficient for home conſumption, yet it could hardly be expected that Ireland would rival Great Britain at the foreign markets, when, after the expence of land-carriage, freight, inſurance, and factorage, the latter was able to underſell Ireland in her own market on the very ſpot, even though aided by the low wages and taxes paid in the country.

With regard to the linen, his lordſhip obſerved, that however proſperous it might appear, yet ſtill it was capable of great improvement. The idea of extending and improving the linen-manufacture of Ireland originated from a pamphlet written by Sir William Temple; and this gave riſe to the compact which had been referred to. But though this compact was now about to be diſſolved, it was his opinion that the bounties on importing Iriſh linens ought not to be diſcontinued; becauſe it appeared, that the Britiſh bounties had operated as a great encouragement to the Iriſh manufactures, at the ſame time that the ſum appropriated to this purpoſe amounted to more than 13,000 l.

With regard to the diſſolution of the compact betwixt England and Ireland, he obſerved, that, as a more liberal ſpirit had now appeared on both ſides of the water, he hoped both kingdoms would be perfectly contented. Ireland would never be able to rival England in the fine wollen fabrics; but allowing the Iriſh to manufacture their own wool, would put an end to the contraband trade with France: and it ought to be remembered, that whatever was an advantage to Ireland, muſt, ſooner or later, be of ſingular advantage to Great Britain, and by the propoſed regulations in their commercial connections, the two kingdoms would be put more upon an equality.

With regard to the glaſs manufacture, his lordſhip likewiſe obſerved, that Ireland had been very injuriouſly treated. Before the act of 19th Geo. II. they had begun to make ſome progreſs in the lower branches of the glaſs manufacture; but by that act they were not only prevented from importing any other glaſs than what was of Britiſh manufacture, but alſo from exporting their own glaſs, or putting it on a horſe or carriage with a deſign to be exported. This act had been complained of in Ireland as a great piece of injuſtice, and it was the intention of his propoſition to remove that grievance.

With regard to the third propoſition, his lordſhip obſerved, that allowing Ireland a free trade to the colonies muſt be conſidered as a favour to that kingdom. Conſidering her even as an independent ſtate, ſhe could ſet up no claim to an intercourſe with the Britiſh colonies. By every principle of juſtice, of the laws of nations, and the cuſtom of the other European powers who had ſettlements and diſtant dependencies, the mother country had an excluſive right to trade with, and to forbid all others from having any intercourſe with them. Were not this the caſe, what nation under the ſun would ſpend their blood and treaſure in eſtabliſhing a colony, and protecting and defending it in its infant ſtate, if other nations were afterwards to reap the advantages derived from their labour, hazard, and expence. But though Great Britain had a right to reſtrain Ireland from trading with her colonies, his lordſhip declared himſelf of opinion that it would be proper to allow her to participate of the trade. This would be the only prudent means of affording her relief; it would be an unequivocal proof of the candour and ſincerity of Great Britain; and he had not the leaſt doubt but it would be received as ſuch in Ireland. Britain, however, ought not to be a ſufferer by her bounty to Ireland; but this would be the caſe, ſhould the colony trade be thrown open to the latter, without accompanying it with reſtrictions ſimilar to thoſe which were laid upon the Britiſh trade with them. An equal trade muſt include an equal ſhare of duties and taxes; and this was the only proper ground on which the benefits expected by the Iriſh nation could be either granted or deſired.

88 They are received with great joy by the Iriſh.

Having made ſome other obſervations on the propriety of theſe meaſures, they were regularly formed into motions, and paſſed unanimouſly. In Ireland they were received with the utmoſt joy and gratitude by both houſes of parliament. On the 20th of December the following reſolutions were paſſed; viz. That the exportation of woollen and other manufactures from Ireland to all foreign places will materially tend to relieve its diſtreſſes, increaſe its wealth, promote its proſperity, and thereby advance the welfare of Britain, and the common ſtrength, wealth, and commerce of the Britiſh empire; that a liberty to trade with the Britiſh colonies in America and the Weſt Indies, and the ſettlements on the coaſt of Africa, will be productive of very great commercial benefits; will be a moſt affectionate mark of the regard and attention of Great Britain to the diſtreſſes of the kingdom; and will give new vigour to the zeal of his Majeſty's brave and loyal people of Ireland to ſtand forth in ſupport of his Majeſty's perſon and government, and the intereſt, the honour, and dignity of the Britiſh empire." The ſame reſolutions, were, next day, paſſed in the houſe of peers.

86 Exceſſive eulogiums on Lord North to the diſadvantage of the minority in parliament.

The higheſt encomiums were now paſſed on Lord North. His exertions in favour of Ireland were declared to have been great and noble; he was ſtyled "the great advocate of Ireland;" and it was foretold, that he would be of glorious and immortal memory in that kingdom. But while theſe panegyrics were ſo laviſhly made on the miniſter, the members in oppoſition, in the Britiſh parliament, were ſpoken of in very indifferent terms. It was ſaid, that, while they thought the miniſter did not mean to go into the buſineſs of Ireland, they called loudly for cenſure againſt him for not doing it; but when it was found that he meant ſeriouſly to take their affairs into conſideration, they had then baſely ſeceded, and wholly forſaken the intereſt of the kingdom. Theſe cenſures were ſo loud, that a member, of the Britiſh houſe of commons wrote a letter to be communicated to his friends in Ireland, in which he repreſented, that however politic it might be to compliment the miniſter on the preſent occaſion, it was neither very wiſe nor generous in the members of the Iriſh parliament to be ſo ready in beſtowing invectives againſt their old friends in England. With regard to the miniſter, it was alleged, that until he was driven to it by the meaſures adopted in Ireland, his conduct had been extremely equivocal, dilatory, and indeciſive. The minority had been juſtly incenſed againſt him for having ſo groſsly ſacrificed the honour of the nation and the dignity of parliament as to refuſe any ſubſtantial relief to the Iriſh, until their own exertions had made it appear that every thing which could be done for them by the Britiſh parliament was not a matter of choice but of neceſſity. The minority, it was ſaid, had earneſtly and repeatedly laboured to procure relief for the people of Ireland; and if they had now contented themſelves with a ſilent acquieſcence in the miniſter's propoſitions, it was only until they ſhould know whether they would be ſatisfactory to the people of Ireland; and becauſe what was now done, appeared to be more an act of ſtate than of mere parliamentary deliberation and diſcuſſion.

90 They are checked by a letter from a member of the Britiſh houſe of commons.

91 Additional propoſitions in favour of Ireland.

To the propoſitions already mentioned, Lord North added three others. 1. For repealing the prohibition of exporting gold coin from Great Britain to Ireland. 2. For removing the prohibition to import foreign hops into Ireland, and the drawback on the exportation of foreign hops. 3. For enabling his majeſty's Iriſh ſubjects to become members of the Turkey company, and to export woollens in Britiſh or Iriſh bottoms to the Levant. In ſupport of this laſt reſolution his lordſhip urged, that it was neceſſary, becauſe the exportation of woollens having been granted to Ireland, the Iriſh would naturally expect a ſhare in the Turkey-trade, which, as matters ſtood, was not poſſible, it having hitherto been a received opinion, that no Iriſhman could be elected a member of the Turkey company. Notwithſtanding all the ſatisfaction, however, with which the news of theſe bills were received in Ireland, it was not long before thoughts of a different kind began to take place. It was ſuggeſted, that a free trade could be but of little uſe, if held by a precarious tenure. The repeal of the obnoxious laws was repreſented as an act of neceſſity, not of choice, on the part of the Britiſh parliament. When that neceſſity, therefore, no longer exiſted, the ſame parliament might recal the benefits it had granted, and again fetter the Iriſh trade by reſtrictions perhaps more oppreſſive than before. To ſecure the advantages they now poſſeſſed, it was neceſſary that the kingdom ſhould enjoy the benefits of a free conſtitution. For this the people looked up to the volunteer companies; and the idea of having ſuch a glorious object in their power, augmented the number of thoſe which had alſo been increaſed from other cauſes. They had now received the thanks of both houſes of parliament, and thus had obtained the ſanction of the legiſlature. Thus many who had formerly ſcrupled to connect themſelves with a lawleſs body, made no ſcruple to enter their liſts. Government alſo engaged ſeveral of their friends in the volunteer cauſe. New companies were therefore raiſed; but whatever might be the political ſentiments of the officers, the private men were univerſally attached to the popular cauſe. The national ſpirit was likewiſe kept up by ſeveral patriotic publications, particularly the letters ſigned Owen Roe O'Niel, which in an eſpecial manner attracted the public attention; nor was the pulpit backward in contributing its part in the ſame cauſe.

92 New diſcontents begin to take place.

93 Number of the volunteers increaſed.

94 They form themſelves into battalions.

To give the greater weight to their determinations, the volunteers now began to form themſelves into battalions; and in a very ſhort time they were all united in this manner, excepting a ſmall number of companies, which, from accidental cauſes, continued ſeparate. The newſpapers were filled with reſolutions from the ſeveral corps, declaring Ireland to be an independent kingdom, intitled by reaſon, nature, and compact, to all the privileges of a free conſtitution; that no power in the world, excepting the king, with the lords and commons of Ireland, had or ought to have, power to make laws for binding the Iriſh; and that, in ſupport of theſe rights and privileges, they were determined to ſacrifice their lives and property.

95 Ireland declared an independent kingdom.

96 Servile behaviour of the Iriſh parliament.

Notwithſtanding all this zeal, however, the repreſentatives of the people in Ireland ſeem yet to have behaved in a very ſupine and careleſs manner, and to have been entirely obedient to the dictates of government. One of the houſe of commons declared in the month of April 1780, that "no power on earth, excepting the king, lords, and commons of Ireland, had a right to make laws to bind the people." "Every member in the houſe (ſays Mr Crawford), one excepted, acknowledged the truth of the propoſition, either in expreſs terms, or by not oppoſing it; and yet, however aſtoniſhing it may appear, it was evident, that had the queſtion been put, it would have been carried in the negative. The matter was compromiſed. The queſtion was not put; and nothing relating to it was entered on the journals.

97 Iriſh mutiny bill made perpetual.

98 Bad tendency of it ſet forth by Mr Grattan.

This inattention, or rather unwillingneſs, of the majority to ſerve their country, was more fully manifeſted in the caſe of a mutiny bill, which they allowed to be made perpetual in Ireland, though that in England had always been cautiouſly paſſed only from year to year. After it was paſſed, however, ſome of the zealous patriots, particularly Mr Grattan, took great pains to ſet forth the bad tendency of that act. He obſerved, that ſtanding armies in the time of peace were contrary to the principles of the conſtitution and the ſafety of public liberty; they had ſubverted the liberty of all nations excepting in thoſe caſes where their number was ſmall, or the power of the ſovereign over them limited in ſome reſpect or other; but it was in vain to think of ſetting bounds to the power of the chief magiſtrate, if the people choſe by a ſtatute to bind themſelves to give them a perpetual and irreſiſtible force. The mutiny bill, or martial law methodized, was directly oppoſite to the common law of the land. It ſet aſide the trial by jury and all the ordinary ſteps of law; eſtabliſhing in their ſtead a ſummary proceeding, arbitrary crimes and puniſhments, a ſecret ſentence, and ſudden execution. The object of this was to bring thoſe who were ſubject to it to a ſtate of implicit ſubordination, and render the authority of the ſovereign abſolute. The people of England, therefore, from a laudable jealouſy on all ſubjects in which their liberty was concerned, had in the matter of martial law exceeded their uſual caution. In the preamble to the mutiny act, they recited part of the declaration of right, "that ſtanding armies and martial-law in time of peace, without the conſent of parliament, are illegal. Having then ſtated the purity and ſimplicity of their ancient conſtitution, and ſet forth the great principle of magna charta, they admitted a partial and temporary repeal of it: they admitted an army, and a law for its regulation, but at the ſame time they limited the number of the former, and the duration of both; confining the exiſtence of the troops themſelves, the law that regulated them, and the power that commanded them, to one year. Thus were the ſtanding forces of England rendered a parliamentary army, and the military rendered effectually ſubordinate to the civil magiſtrate, becauſe dependent on parliament. Yet the people of England conſidered the army, even thus limited, only as a neceſſary evil, and would not admit even of barracks, leſt the ſoldier ſhould be ſtill more alienated from the ſtate of a ſubject; and in this ſtate of alienation have a poſt of ſtrength, which would augment the danger ariſing from his ſituation. When the parliament of Ireland proceeded to regulate the army, therefore, they ought to have adopted the maxims of the Britiſh conſtitution, as well as the rules of Britiſh diſcipline. But they had totally departed from the maxims and example of the Engliſh, and that in the moſt important concern, the government of the ſword. They had omitted the preamble which declared the great charter of liberty; they had left the number of forces in the breaſt of the king, and under theſe circumſtances they had made the bill perpetual.

It is probable that the bulk of the Iriſh nation did not at firſt perceive the dangerous tendency of the bill in queſtion. The repreſentations of Mr Grattan and others, however, ſoon opened their eyes, and a general diſſatiſfaction took place. This was much increaſed by two unſucceſsful attempts in the houſe of commons; one to obtain an act for modifying Poyning's law; and the other for ſecuring the independency of the judges. A univerſal diſguſt againſt the ſpiritleſs conduct of parliament now took place; and the hopes of the people were once more ſet on the volunteers.

99 Reviews of the volunteers appointed.

As it became now ſomewhat probable that theſe companies might at laſt be obliged to aſſert the rights of their countrymen by force of arms, reviews were judged neceſſary to teach them how to act in larger bodies, and to give them a more exact knowledge of the uſe of arms. Several of theſe reviews took place in the courſe of ſummer 1780. The ſpectators in general were ſtruck with the novelty and grandeur of the ſight; the volunteers became more than ever the objects of eſteem and admiration, and their numbers increaſed accordingly. The reviews in 1781 exceeded thoſe of the former year; and the dexterity of the corps who had aſſociated more early was now obſerved to be greater than that of the reſt. More than 5000 men were reviewed at Belfaſt, whoſe performances were ſet off to peculiar advantage by the diſplay of 13 pieces of cannon. They ſhowed their alacrity to ſerve their country in the field, on a report having ariſen that the kingdom was to be invaded by the combined fleets of France and Spain; and for their ſpirited behaviour on this occaſion they received a ſecond time the thanks of both houſes of parliament.

100 Shameful conduct of the Iriſh parliament.

101 A general meeting of the volunteers appointed.

Such prodigious military preparations could not but alarm the Britiſh miniſtry in the higheſt degree; and it was not to be doubted that the Iriſh volunteers would come to the ſame extremities the Americans had done unleſs their wiſhes were ſpeedily complied with. Still, however, it was imagined poſſible to ſuppreſs them, and it was ſuppoſed to be the duty of the lord lieutenant to do ſo. It was during the adminiſtration of the duke of Buckingham that the volunteers had grown into ſuch conſequence; he was therefore recalled, and the earl of Carliſle appointed in his place. Though it was impoſſible for the new governor to ſuppreſs the ſpirit of the nation, he found it no difficult matter to obtain a majority in parliament. Thus every redreſs was for the preſent effectually denied. Neither the modification of Poyning's law, nor the repeal of the obnoxious parts of the mutiny bill, could be obtained. The volunteers, exaſperated at this behaviour, reſolved at once to ſhow that they were reſolved to do themſelves juſtice, and were conſcious that they had power to do ſo. At a meeting of the officers of the ſouthern battalion of the Armagh regiment, commanded by the earl of Charlemont, the following reſolutions were entered into December 28th 1781. 1. That the moſt vigorous and effectual methods ought to be purſued for rooting corruption out from the legiſlative body. 2. For this purpoſe a meeting of delegates from all the volunteer aſſociations was neceſſary; and Dungannon, as the moſt central town in the province of Ulſter, ſeemed to be the moſt proper for holding ſuch a meeting. 3. That as many and laſting advantages might attend the holding ſuch a meeting before the preſent ſeſſion of parliament was much farther advanced, the 15th of February next ſhould be appointed for it.

104 Reſolutions of this meeting.

Theſe reſolutions proved highly offenſive to the friends of government, and every method was taken to diſcourage it. On the appointed day, however, the repreſentatives of 143 volunteer corps did attend at Dungannon; and the reſults of their deliberations were as follow. 1. It having been aſſerted, that volunteers, as ſuch, cannot with propriety debate or publiſh their opinions on political ſubjects, or on the conduct of parliament, or public men, it was reſolved unanimouſly, that a citizen, by learning the uſe of arms, does not abandon any of his civil rights. 2. That a claim from any body of men, other than the king, lords, and commons of Ireland, to make laws to bind the people, is illegal, unconſtitutional, and a grievance. 3. Reſolved, with one diſſenting voice only, that the powers exerciſed by the privy council of both kingdoms, under colour or pretence of the law of Poyning's, are unconſtitutional and a grievance. 4. Reſolved unanimouſly, that the ports of this country are by right open to all foreign countries not at war with the king; and that any burden thereupon, or obſtruction thereto, excepting only by the parliament of Ireland, are unconſtitutional, and a grievance. 5. Reſolved, with one diſſenting voice only, that a mutiny bill, not limited in point of duration from ſeſſion to ſeſſion, is unconſtitutional and a grievance. 6. Reſolved unanimouſly, that the independence of judges is equally eſſential to the impartial adminiſtration of juſtice in Ireland as in England, and that the refuſal or delay of this right is in itſelf unconſtitutional and a grievance. 7. Reſolved, with 11 diſſenting voices only, that it is the decided and unalterable determination of the volunteer companies to ſeek a redreſs of theſe grievances; and they pledged themſelves to their country, and to each other, as freeholders, fellow-citizens, and men of honour, that they would, at every enſuing election, ſupport only thoſe who had ſupported them, and would ſupport them therein, and that they would uſe all conſtitutional means to make ſuch purſuit of redreſs ſpeedy and effectual. 8. Reſolved, with only one diſſenting voice, that the minority in parliament, who had ſupported thoſe conſtitutional rights, are intitled to the moſt grateful thanks of the volunteer companies, and that an addreſs to the purpoſe be ſigned by the chairman, and publiſhed with the reſolutions of the preſent meeting. 9. Reſolved unanimouſly, that four members from each county of the province of Ulſter, eleven to be a quorum, be appointed a committee till the next general meeting, to act for the volunteer corps, and to call general meetings of the province as occaſion requires. 10. The committee being appointed, and the time of general meetings, and ſome other affairs of a ſimilar nature ſettled, it was reſolved unanimouſly, that the court of Portugal having unjuſtly refuſed entry to certain Iriſh commodities, the delegates would not conſume any wine of the growth of Portugal, and they would uſe all their influence to prevent the uſe of the ſaid wine, excepting what was then in the kingdom, until ſuch time as the Iriſh exports ſhould be received in the kingdom of Portugal. 11. Reſolved, with only two diſſenting voices, that they hold the right of private judgment in matters of religion equally ſacred in others as in themſelves; and that they rejoiced in the relaxation of the penal laws againſt the Papiſts, as a meaſure fraught with the happieſt conſequences to the union and proſperity of the inhabitants of Ireland.

105 Miniſterial party prevails exceſſively in parliament.

While theſe proceedings took place at Dungannon, the miniſtry carried all before them in parliament. In a debate concerning the excluſive legiſlative privileges of Ireland, a law member, ſpeaking of the arbitrary acts of England, aſſerted, that "power conſtituted right;" and a motion that the commons ſhould be declared the repreſentatives of the people was carried in the negative. Theſe ſcandalous proceedings could not but haſten the ruin of their cauſe. The reſolutions entered into at the Dungannon meeting were received throughout the kingdom with the utmoſt applauſe. A few days after, Mr Grattan, whoſe patriotiſm has been already taken notice of, moved in the houſe of commons for a long and ſpirited addreſs to his majeſty, declaring the rights of the kingdom, and aſſerting the principle which now began to prevail, that Ireland could legally be bound by no power but that of the king, lords, and commons of the country; though the Britiſh parliament had aſſumed ſuch a power. This motion was at preſent rejected by a large majority; but their eyes were ſoon enlightened by the volunteers.

106 Mr Grattan's motion for an addreſs, declaring the independency of Ireland rejected.

Theſe having now appointed their committees of correſpondence, were enabled to communicate their ſentiments to one another with the utmoſt facility and quickneſs. An aſſociation was formed in the name of the nobility, repreſentatives, freeholders, and inhabitants of the county of Armagh, wherein they ſet forth the neceſſity of declaring their ſentiments openly reſpecting the fundamental and undoubted rights of the nation. They declared, that, in every ſituation in life, and with all the means in their power, they would maintain the conſtitutional right of the kingdom to be governed only by the king and parliament of Ireland; and that they would, in every inſtance, uniformly and ſtrenuouſly oppoſe the execution of any ſtatutes, excepting ſuch as derived their authority from the parliament juſt mentioned; and they pledged themſelves, in the uſual manner, to ſupport what they now declared with their lives and fortunes.

107 Declaration of the volunteers to that purpoſe.

This declaration was quickly adopted by all the other counties, and ſimilar ſentiments became univerſally avowed throughout the kingdom. The change in the Britiſh miniſtry in the ſpring of 1782 facilitated the wiſhes of the people. The duke of Portland, who came over as lord lieutenant in April that year, ſent a moſt welcome meſſage to parliament. He informed them, that, "his majeſty, being concerned to find that diſcontents and jealouſies were prevailing among his loyal ſubjects in Ireland, upon matters of great weight and importance, he recommended it to parliament to take the ſame into their moſt ſerious conſideration, in order to ſuch a final adjuſtment as might give mutual ſatisfaction to his kingdoms of Great Britain and Ireland."

108 Favourable meſſage ſent to parliament by the duke of Portland.

109 Mr Grattan's ſecond attempt in favour of his addreſs

Mr Grattan, whoſe patriotic efforts had never been ſlackened, now ventured to propoſe a ſecond time in parliament the addreſs which had been rejected before. On the 16th of April he began a ſpeech to this purpoſe with a panegyric on the volunteers, and the late conduct of the people. The Iriſh, he ſaid, were no longer a divided colony, but an united land, manifeſting itſelf to the reſt of the world in ſignal inſtances of glory. In the reſt of Europe the ancient ſpirit was expired; liberty was yielded, or empire loſt; nations were living upon the memory of paſt glory, or under the care of mercenary armies. In Ireland, however, the people, by departing from the example of other nations, had become an example to them. Liberty, in former times, and in other nations, was recovered by the quick feelings and rapid impulſe of the populace. But in Ireland, at the preſent period, it was recovered by an act of the whole nation reaſoning for three years on its ſituation, and then reſcuing itſelf by a ſettled ſenſe of right pervading the land. The meeting of the delegates at Dungannon was an original meaſure; and, like all of that kind, continued to be matter of ſurpriſe, until at laſt it became matter of admiration. Great meaſures, ſuch as the meeting of the Engliſh at Runny Mead, and of the Iriſh at Dungannon, were not the conſequences of precedent, but carried in themſelves both precedent and principle; and the public cauſe in both inſtances would infallibly have been loſt had it been truſted to parliament. The meeting at Dungannon had reſolved, that the claim of the Britiſh parliament was illegal; and this was a conſtitutional declaration. The Iriſh volunteers were aſſociated for the preſervation of the laws, but the conduct of the Britiſh parliament ſubverted all law. England, however, had no reaſon to fear the Iriſh volunteers; they would ſacrifice their lives in her cauſe. The two nations formed a general confederacy. The perpetual annexation of the crown was a great bond, but magna charta was a greater. It would be eaſy for Ireland to find a king; but it would be impoſſible to find a nation who could communicate to them ſuch a charter as magna charta; and it was this which made their natural connection with England. The Iriſh nation were too high in pride, character, and power, to ſuffer any other nation to make their laws. England had indeed brought forward the queſtion, not only by making laws for Ireland the preceding ſeſſion, but by enabling his majeſty to repeal all the laws which England had made for America. Had ſhe conſented to repeal the declaratory law againſt America? and would ſhe refuſe to repeal that againſt Ireland? The Iriſh nation were incapable of ſubmitting to ſuch a diſtinction.

110 It is agreed to.

111 Subſtance of the addreſs.

Mr Grattan now found his eloquence much more powerful than formerly. The motion which, during this very ſeſſion, had been rejected by a great majority, was now agreed to after a ſhort debate, and the addreſs to his majeſty prepared accordingly. In this, after thanking his majeſty for his gracious meſſage, and declaring their attachment to his perſon and government, they aſſured him, that the ſubjects of Ireland are a free people; that the crown of Ireland is an Imperial crown inſeparably annexed to that of Britain, on which connection the intereſts and happineſs of both nations eſſentially depend: but the kingdom of Ireland is diſtinct, with a parliament of its own: that there is no body of men competent to make laws to bind Ireland, except the king, lords, and commons thereof, nor any other parliament that hath any power or authority of any ſort whatſoever, in this country, except the parliament of Ireland. They aſſured his majeſty, that they humbly conceive, that in this right the very eſſence of their liberties did exiſt; a right which they, on the part of all Ireland, do claim as their birthright, and which they cannot yield but with their lives. They aſſured his majeſty, that they had ſeen with concern certain claims advanced by the parliament of Great Britain, in an act intitled, "For the better ſecuring the dependency of Ireland;" an act containing matter entirely irreconcileable to the fundamental rights of the nation. They informed his majeſty, that they conceived this act, and the claims it advanced, to be the great and principal cauſe of the diſcontents and jealouſies in the kingdom. They aſſured him, that his commons did moſt ſincerely wiſh, that all the bills, which become law in Ireland, ſhould receive the approbation of his majeſty under the ſeal of Great Britain; but yet, that they conceived the practice of ſuppreſſing their bills in the council of Ireland, or altering them any where, to be another juſt cauſe of diſcontent and jealouſy. They further aſſured his majeſty, that an act intitled, "For the better accommodation for his majeſty's forces," being unlimited in duration, and defective in ſome other circumſtances, was another juſt cauſe of jealouſy and diſcontent. Theſe, the principal cauſes of jealouſies and diſcontent in the kingdom, they had ſubmitted to his majeſty, in humble expectation of redreſs: and they concluded with an aſſurance, that they were more confident in the hope of obtaining redreſs, as the people of Ireland had been, and were, not more diſpoſed to ſhare the freedom of England, than to ſupport her in her difficulties, and to ſhare her fate.

112 It is graciouſly received.

To this remarkable addreſs a moſt gracious anſwer was given. In a few days the lord lieutenant made a ſpeech to both houſes; in which he informed them, that, by the magnanimity of the king, and wiſdom of the Britiſh parliament, he was enabled to aſſure them, that immediate attention had been paid to their repreſentations, and that the legiſlature of Britain had concurred in a reſolution to remove the cauſes of their diſcontents, and were united in a deſire to gratify every wiſh expreſſed in the late addreſs to the throne; and that, in the mean time, his majeſty was graciouſly diſpoſed to give his royal aſſent to acts to prevent the ſuppreſſing of bills in the Iriſh privy council, and to limit the mutiny-bill to the term of two years.

113 Extreme joy of the Iriſh.

114 Mr Grattan rewarded.

The joy which now diffuſed itſelf all over the kingdom was extreme. The warmeſt addreſſes were preſented not only to his majeſty but to the lord lieutenant. The commons inſtantly voted 100,000 l. to his majeſty, to enable him to raiſe 20,000 men for the navy; and ſoon after, 5000 men were likewiſe voted from the Iriſh eſtabliſhment. The volunteers became in a peculiar manner the objects of gratitude and univerſal panegyric; but none was placed in ſo conſpicuous a light as Mr Grattan. Addreſſes of thanks flowed in upon him from all quarters; and the commons addreſſed his majeſty to give him 50,000 l. as a recompenſe of his ſervices: for which they promiſed to make proviſion.

115 Jealouſies begin to revive.

This requeſt was alſo complied with; but ſtill the jealouſies of the Iriſh were not completely eradicated. As the intended repeal of the declaratory act was found to be ſimple, without any clauſe expreſly relinquiſhing the claim of right, ſeveral members of the houſe of commons were of opinion, that the liberties of Ireland were not yet thoroughly ſecured. The majority, however, were of opinion, that the ſimple repeal of the obnoxious act was ſufficient; but many of the nation at large differed in ſentiments. Mr Flood, a member of the houſe, and a zealous patriot, now took the lead in this matter; while Mr Grattan loſt much of his popularity by eſpouſing the contrary opinion. The matter, however, was to appearance finally ſettled by the volunteers, who declared themſelves on Mr Grattan's ſide. Still ſome murmurings were heard; and it muſt be owned, that even yet the conduct of Britain appeared equivocal. 116 Equivocal conduct of Britain. An Engliſh law was paſſed, *permitting* importation from one of the Weſt India Iſlands to all his majeſty's dominions; and of courſe including Ireland, though the trade of the latter had already been declared abſolutely free. This was looked upon in a very unfavourable light. Great offence was alſo taken at a member of the Engliſh houſe of lords for a ſpeech in parliament, in which he aſſerted, that Great Britain had a right to bind Ireland in matters of an external nature; and propoſed to bring in a bill for that purpoſe. The public diſcontent was alſo greatly inflamed by ſome circumſtances relating to this bill, which were particularly obnoxious. Lord Beauchamp, in a letter addreſſed to one of the volunteer corps, was at pains to ſhow that the ſecurity of the legiſlative privileges obtained from the parliament of Britain was inſufficient. The lawyers corps alſo, who took the queſtion into conſideration, were of the ſame opinion; but the circumſtance which gave the greateſt offence was, that the chief juſtice in the Engliſh court of king's bench gave judgment in an Iriſh cauſe directly contrary to a law which had limited all ſuch judgments to the firſt of June. All theſe reaſons of diſcontent, however, were removed on the death of the marquis of Rockingham, and the appointment of the new miniſtry who ſucceeded him. 117 Affairs finally ſettled under the adminiſtration of Lord Temple. Lord Temple came over to Ireland, and his brother and ſecretary Mr Grenville went to England, where he made ſuch repreſentations of the diſcontents which prevailed concerning the inſufficiency of the declaratory act, that Mr Townſhend, one of the ſecretaries of ſtate, moved in the houſe of commons for leave to bring in a bill to remove from the minds of the people of Ireland all doubts reſpecting their legiſlative and judicial privileges. This bill contained, in the fulleſt and moſt expreſs terms, a relinquiſhment on the part of the Britiſh legiſlature of all claims of a right to interfere with the judgment of the Iriſh courts, or to make laws to bind Ireland in time to come. Thus the conteſt was at laſt ended; and ever ſince this kingdom has continued to flouriſh, and to enjoy the bleſſings of tranquillity and peace, free from every kind of reſtriction either on its commerce or manufactures.

118 Climate &c. of Ireland. The climate of Ireland would almoſt perfectly agree with that of England, were the ſoil equally improved, being abundantly fruitful both in corn and graſs, eſpecially the latter; in conſequence of which, an infinite number of black cattle and ſheep are bred, particularly in the province of Connaught. Few countries produce finer grain than that which grows in the improved parts of this kingdom. The northern and eaſtern counties are beſt cultivated and incloſed, and the moſt populous.

Ireland is known to have many rich mines; and there is no inconſiderable proſpect of gold and ſilver in ſome parts of the kingdom. No country in the world abounds more in beautiful lakes, both freſh and ſalt water ones; and it is alſo plentifully watered with many beautiful rivers. The commodities which Ireland exports, as far as her preſent trade will permit, are hides, tallow, beef, butter, cheeſe, honey, wax, hemp, metals, and fiſh: wool and glaſs were, till December 23. 1779, prohibited; but her linen trade is of late grown of very great conſequence. England, in the whole, is thought to gain yearly by Ireland upwards of 1,400,000l. and in many other reſpects ſhe muſt be of very great advantage to that kingdom. Formerly, indeed, ſhe was rather a burden to her elder ſiſter than any benefit; but the times are changed now, and improve every day.

119 Linen manufacture early introduced. Mr O'Halloran ſays, the linen manufacture was carried on in Ireland in very early days to a great extent; and Gratianus Lucius quotes a deſcription of the kingdom, printed at Luyden in 1627; in which the author tells us, "That this country abounds with flax, which is ſent ready ſpun in large quantities to foreign nations. Formerly (ſays he) they wove great quantities of linen, which was moſtly conſumed at home, the natives requiring above 30 yards of linen in a ſhirt or ſhift." So truly expenſive was the Iriſh faſhion of making up ſhirts, on account of the number of plaits and folds, that, in the reign of Henry VIII. a ſtatute paſſed, by which they were forbidden, under a ſevere penalty, to put more than ſeven yards of linen in a ſhirt or ſhift.

We may form ſome idea of what the trade of Ireland muſt have been in former times, when, ſo late as the reign of Brien Boru, who died in 1014, notwithſtanding the ravages and diſtreſſes which a Daniſh war, of above 200 years continuance, muſt have produced throughout the kingdom, the annual duties ariſing from goods imported into the ſingle port of Limerick, and paid in red wine, amounted to 365 pipes! Even ſo lately as the laſt century, it is ſcarcely credible what riches this city derived from the bare manufacture of ſhoes, which were exported in amazing quantities; whereas now, inſtead of ſhoes and boots, we ſee the raw hides ſhipped off for foreign markets.

No country in the world ſeems better ſituated for a maritime power than Ireland, where the ports are convenient to every nation in Europe, and the havens ſafe and commodious. The great plenty of timber, the ſuperior excellence of the oak, and the acknowledged ſkill of her ancient artizans in wood-works, are circumſtances clearly in her favour. That the Iriſh formerly exported large quantities of timber, is manifeſt from the churches of Glouceſter, Weſtminſter-monaſtery and palace, &c. being covered with Iriſh oak.

120 Government, population, &c. The government of the kingdom is in the hands of a viceroy, or lord-lieutenant, who lives in very great ſplendor. In his abſence there are lords-juſtices (ſtyled their *excellencies*), generally three in number, viz. lord primate, lord high chancellor, and the ſpeaker of the houſe of commons. The parliament of Ireland meet every other winter, or oftener, according to exigencies.

Ireland is divided into four large provinces, and thoſe again into 32 counties, as follows.

I. ULSTER.

Counties.	*Houſes.*	*Extent*, &c.	
1. Antrim	20738	Length 68 } miles	{ 460 circumfer.
2. Armagh	13125	Breadth 98 }	
3. Cavan	9268	Iriſh plantations.	
4. Down	26090	Acres, 2836837	4496205
5. Donnegal	12357	Pariſhes, 365	[Engliſh
6. Fermanagh	5674	Boroughs, 29	
7. Londonderry	14527	Baronies, 55	
8. Monaghan	26637	Archbiſhop. 1	
9. Tyrone	16545	Biſhoprics, 6	
		Market-towns, 58	

II. LEINSTER.

1. Caterlogh, or Carlow	5444	Leng. 104 } miles	{ 360 circumfer.
		Bread. 55 }	
2. Dublin	24145	Ir. acr. 2642958, or	4281155
3. Kildare	8887	Pariſhes, 858	[Engliſh
4. Kilkenny	3231	Boroughs, 53	
5. King's-county	9294	Baronies, 99	
6. Longford	6057	Market towns, 63	
7. Lowth	8150	Archbiſhopric, 1	
8. Meath (Eaſt)	14000	Biſhoprics, 3	
9. Queen's county	11226	The rivers are, the Boyne, Barrow, Liffy, Noir, and the May.	
10. Weſtmeath	9621		
11. Wexford	13015		
12. Wicklow	7781		

III. MUNSTER.

1. Clare	11381	Leng. 100 } miles	{ 600 circumfer-
2. Cork	47334	Bread. 107 }	
3. Kerry	11653	Acres 3289932,	5329146
4. Limerick	19380	Pariſhes, 740	[Engliſh
5. Tipperary	18325	Boroughs, 26	
6. Waterford	9485	Baronies, 63	
		Houſes, 117197	
		Archbiſhopric, 1	
		Biſhops, 6	

IV. CONNAUGHT.

1. Galway	15576	Leng. 90 { miles	} 500 circumfer.
		Bread. 80 {	
2. Leitrim	5156	Acres, 2272915,	3681746,
		Pariſhes, 330	[Engliſh
3. Mayo	15089	Boroughs, 10	
		Baronies, 43	
4. Roſcommon	8780	Archbiſhopric, 1	
		Biſhop, 1	
5. Sligo	5970	Houſes, 49966	
		Rivers are the Shannon, May, Suck, and Gyll.	

In 1731, while the duke of Dorſet was lord-lieutenant, the inhabitants were numbered, and it was found that the four provinces contained as follows:

	Proteſtants	Papiſts
Connaught	21604	221780
Leinſter	203087	447916
Munſter	115130	482044
Ulſter	360632	158020
	700453	1309768

There are 44 charter working-ſchools at preſent in Ireland, wherein 2025 boys and girls are maintained and educated. Theſe ſchools are maintained by an annual bounty of 1000 l. by a tax upon hawkers and pedlars, and by ſubſcriptions and legacies. The children admitted are thoſe born of Popiſh parents, or ſuch as would be bred Papiſts if neglected, and are ſound of limbs. Their age muſt be from ſix to ten; the boys at 16, and the girls at 14, are apprenticed into Proteſtant families. The firſt ſchool was opened in 1734. Five pounds are given to every perſon educated in theſe ſchools upon his or her marrying a Proteſtant. An Engliſh act of parliament, lately tolerated the Catholic religion in Ireland, and by that means has relieved thouſands of uſeful ſubjects.

The return of houſes in Ireland for the year 1754, was 395,439; and for the year 1766, it was 424,046. Suppoſing therefore the numbers to have increaſed at the ſame rate, the number of houſes now cannot be leſs than 454,130; which, allowing five perſons to a family, will make the number of inhabitants 2,260,650; but as the return of houſes by hearth-collectors is rather under than above the truth, and as there are many families in every pariſh who are by law excuſed from that tax, and therefore not returned, the number on a moderate eſtimate will be 2,500,000. Sir W. Petty reckoned 160,000 cabins without a chimney; and if there be an equal number of ſuch houſes now, the number of people will be above 3,000,000. Mr Molyneux ſays, "Ireland has certainly been better inhabited formerly; for on the wild mountains between Ardmach and Dundalk, are obſervable the marks of the plough, as they are alſo on the mountains of Altmore. The ſame has been obſerved in the counties of Londonderry and Donnegal. Mountains that are now covered with bogs have been formerly ploughed; for when you dig five or ſix feet deep, you diſcover a ſoil proper for vegetation, and find it ploughed into ridges and furrows: a plough was found in a very dead bog near Donnegal; and an hedge, with ſome wattles, ſtanding under a bog that was five or ſix feet in depth. The ſtump of a large tree was found in a bog ten feet deep at Caſtle-Forbes; the trunk had been burnt, and ſome of the cinders and aſhes ſtill were lying on the ſtump. Mr Molyneux further ſays, that on the top of an high mountain, in the north, there were then remaining the ſtreets and other marks of a large town.

121
Appearance and character of the inhabitants.

Beauty ſeems to be more diffuſed in England, among the lower ranks of life, than in Ireland; which may, however, be attributed to the mere modes of living. In England, the meaneſt cottager is better fed, better lodged, and better dreſſed, than the moſt opulent farmers here, who, unaccuſtomed to what Engliſh peaſants reckon the comforts of life, know no luxury but in deep potations of aquavitæ.

From this circumſtance, we may account for a fact reported by the officers of the army here. They ſay, that the young fellows of Ireland, who offer to enliſt, are more generally below the given height than in England. There can be no appeal from their teſtimony; for they were Iriſh, and the ſtandard is an infallible teſt. No reaſon, indeed, can be given why the cauſes which promote or prevent the growth of other animals, ſhould not have ſimilar effects upon the human ſpecies. In England, where there is no ſtint of proviſions, the growth is not checked; but, on the contrary, it is extended to the utmoſt bound of nature's ture's original intention: whereas, in Ireland, where food is neither in the ſame quantity nor of the ſame quality, the body cannot expand itſelf, but is dwarfed and ſtunted in its dimenſions. The gentlemen of Ireland are full as tall as thoſe of England; the difference, then, between them and the commonalty, can only proceed from the difference of food.

The inhabitants, in general, of this kingdom, are very far from what they have too often and unjuſtly been repreſented by thoſe of Britain who never ſaw them, a nation of wild Iriſh. Miſerable and oppreſſed, as by far too many of them are, an Engliſhman will find as much civility in general, as amongſt the ſame claſs in his own country; and for a ſmall pecuniary conſideration, they will exert themſelves to pleaſe you as much as any people, perhaps in the world. Poverty and oppreſſion will naturally make mankind ſour, rude, and unſociable, and eradicate, or at leaſt ſuppreſs, all the more amiable principles and paſſions of humanity. But it ſhould ſeem unfair and ungenerous to judge of, or decide againſt, the natural diſpoſition of a man reduced by indigence and oppreſſion almoſt to deſperation. Let commerce, agriculture, and arts, but call forth the dormant activity of their genius, and rouſe the native ſpirit of enterprize, which now lies torpid within them; let liberal laws unfetter their minds, and plenty cheer their tables; they will ſoon ſhow themſelves deſerving to rank with the moſt reſpectable ſocieties in Europe.

122 Account of the bogs in Ireland. The bogs wherewith Ireland is in ſome places overgrown, are not injurious to health, as is commonly imagined; the watery exhalations from theſe are neither ſo abundant nor ſo noxious as thoſe from marſhes, which become prejudicial from the various animal and vegetable ſubſtances which are left to putrify as ſoon as the waters are exhaled by the ſun. Bogs are not, as one might ſuppoſe from their blackneſs, maſſes of putrefaction; but, on the contrary, they are of ſuch a texture, as to reſiſt putrefaction above any other ſubſtance we know of. A ſhoe, all of one piece of leather, very neatly ſtitched, was taken out of a bog ſome years ago, yet entirely freſh;—from the very faſhion of which, there is ſcarce room to doubt that it had lain there ſome centuries. Butter, called *rouſkin*, hath been found in hollowed trunks of trees, where it had been hid ſo long, that it was become hard and almoſt friable, yet not devoid of unctuoſity; that the length of time it had been buried was very great, we learn from the depth of the bog, which was ten feet, that had grown over it. But the common phenomenon of timber-trees dug out of theſe bogs not only ſound, but alſo ſo embalmed as afterwards to defy the injuries of time, demonſtrate the antiſeptic quality of them. The horns of the mooſe-deer muſt have lain many centuries in a bog; for the Iriſh hiſtories do not recognize the exiſtence of the animal whereon they grew. Indeed, human bodies have, in many places, been dug up entire, which muſt have lain there for ages. The growth of bogs, however, is variable in different places, from the variety of conditions in the ſituation, ſoil, humidity, and quantity of vegetable food; in ſome places it is very rapid, in others very ſlow; and therefore their altitudes cannot afford any certain meaſure of time. In the manufacturing counties of the north, peat-fuel has become ſo ſcarce, that turburies let from five to eight guineas an acre. In ſome places they are ſo eradicated, there does not remain a trace of them, the ground being now converted into rich meadows and ſweet paſtures.

123 Trade of Ireland on the increaſe. If we truſt to authorities, we muſt conclude that Ireland was not originally inferior to England, either in the fertility of the ſoil or ſalubrity of the climate. When this country ſhall have felt the happy effects of the late conceſſions and indulgencies of the Britiſh parliament, by repealing ſeveral acts which reſtrained the trade of this kingdom with foreign ports, and allowing the exportation of woollen manufactures and glaſs, and ſhall have received further indulgencies from the ſame authority; and when the ſpirit of induſtry ſhall be infuſed, in conſequence of it, into the common people; their country will not be inferior to any other on the globe under the ſame parallel. It is very difficult to ſay, whether foreign or domeſtic cauſes have operated moſt powerfully in laying waſte this fruitful country; which, by being relieved from their late unnatural prohibitions, will be enabled to furniſh a grand proportion of ſupplies to Great Britain, and will unavoidably become of vaſt importance, by its reciprocal trade, in reſtraining the increaſe of that of France, who cannot carry on this important branch of traffic without the aſſiſtance of Iriſh wool. The wool of France is ſhort and coarſe, being, in the language of the manufacturers, neither fine in the thread nor long in the ſtaple. This obliges them to have recourſe to the wool of Ireland, which poſſeſſes both theſe qualities. Aſſiſted by a pack of Iriſh wool, the French are enabled to manufacture two of their own; which they will no longer be enabled to procure, as the Iriſh will now work up their own wool which they uſed to export; great part of which found its way to France, and enabled them to ſupply other markets, to the great prejudice of Britain. The happy effects of it have been already felt; for notwithſtanding it was ſo late as December 23. 1789, that the royal aſſent was given to the taking off their reſtraints on woollen exports, it appears, that on January 10th following, an export entry was made at the cuſtom-houſe of Dublin of 1300 yards of ſerge for a foreign market, by William Worthington, Eſq.

IRENÆUS (St), a biſhop of Lyons, was born in Greece about the year 120. He was the diſciple of Pappias and St Polycarp, by whom, it is ſaid, he was ſent into Gaul in 157. He ſtopped at Lyons, where he performed the office of a prieſt; and in 178 was ſent to Rome, where he diſputed with Valentinus, and his two diſciples Florinus and Blaſtus. At his return to Lyons, he ſucceeded Photinus, biſhop of that city; and ſuffered martyrdom in 202, under the reign of Severus. He wrote many works in Greek, of which there only remains a barbarous Latin verſion of his five books againſt heretics, ſome Greek fragments in different authors, and pope Victor's letter mentioned by Euſebius. The beſt editions of his works are thoſe of Eraſmus, in 1526; of Grabe, in 1702; and of Father Maſſuet, in 1710. St Irenæus's ſtyle is cloſe, clear, and ſtrong, but plain and ſimple. Dodwell has compoſed ſix curious diſſertations on the works of St Irenæus.

He ought not to be confounded with St Irenæus the deacon, who in 275 ſuffered martyrdom in Tuſcany, under the reign of Aurelian; nor with St Iræneus, biſhop of Sirmich, who ſuffered martyrdom on the 25th of March 304, during the perſecution of Diocleſian and Maximianus.

IRENE, empreſs of the eaſt, celebrated for her valour, wit, and beauty; but deteſtable for her cruelty, having ſacrificed her own ſon to the ambition of reigning alone. She died in 803.

IRESINE, in botany: A genus of the pentandria order, belonging to the diœcia claſs of plants; and in the natural method ranking under the 54th order *Miſcellaneæ*. The male calyx is diphyllous, the corolla pentapetalous; and there are five nectaria. The female calyx is diphyllous, the corolla pentapetalous; there are two ſeſſile ſtigmata, and a capſule with flocky ſeeds.

IRIS, in phyſiology, the rainbow. The word is Greek, *ιρις*, ſuppoſed by ſome to be derived from *ειρω* "I ſpeak, I tell;" as being a meteor that is ſuppoſed to foretel, or rather to declare rain. See RAINBOW.

Lunar IRIS, or *Moon-rainbow*. See RAINBOW (*Lunar*).

IRIS, in anatomy, a ſtriped variegated circle round the pupil of the eye, formed of a duplicature of the uvea. See ANATOMY, p. 767.

IRIS is alſo applied to thoſe changeable colours which ſometimes appear in the glaſſes of teleſcopes, microſcopes, &c. ſo called from their ſimilitude to a rainbow. The ſame appellation is alſo given to that coloured ſpectrum, which a triangular priſmatic glaſs will project on a wall, when placed at a due angle in the ſun-beams.

IRIS, the *Flower de Luce*, or Flag-flower, &c. in botany: A genus of the monogynia order, belonging to the triandria claſs of plants; and in the natural method ranking under the ſixth order, *Enſatæ*. The corolla is divided into ſix parts; the petals alternately reflexed; the ſtigmata reſembling petals.

There are 44 ſpecies, all herbaceous flowering perennials, both of the fibrous, tuberous, and bulbous rooted kind, producing thick annual ſtalks from 3 or 4 inches to a yard high, terminated by large hexapetalous flowers, having three of the petals reflexed quite back and three erect; moſt of which are very ornamental, appearing in May, June, and July.

Culture. All the ſpecies are eaſily propagated by offſets from the roots, which ſhould be planted in September, October, or November, though almoſt any time from September to March will do. They may alſo be raiſed from ſeed, which is the beſt method for procuring varieties. It is to be ſown in autumn, ſoon after it ripens, in a bed or border of common earth, and raked in. The plants will riſe in the ſpring, and are to be tranſplanted next autumn.

Properties. The roots of the Florentine white iris, when dry, are ſuppoſed to have a pectoral virtue. They have an agreeable ſmell, reſembling that of violets; and hence are uſed in perfumes, and in flavouring of liquors. When recent, they have a bitter, acrid, nauſeous taſte; and when taken into the body, prove ſtrongly cathartic; on which account they have been recommended in dropſies, in the doſe of three or four ſcruples.—The juice of the ſpecies called *baſtard acorus*, or *yellow flag-flower*, is alſo very acrid, and hath been found to produce plentiful evacuations from the bowels when other means had failed. For this purpoſe, it may be given in doſes of 80 drops every hour or two; but the degree of its acrimony is ſo uncertain, that it can hardly ever come into general uſe. The freſh roots have been mixed with the food of ſwine bitten by a mad dog, and they eſcaped the diſeaſe, when others, bitten by the ſame dog, died raving mad. Goats eat the leaves when freſh; but cows, horſes, and ſwine, refuſe them. Cows will eat them when dry. The roots are uſed in the iſland of Jura for dying black.—The roots or bulbs of a ſpecies growing at the Cape, are roaſted in the aſhes and uſed as food by the natives: they are called *oenkjes*, and have nearly the ſame taſte with potatoes. The Hottentots, with more reflection than generally falls to the ſhare of ſavages, uſe the word *oenkjes* in the ſame ſenſe in which Virgil uſed that of *ariſtæ*, that is, for reckoning of time; always beginning the new year whenever the *oenkjes* puſh out of the ground, and marking their age and other events by the number of times in which in a certain period this vegetable has made its appearance.—The Siberians cure the venereal diſeaſe by a decoction of the root of the *Iris Siberica*, which acts by purging and vomiting. They keep the patient eight days in a ſtove, and place him in a bed of the leaves of the *arctium lappa*, or common burdock, which they frequently change till the cure is effected.

Iris-Stone. See *Moon-Stone*.

IRON, one of the imperfect metals, but the hardeſt and moſt uſeful as well as the moſt plentiful of them all, is of a livid whitiſh colour inclining to grey, and internally compoſed to appearance of ſmall facets; ſuſceptible of a fine poliſh, and capable of having its hardneſs more increaſed or diminiſhed by certain chemical proceſſes than any other metal.

1
Diffuſed almoſt all over the globe.

It is very generally diffuſed throughout the globe, being frequently found mixed with ſand, clay, chalk, and being likewiſe the colouring matter of a great number of ſtones and earth. It is found alſo in the aſhes of vegetables, and in the blood of animals, in ſuch abundance, that ſome authors have attributed both the colours of vegetables and of the vital fluid itſelf to the iron contained in them. In conſequence of this abundance the iron ores are extremely numerous.

2
Found native in Siberia, Senegal, &c.

1. Native iron, formerly thought not to have an exiſtence any where, is now certainly known to have been met with in ſeveral places. It is, however, by no means common, but occurs ſometimes in iron mines. Margraaff found a fibrous kind of it at Eibenſtock in Saxony, and Dr Pallas found a maſs in Siberia weighing 1600 pounds. Mr Adanſon likewiſe informs us, that native iron is common about Senegal; but ſome naturaliſts are of opinion that theſe pieces which have been taken for native iron, are in reality artificial, and have been accidentally buried in the earth. The large piece mentioned by Dr Pallas is of that ſpecies called *red ſhort*, which is malleable when cold, but brittle when red hot.—A maſs of a ſimilar nature is ſaid to have been lately found in South America.

Phil. Tranſ. vol. 78.

This American maſs of iron was diſcovered by ſome Indians in the diſtrict of Santiago del Eſtero in the midſt of a wide extended plain. It projected about a foot above the ground, and almoſt the whole of its upper ſurface was viſible; and the news of its being found in a country where there are no mountains, nor even the ſmalleſt ſtone within a circumference of 100 leagues, could not but be very ſurpriſing. Though the journey was attended with great danger on account of the want of water, and abundance of wild beaſts in theſe deſerts, ſome private perſons, in hopes of gain, undertook to viſit this maſs; and having accompliſhed their journey, ſent a ſpecimen of the metal to Lima and Madrid, where it was found to be very pure ſoft iron.

As it was reported that this maſs was only the extremity of an immenſe vein of the metal, a commiſſion was given to Don Michael Rubin de Celis to examine the ſpot; and the following is an abſtract of his account.

" The place is called *Otumpa*, in lat. 27. 28. S. and the maſs was found almoſt buried in pure clay and aſhes. Externally it had the appearance of very compact iron; but internally was full of cavities, as if the whole had been formerly in a liquid ſtate. I was confirmed in this idea (ſays our author), by obſerving, on the ſurface of it, the impreſſion of human feet and hands of a large ſize, as well as of the feet of large birds, which are common in this country. Though theſe impreſſions ſeem very perfect, yet I am perſuaded that they are either a *luſus naturæ*, or that impreſſions of this kind were previouſly upon the ground, and that the liquid maſs of iron falling upon it received them. It reſembled nothing ſo much as a maſs of dough; which having been ſtamped with impreſſions of hands and feet, and marked with a finger, had afterwards been converted into iron.

" On digging round the maſs, the under ſurface was found covered with a coat of ſcoriæ from four to ſix inches thick, undoubtedly occaſioned by the moiſture of the earth, becauſe the upper ſurface was clean. No appearance of generation was obſerved in the earth below or round it to a great diſtance. About two leagues to the eaſtward is a brackiſh mineral ſpring, the only one to be met with in all the country. Here there was a very gentle aſcent of between four and ſix feet in height, running from north to ſouth; all the reſt being as perfect a level as can be imagined. The earth in every part about this ſpring, as well as near the maſs, is very light, looſe, and greatly reſembling aſhes even in colour. The graſs of the adjacent parts is very ſhort, ſmall, and extremely unpalatable to cattle; but that at a diſtance is long and extremely grateful to them: from all which circumſtances it is probable that this maſs was produced by a volcanic exploſion. Its weight might be eſtimated at about 300 quintals.—It is likewiſe an undoubted fact, that in theſe foreſts there exiſts a maſs of pure iron in the ſhape of a tree with its branches. At a little depth in the earth are found ſtones of quartz of a beautiful red colour, which the honey-gatherers, the only perſons who frequent this country, make uſe of as flints to light their fires. They had formerly carried ſome of them away on account of their peculiar beauty, being ſpotted and ſtudded as it were with gold. One of theſe, weighing about an ounce, was ground by the governor of the diſtrict, who extracted from it a drachm of gold."

The native iron ſaid to have been found about Senegal has a cubical form; and out of this the black inhabitants make different kinds of veſſels for their own uſe. Some maſſes have been found in a polyhedral granulated form, and of a bright yellow colour; but, which, on being poliſhed, ſhow the proper colour of the metal. Mr Bergman informs us, that the great maſs of native metal found in Siberia reſembles forged iron in its compoſition, a centenary, or 63 grains, yielding 49 cubic inches of inflammable air; and from many experiments it appears, that ductile iron yields from 48 to 51 cubic inches of the ſame kind of air. Dr Matthew Guthrie informs us, that "the pores of this iron were filled with a yellow vitreous matter, of ſuch hardneſs as to cut glaſs." The cells are lined with a kind of varniſh contiguous to the glaſſy ſubſtance within.

3 Calciform ores,

2. The *calciform ores* are either compoſed of the blackiſh, blackiſh-brown, or red calx of the metal; the former being in ſome meaſure magnetic, in conſequence of the phlogiſton it contains; the latter ſhowing nothing of this property until it be roaſted.

The name of *calciform* may be applied to all the ores of this metal, excepting the native iron already mentioned, and the native Pruſſian blues, of which we ſhall afterwards treat. All of them are mixed with different minerals, and generally take their colour from that of the calx of iron which is prevalent in them. Mr Kirwan enumerates a great many different ſpecies.

4 Steel ore.

3. *Steel ore, Stachlerz*, the *ferrum chalybeatum Linnæi*, and *minera ferre nigra* of *Cronſtedt*. This is of a dark colour, ſolid and compact, but with difficulty ſtriking fire with ſteel; reducible to a black powder, obedient to the magnet, and ſomewhat malleable when red hot: affording from 60 to 80 *per cent.* of good iron. It is met with in Sweden, the Iſle of Elbe, and North America. The *ferrum teſſulare* and *minera ferri cryſtallizata* of Wallerius, belongs to this ſpecies, but is ſomewhat leſs magnetic. Our author denominates it cryſtallized iron ore in an octohedral or cubic form.

5 Magnet.

4. The *magnet*, according to Fourcroy, is a muddy iron ore, which, however, ſome authors ſuppoſe to be very near the metallic ſtate. Mr Kirwan ſays it differs but little from the foregoing, only that it has leſs luſtre. There are two kinds, the fine and the coarſe grained, of which the latter loſe their power the ſooneſt. When heated red hot, it ſmells of ſulphur. Our author thinks it may contain nickel, as this ſemi-metal is found to poſſeſs a magnetic property when purified to a certain degree.

6 Suppoſed to contain nickel.

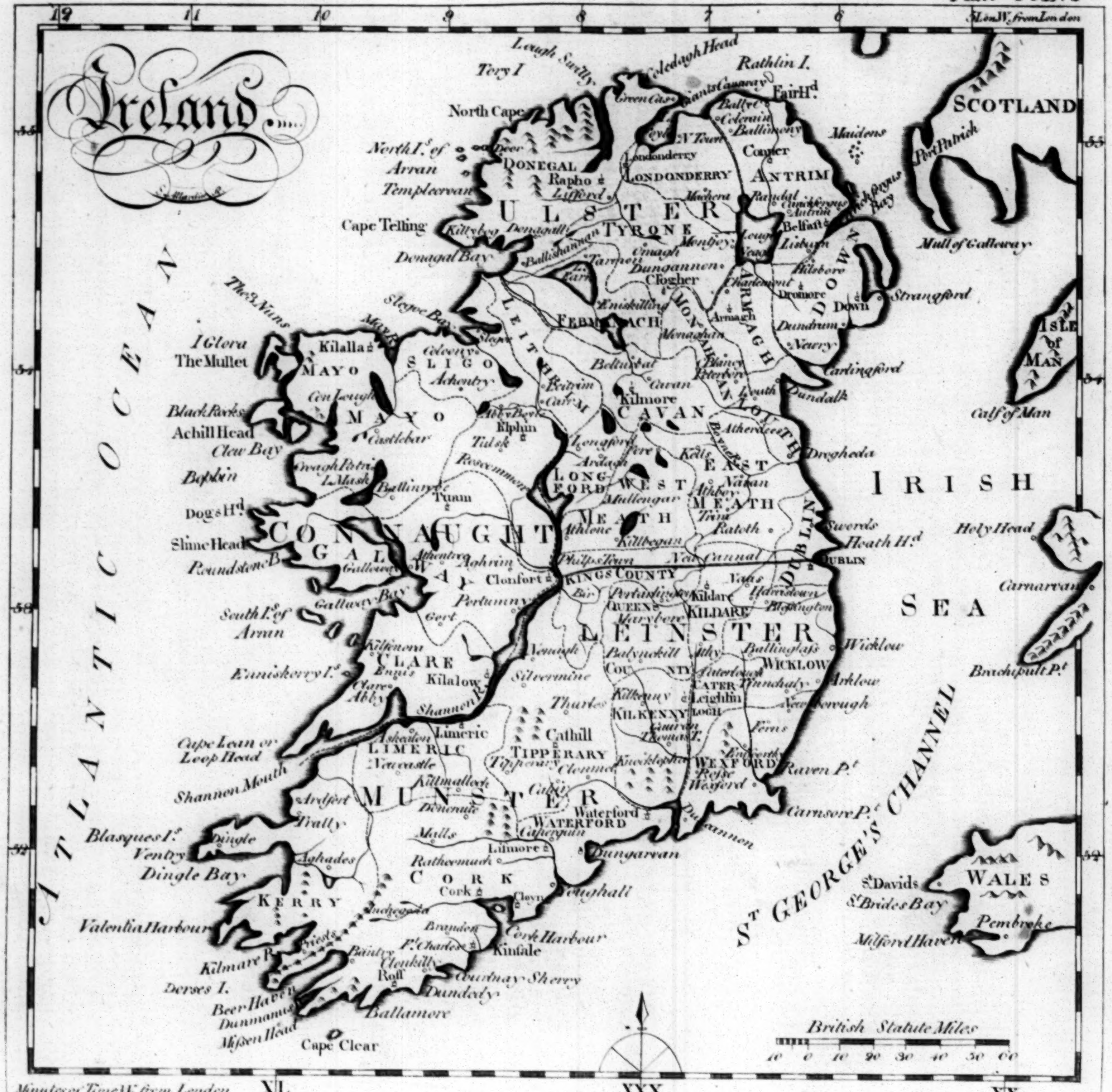
7 Brown ore.

5. The brown calx of iron combined with plumbago, *black eiſen glimmer*, *ſchwartz*, *eiſen bahen* or *eiſenman*, conſiſts of black ſhining ſcales more or leſs magnetic, affording, according to Mr Rinman, 26 *per cent* of iron, the reſt being plumbago.

8 Wh ores.

6. The brown calx of iron united with the white calx of manganeſe, and mild calcareous earth in various proportions. Theſe conſtitute the white ores of iron, on which Mr Bergman has given a diſſertation.—" They have received (ſays he) divers denominations from the ſingular heat with which they are accompanied. Their texture is almoſt the ſame with that of the calcareous ſtone, yet it is rarely found compact, and compoſed of impalpable particles. It is ſometimes ſquamous, ſometimes granulated with ſmall diſtinct particles, ſome of them ſhining, but in general ſpathous. This diſcription, however, is not meant for their complete and perfect ſtate; for the figure of their parts is more or leſs deſtroyed by ſpontaneous calcination;

Plate CCLVI


Ireland
ATLANTIC OCEAN
IRISH SEA
ST GEORGE'S CHANNEL
SCOTLAND
WALES
ISLE of MAN
ULSTER
CONNAUGHT
LEINSTER
MUNSTER
DONEGAL
LONDONDERRY
ANTRIM
TYRONE
FERMANAGH
MONAGHAN
ARMAGH
DOWN
CAVAN
LEITRIM
SLIGO
MAYO
GALLWAY
ROSCOMMON
LONG FORD
WEST MEATH
EAST MEATH
LOUTH
DUBLIN
KINGS COUNTY
QUEENS
KILDARE
WICKLOW
CATERLOGH
KILKENNY
WEXFORD
CLARE
LIMERIC
TIPPERARY
WATERFORD
CORK
KERRY
Tory I.
North Cape
Cape Telling
Donagal Bay
Slegoe Bay
The 3 Nuns
Achill Head
Clew Bay
Slime Head
Gallway Bay
Shannon Mouth
Dingle Bay
Valentia Harbour
Cape Clear
Cork Harbour
Rathlin I.
Fair Hd.
Giants Causeway
Belfast
Strangford
Dundalk
Drogheda
Heath Hd.
Wicklow
Arklow
Carnsore Pt.
Dungarvan
Youghall
Kinsale
Holy Head
Carnarvan
Milford Haven
Pembroke
St. Davids
Mull of Galloway
Calf of Man
Port Patrick
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Lon. W. from London
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BRITISH MUSEUM

tion; nay, the whole maſs is at length reſolved into a powder: ſometimes it is found ſtalactitic, fiſtulous and ramous, cellular, or even germinating like moſs. Sometimes, though very ſeldom, they have ſufficient hardneſs to ſtrike fire with ſteel; but though, when found mixed with flint and newly dug up, they are of this kind, yet they ſoon loſe the property we ſpeak of. When perfect, they generally reſemble the calcareous ſtone, unleſs when expoſed for ſome time to the air, by which the union of their parts is gradually diminiſhed. Their colour is white, but the ſurface which comes into contact with the air grows gradually brown, or even blackiſh; yet as long as the iron which is converted into an ochre remains in them, they have a ferruginous hue; but though the ſurface is thus changed, the internal parts remain the ſame, and, on being filed or broken, exhibit the natural colour. —This change is effected by the air, not upon the iron, as is commonly believed, but on the white calx of manganeſe which is dephlogiſticated by the atmoſphere.

"The ſpecific gravity of the ore, when perfect, varies between 3,640 and 3,810, and is diminiſhed according to the degree of calcination. The ore whoſe particles are quite ſeparated is from 2.5 to 2.9; but that which is not perfectly corroded, from 3.3 to 3.6. It is rarely attracted by the magnet, whether perfect or calcined, though the metallic part ſometimes amounts to nearly one half the weight.

9 A mountain of iron ore in Dalecarlia in Sweden.

The white ores of iron are found, though in very ſmall quantity, in Sweden. The *Suart-begger*, or *Black Mountain*, in Dalecarlia, has its name from its ſurface, which is grown black by calcination. It is high, and naked on the ſummit, which is croſſed by a broad calcareous vein with ſhining particles of ſpar, and a white ore of iron, together with a galena, pſeudogalena, black ore of iron, pyrites, ſchoerl, and garnet intermixed. In the old mines at Halleforo, or the eaſtern mines, the rock itſelf appears to conſiſt of a white ore of iron; but in other places it is either found in ſmall quantity, or very poor in metal. Many mountains about Smialkald in Germany contain theſe ores. In one called *Stahlbegger*, a broad vein occurs almoſt horizontal, and from 25 to 30 fathoms thick. It conſiſts of an irregular ſpar, in which are diſperſed quartz and pieces of the ore, which are found of a better quality in proportion as they are more deeply ſeated. The uppermoſt ſide, which is pendant, conſiſts of a ſandy ſtone from 9 to 20 fathoms high; but the lower is margaceous, and is found more indurated towards the lower parts; and at the very loweſt is extended by a blue mica: the ſides ſcarcely cohere to the vein. The whole mountain in Nauſſavia conſiſts of a yellowiſh ore of iron, certain veins of which are accompanied with copper, and others with hæmatites. The hill of *Arzberg*, ſituated at Eiſenartz in Upper Sinia, is 6000 fathoms in circuit, 900 in diameter, and 450 in height. According to ſome accounts the ore is irregularly accumulated and concreted, conſiſting of maſſes of quartz charged with argillaceous earth and white ore of iron; but, according to others, the ore is found there not only in heaps, but in various veins."

This ore, when analyſed, gave 38 parts of the brown calx of iron, 24 of the white calx of manganeſe, and 50 of mild calcareous earth. Another from Weſt Silvathreg, yielded 22 of the brown calx of iron, 28 of the white calx of manganeſe, and 50 of mild calcareous earth. The aerial acid is uſed, and is united not only to the earth, but alſo to the metallic calx. The above proportions of the crude materials in the ore of Eiſenartz, would yield according to Mr Kirwan, 38 parts of calcareous earth, 38 of iron in its metallic ſtate, and 24 of manganeſe. Many others are poorer, and ſome to ſuch a degree as ſcarcely to deſerve the name of an ore. They abound alſo in France and Spain, and are found ſometimes in heaps, ſometimes alſo forming veins, ſtrata, or even whole mountains. Mr Bergman never found them contain any organiſed bodies; a mark (ſays he) by which the moſt ancient productions of the earth have been diſtinguiſhed. When this iron ore bears a ſtalactitical appearance, and is very white, it is called *flos ferri*, and *eiſen bluth*. An hundred parts of it yield 65 of calcareous earth, and 35 of calx of iron; which, according to Rinman, produce 27 of iron in its metallic ſtate.

10 Black ſand of Virginia.

7. *Magnetic ſand.* Of this kind is the black ſand of Virginia, whoſe ſpecific gravity is about 4.600, and contains half its weight of metal.

From an account inſerted in the Philoſophical Tranſactions for 1763, we are informed, that there are very large quantities of this ſand-iron ore in Virginia; perhaps as large as of any other kinds of iron-ore. It is ſo pure, that it requires a mixture of bog-ore, or of ſlags from other ſmeltings, to reduce it to a metallic form. The iron and ſteel produced from it were above 60 *per cent.* or from 50 to 85; the quality of both extremely good; and two ſmall bars were ſent as a ſample to the muſeum of the Royal ſociety of London. Large ſtrata of black ſand-iron-ore are found in Portugal, even at a conſiderable diſtance from the ſea-ſhore, or from any running waters. A very great part of this black ſand is attracted by the magnet. There is alſo found, particularly in France, a black, heavy, unmagnetic ſand, of the ſilicious kind, which is ſaid to contain iron and zinc in great quantity. Mr Kirwan, p. 143. of his Mineralogy, ſpeaks of a ſiliceous ſand conſolidated by ſemiphlogiſticated calx of iron, which does not crumble into ſand when powdered. It is generally of a black or brown colour; but grows reddiſh or yellowiſh, and moulders by expoſure to the air. It does not efferveſce with acids, unleſs it contains teſtaceous particles, which is frequently the caſe; it is even frequently covered with ſhells. He adds, that the agglutinating power of ſolutions of iron has been ſhown by a ſtony concretion of this ſort that had been long buried in the ſea, and is mentioned in a paper of Mr Edward King in the Philoſophical Tranſactions for 1779. Mr Rinman, however, has found that dephlogiſticated calces of iron, and particularly its ſolutions in mineral acids, have no binding power.

11 Indurated red ore.

8. Red calx of iron indurated and combined with a ſmall quantity of clay, frequently with manganeſe.—Fourcroy calls this a muddy iron-ore, which ſeems to be formed in the manner of ſtalactites, and deriving its name from its colour, which is commonly red, or the colour of blood, though not without variations. Mr Kirwan ſays, that "it is generally of a red, yellow, purple, or brown colour, of a metallic luſtre, and very hard, though ſeldom capable of giving fire with ſteel." Fourcroy tells us, that it is uſually compoſed of layers which cover each other, and are themſelves formed of

convergent needles, the external part being covered with tubercles; and that it is not only diſtinguiſhed by the colour, but by the form, as the hæmatites botrytes, in the form of bunches of grapes. Mr Kirwan tells us, that its ſtructure is either ſolid, granular, ſcaly, or fibrous; that it occurs in ſhapeleſs maſſes, in a ſtalactitical form; or, according to Gmelin, cryſtallized in regular forms; though M. de Liſle denies this. In ſome places it forms whole mountains, and affords from 40 to 80 *per cent.* of iron. Mr Gerhard extracted alum from it, which affords a proof of its containing clay; and Mr Hilan found it alſo to contain manganeſe. In its natural ſtate it is not affected by the magnet; but by torrefaction it becomes black and magnetic.

12
Ochres of different kinds.

9. Hæmatitical, red, yellow, and brown ochres. Theſe are, by Mr Kirwan, intitled "hæmatites in a looſe form, mixed with a notable proportion of argill" (clay.) They are diſtinguiſhed, he ſays, from clays, by containing a larger proportion of martial particles. To this ſpecies belong the ores which become brown by calcination, and likewiſe magnetic. They are ſometimes mixed with clay or calcareous earths; in which caſe theſe ores efferveſce with acids. The hæmatites, or blood ſtones, have their names, not on account of their external colours, but becauſe, when reduced to powder, they produce a red or blood-colour. The yellow hæmatites, however, only produce the ſame colour by pulveriſation. They are productive of very good iron, and are found in great abundance in the province of Galiza in Spain. The inhabitants of Compoſtella, the capital, make a good commerce of theſe hæmatites of the hardeſt kind for the burniſhing gold leaves, and various other metals. A dark blue kind, ſomewhat ſimilar to black-lead, is principally employed for theſe purpoſes. They are found in many parts of Europe, ſometimes forming whole mountains. The moſt extraordinary ores of this kind, both on account of their forms and of their various and brilliant colours, are found in the iſland of Elba near the coaſt of Tuſcany. The cryſtallized ores are here the moſt beautiful and the moſt common, though not to be met with any where elſe. They exhibit various gradations of the fineſt colours, as red, violet, blue, green, yellow, brown, and black; inſomuch that, according to Coudrai's expreſſion, they look like ſo many cluſters of emeralds, ſapphires, diamonds, rubies, and topazes. E. Peni and Mongez affirm, that theſe ores are mineralized only by the aerial acid; though Coudrai is of opinion, that they contain ſulphur alſo. Beſides theſe beautiful cryſtallized ores, this iſland contains alſo many others; being indeed little other than a group of iron-mountains. The ores in general produce the very beſt kind of iron.

13
Emery.

10. *Emery, ſmyris,* is a grey or reddiſh iron-ore found in great quantity on the iſlands of Jerſey and Guernſey. It is extremely hard, yielding in this reſpect to no ſubſtance except the diamond itſelf. It is alſo very refractory, and for theſe reaſons is not uſed for the ſake of the metal it contains, nor indeed is it well known what proportion is contained in it. "The beſt ſort (ſays Mr Kirwan) is of a dark grey colour, but becomes brown, and in great meaſure magnetic, by calcination: other ſorts are of a ruſty rediſh white or yellowiſh colour. Its ſpecific gravity is from 3,000 to 4.000. It is uſed in poliſhing glaſs and metals; for which purpoſe it muſt firſt be ground down and levigated in mills.

14
Bog ores, &c.

11. The *argillaceous ores.* Theſe comprehend the ochres, and more particularly thoſe mentioned by Fourcroy under the name of *bog-ores* of iron, which are commonly met with diſpoſed in beds, and ſeemingly depoſited by waters. Mr Fourcroy informs us, that this kind of ore is very often in the form of ſpherical bodies either regular or irregular. Organic matters, ſuch as wood, leaves, bark, ſhells, &c. are not unfrequently found in the ſtate of bog-ores. This kind of tranſition ſeems to indicate an analogy betwixt iron and organic ſubſtances. In the wood of Boulogne near Auteuil there is a mine of bog-ore of iron, in which vegetable ſubſtances become mineralized almoſt immediately under our eyes.

Mr Kirwan diſtinguiſhes two principal varieties of theſe; one found on mountains, and ſuch as are met with in ſwampy grounds or low lands overflown with water; both of them very heavy, and ſome abſorbing water like clays.

15
Highland argillaceous ores.

The Highland argillaceous ochres are either yellow, red, brown, or greyiſh, indurated and friable, or looſe and powdery, or in grains; they are compoſed chiefly of the red or yellow calx of iron, or of a grey iron ore called *Torſten,* in a looſe form mixed with clay. Hence they often contain manganeſe or ſiderite, and in France are ſaid to be mixed with a calx of zinc. They do not obey the magnet before calcination, and rarely after it. They efferveſce with acids only in conſequence of being mixed with calcareous earth; they are ſoluble with difficulty in the acids, but the moſt ſoluble are the beſt. The iron produced from them is of very different quality, according to the nature of the ore from whence it is produced. To this ſpecies belong the hornſtone overloaded with iron, and a white iron ore mentioned by Rinman found in Kent. It is mixed with clay or marl, and is ſcarcely ſoluble in acids. It affords 47 *per cent.* of brittle iron.

16
Swampy ores.

The ſwampy argillaceous ores, according to Mr Kirwan, are found in irregular lumps of a brown or browniſh-black, and ſometimes in round balls, porous or ſolid, or in flat round pieces or in grains, and ſometimes in ſlender triangular priſms parallel to each other, and very brittle. It is mixed with clay and extractive, and becomes magnetic by calcination; during which operation it gives out a quantity of aerated volatile alkali, and loſes one-fourth of its weight. The crude ore affords about 36 *per cent.* of metal, and 50 *per cent.* after calcination. The iron produced from it, at leaſt in Sweden, is that called *coldſhort.* According to Mr Hialm ſome ſorts of this ore contain 28 *per cent.* of manganeſe.

17
Red calcareous ore.

12. *Red calcareous iron ore* is found looſe in many parts of England, efferveſces ſtrongly with acids, and is uſed as a paint under the name of red ochre.

18
Martial calamine.

13. *Martial calamine.* Though calamine is properly an ore of zinc, it ſometimes contains ſuch a large proportion of iron as to make it worth while to extract the iron. The ore conſiſts of a mixture of quartz and clay, with the calces of iron and zinc. It it is of a moderate hardneſs, and a yellow, red, or brown colour.

19
Martial pyrites.

14. *Martial pyrites.* This has its name from its property of giving fire with ſteel. It is commonly in

ſmall red maſſes, ſometimes regularly formed, and uſually cubical, ſpherical, or dodecahedral, though their form varies conſiderably. Some are brown on the outſide, others of the colour of iron, ſome yellowiſh, and reſembling the ores of copper, even on their ſurface; but all of them are yellow, and as it were coppery within, and for the moſt part compoſed of needles, or pyramids of ſeveral ſides, whoſe ſummits converge to a common centre. The pyrites are commonly diſperſed, and particularly in copper mines in the neighbourhood of iron mines, and in clays and coal mines, the upper ſtratum of the latter being almoſt always pyritous. They are all eaſily decompoſed, and yield green vitriol, as is explained under the article CHEMISTRY.

20 Arſenical ore, miſpickel, or ſpeiſs.

15. *Iron mineralized by arſenic.* This combination takes place either by the combination of arſenic alone with the metal, or in conjunction with ſulphur. The former is called in Germany *miſpickel*, and *ſpeiſs* by the Bohemians; is of a bright white colour, ſometimes, though rarely, variegated like a pigeon's neck, and is not eaſily altered by expoſure to the air. It is not magnetic either before or after calcination; it is ſoluble in acids, and affords arſenic by diſtillation in the proportion of 30 or 40 *per cent.* and ſometimes contains a ſmall proportion of copper and ſilver. It is frequently found in indurated clay, quartz, ſpar, ſchoerl, &c. and mixed with other metallic ores. When this metal contains leſs than $\frac{1}{18}$th of arſenic, it is magnetic, according to Scheffer; whence, if the calcination be puſhed to a ſufficient length, the ore muſt remain magnetic.

21 White, grey, &c. pyrites, or marcaſite.

That ſpecies of ore which conſiſts of iron mineralized by ſulphur and arſenic together, contains the white, grey or bluiſh grey pyrites or marcaſite. It is found either in ſolid compact maſſes of a moderate ſize, or in grains, and gives fire with ſteel. When burnt it affords a blue flame and the ſmell of arſenic, with orpiment or realgar, inſtead of pure arſenic by diſtillation in cloſe veſſels. It is not magnetic either before or after calcination, and contains much more arſenic than ſulphur.

22 Native Pruſſian blue.

16. *Native Pruſſian blue* conſiſts of clay mixed with iron, and coloured with ſome unknown tinging ſubſtance, generally found in ſwampy grounds or bogs. It is at firſt white, but when expoſed to the air becomes either of a light or deep blue. By heat it turns greeniſh, and emits a ſlight flame, becoming afterward red and magnetic. It is ſoluble both in alkalies and acids; but the alkaline ſolution is precipitated by acids, and the acid ſolution by alkalies. The precipitate at firſt is greeniſh, and gradually aſſumes a white hue, but regains its blue colour on being mixed with vegetable aſtringents. Mr Woulfe found this kind of ore in Scotland on the ſurface of the earth. The greateſt part of marſhy grounds containing turf, likewiſe have ſome of this.

23 Terra verte, or green earth of Verona, &c.

17. The *terra verte*, or green earth of Verona and Normandy, is uſed as a pigment, and contains iron in ſome unknown ſtate, mixed with clay, and ſometimes with chalk and pyrites; alum and ſelenite being likewiſe accidentally mixed with it. It is ſoluble with difficulty in acids, is not magnetic before calcination, and becomes of a coffee-colour by heat.

24 Iron mineralized by phoſphoric acid.

18. Mr Fourcroy informs us, that "it has been diſcovered ſome years ago, that iron is often united naturally with the phoſphoric acid. The muddy or bog ores are ſometimes of this nature: a portion of this compound remaining in the iron gives it the property of being brittle when cold. Iron in this ſtate was called *ſiderite* by Bergman, and it has ſince been called *water-iron*.

There are ſeveral other kinds of iron ore enumerated by mineralogiſts; but thoſe already mentioned are the moſt remarkable.

The following obſervations on iron in its different ſtates, with an account of the methods of manufacturing it, &c. are extracted from Magellan's Notes on Cronſtedt's Mineralogy.

1. Iron is employed in three different ſtates, each having its peculiar properties, by which they are each more particularly applicable to various purpoſes. The firſt is *caſt iron*, the ſecond is *wrought* or *malleable iron*, and the third is called *ſteel*.

According to Bergman, caſt iron, which may be called *unripe* or *raw-iron*, contains the ſmalleſt ſhare of phlogiſton. The malleable iron contains the greateſt quantity; and the ſteel a middling ſhare between both, neither ſo much as the malleable, nor ſo little as the caſt-iron. This laſt is called alſo *pig-iron*, and *yetlin* in England.

2. The richeſt ores of iron are the compact and ponderous, of a browniſh, reddiſh brown, or red colour. Some of theſe ores, in colour and appearance, do not ill reſemble iron itſelf; as the grey ores of Derbyſhire, and the bluiſh of the Foreſt of Dean in Glouceſterſhire, Moſt of the Swediſh ores are likewiſe of this kind. Others are blackiſh, brown, red, yellowiſh, or ruſty-coloured: theſe are the moſt common in England and Germany. There is one very ſingular ſpecies of a ſtriated texture, and of a pale yellowiſh or greyiſh colour, oftentimes white, and in ſome degree pellucid; which, although in its crude ſtate, promiſes nothing metallic, nevertheleſs, on being moderately calcined, diſcovers, by the deep colour it aſſumes, that it abounds in iron. Cramer informs us, that it gives out by fuſion from 30 to 60 *per cent.* But ſome richer ores yield no leſs than 70 and 80 on the hundred.

3. Different kinds of iron ore are found adhering in ſome mines to the tops of caverns in form of icicles or ſtriæ, ſometimes irregularly cluſtered together, ſometimes hanging down like the briſtles of a bruſh; from whence the name of *bruſh-iron-ore*. Other particular forms of the iron ſtone have occaſioned a variety of fanciful names, that are met with in ſome of the metallurgic writers.

4. The iron of Great Britain is made from three different kinds of ores: 1. From the iron-ore called the *Lancaſhire ore*, from the country where it is found in greateſt abundance. This ore is very heavy, of a fibrous or lamellated texture; it is of a dark purple, approaching to a ſhining black; and when reduced to powder, it becomes of a deep red: it lies in veins like the ores of other metals. 2. The bog ore, which reſembles a deep yellow ochry clay, and ſeems to be the depoſition of ſome ferruginaceous rivulets, whoſe currents had formerly been over the ſurface of thoſe flat marſhy plains. It lies in beds of irregular thickneſs, commonly from 12 to 20 inches, and very various in their breadths from ſide to ſide, never being of great dimenſions. 3. The iron-ſtones, however, have no re-

gular appearance, and do not in the leaſt reſemble a metal in their external ſurface. They lie often in beds of great extent, like other ſtony matters, and are ſometimes ſtratified with the ſeams of pit-coal, forming alternate layers.

5. The ores of iron are commonly calcined previous to the fuſion, even the harder ones, though they ſhould contain nothing ſulphureous or arſenical, in order to calcine the hard adhering matrices, and render the maſſes ſoft enough to be eaſily broken into fragments of a convenient ſize for melting. After the mineral is duly prepared, it muſt be ſmelted in furnaces of large capacities, from 16 to 25 feet high, and from 10 to 14 wide: the moſt approved ſhape nearly reſembles that of a hen's egg, with the largeſt end undermoſt, below which is a ſquare cavity to contain the melted metal, and at the top a very ſhort vent about 20 inches in diameter. The inner wall is built of fireſtone, which endures very ſtrong heat with little riſk of melting, and all the joints are cemented with mortar compoſed of ſand and clay. This is ſurrounded with more building, which deviates more and more from a circular form, and becomes a ſquare building of about 20 feet at the baſe, and gradually converges to the top.

6. Near the bottom is an aperture, for the inſertion of the pipe of a large bellows, worked by water or by other machines that may produce a ſtrong current of air. Some very powerful ones, as thoſe in the iron works at Colebrook-dale and at Carron, conſiſt of two or more iron cylinders, about upwards of two feet wide, whoſe piſtons are alternately moved by a ſmall fire engine or by a water wheel: but Mr Wilkinſon very ingeniouſly adapted to his own a large vaulted receiver ſurrounded by water, which produces a very regular and uniform blaſt. Two or more holes are alſo left ready to be occaſionally opened at the bottom of the furnace, to permit at a proper time the ſcoria and the metal to flow out, as the proceſs may require. Charcoal, or coke with lighted bruſhwood, is firſt thrown in: and when the inſide of the furnace has acquired a ſtrong ignition, the ore is thrown in by ſmall quantities at a time, with more of the fuel; and commonly a portion of lime-ſtone is thrown alſo as a flux. The ore gradually ſubſides into the hotteſt part of the furnace, where it becomes fuſed; and the metallic parts being revived by the coal, paſs through the ſcoria, and fall to the lower part or bottom of the furnace, where a paſſage is open for taking off the ſcum or droſs. The metal now in ſtrong fuſion is let out by a tap-hole into furrows made in a bed of ſand: the large maſs, which ſets in the main furrow, is called by the workmen a *ſow*, and the leſſer ones *pigs* of iron. Chimney-backs, ſtoves, garden-rollers, &c. are formed of this rough metal, taken out of the receiver with ladles, and caſt into moulds made of fine ſand."

It is proper to obſerve, that the exceſſive and long-continued ignition kept up in theſe furnaces gradually waſtes the materials of which they are compoſed, rendering their ſides thinner until at laſt they become unable to ſuſtain the weight of the melted metal; ſo that it has ſometimes been known to burſt out ſuddenly in a violent and moſt deſtructive ſtream. At certain intervals, therefore, the fire ought to be allowed to go out, whatever may be the expence of rekindling it, and the furnace examined and repaired.

7. The quantity of fuel, the additions, and the heat, muſt be regulated, in order to obtain iron of good quality; and this quality muſt likewiſe in the firſt product be neceſſarily different, according to the nature of the parts that compoſe the ore.

8. Two or three tons, *viz.* 4000 or 6000 pounds weight of iron, are now run off in 24 hours, at ſome large furnaces, after the application of the large bellows; whilſt ſcarcely an hundred weight could be obtained in a day before that application, becauſe a large quantity of the metal was left in the droſs; hence in ſome places the ſlags of different ores, left by old operators in former times, are now remelted to advantage along with freſh ore; and on account of the richneſs of theſe old ſlags of different ores, ſome people have been miſled in the opinion, that the metal was regenerated in them.

9. Peat and turf has been found to anſwer tolerably well, mixed with charcoal, for the ſmelting of iron ores; but an attempt to uſe it on a large ſcale has at laſt been found not to anſwer the expectations that had been conceived from the firſt trials. Pit-coal, if applied to the ſame purpoſe, renders the iron hard and brittle; but this inconvenience is prevented, by previouſly coaking the coal, and employing it in the ſtate of true coak. Cramer, in his Art of Aſſaying, p. 347. ſays, that pit-coals, kennel-coals, and Scotch-coals, which burn to a white aſh like wood, and abound more in bitumen, may be uſed in the firſt fluxion of the iron from its ore; and if the iron proves not ſo malleable as required, this property may be given to it by melting the metal a ſecond time with wood.

10. The beſt caſt-iron or raw-iron, as much freed from heterogeneous matters as the uſual proceſs of ſmelting can effect it, is not at all malleable, and ſo hard as perfectly to withſtand the file.

11. In general the impure caſt-iron, as run from the ore, is melted down a ſecond time in another furnace, intermixed with charcoal. A ſtrong blaſt of air being impelled on the ſurface of the metal, its fuſion is remarkably promoted; the iron thickens into a maſs called a *loop*, which is conveyed under a large hammer raiſed by the motion of a water-wheel. The iron is there beaten into a thick ſquare form, is then heated again until almoſt ready to melt, and is forged; by a few repetitions of this proceſs, it becomes completely malleable, and is at length formed into bars for ſale.

12. Iron in this ſtate of malleability is much ſofter than before, and of a fibrous texture. But if it is ſtill crude and brittle after the above proceſs, it ſhows that there have remained heterogeneous matters, being hidden in its interſtices, which muſt be expelled; for this purpoſe the iron muſt be ſtratified with charcoal-duſt within a proper furnace, heaped up in good quantity in ſtrata; then the fire muſt be blown pretty ſtrongly, ſo as to bring it to a fuſion, which is to be helped by the addition of fuſible ſcorias or of ſand. The fire muſt not be much greater than neceſſary to make all theſe melt as equally as poſſible; to obtain this end, the melted maſs muſt be agitated here and there with poking rods of wrought iron, in order to make every

part feel alike the action of the fire and air; and the increaſing ſcorias taken out once or twice.

13. In the mean time, a great many ſparkles will be thrown out from the iron, which diminiſh the more as the iron comes nearer to the deſired degree of purity, but they never ceaſe entirely. The burning coals being then removed, and the ſcoria conveyed out of the fire through a channel made for that purpoſe, the iron, by leſſening the violence of the fire, grows ſolid, and muſt be taken out red-hot, and tried by ſtriking it with a hammer. If it proves crude ſtill, let the melting be repeated; and when it is at laſt ſufficiently purified, it is to be hammered, and extended various ways, by making it red-hot many times over; this done, it will no longer be brittle, even when cold, as Cramer aſſerts.

14. Caſt-iron has of late been brought into the malleable ſtate by paſſing it through rollers inſtead of forging it. Indeed this ſeems to be a real improvement in the proceſs, as well in point of diſpatch, as in its not requiring that ſkill and dexterity which forgemen only acquire by long practice. If the purpoſes of commerce ſhould require more iron to be made, it will be eaſy to fabricate and erect rolling machines, though it might be impracticable to procure expert foregemen in a ſhort time.

13. This method was diſcovered by Henry Cort of Goſport, who obtained an excluſive privilege granted by the king's patent. By this proceſs the raw or caſt-iron is freed from the impurities, which are not diſcharged in the common methods of rendering this metal malleable; for iron is in itſelf a ſimple homogeneous metal; and all iron muſt become equally good, if it be purified from the heterogeneous and unmetallic particles that are any ways mixed with it.

16. The ordinary method of converting caſt-iron into malleable, is, as we have ſeen, by employing great quantities of charcoal, which furniſhes phlogiſton, and remetallizes the particles, which are unmetallized and mixed with the heterogeneous matters contained in the fuſed maſs: but in Cort's method there is no need of charcoal, inſtead of which only ſea-coal is employed; becauſe the object is not to remetallize, but only to expel what is unmetallic, inſtead of endeavouring to reſtore the calcined parts with charcoal at a great expence, and ſtill leaving the buſineſs undone. In this method the iron is only heated and wrought ſimply by the heat of the flame, inſtead of being mixed with the burning fuel and aſhes, which are not eaſily diſengaged afterwards from the metal. The ſqueezing it between the rollers, forces out the melted ſlags from the metallic pores, and brings its metallic fibres into a perfect ſolidity and cloſe contact, ſo that they are obliged to cohere much more perfectly to each other, than by the interrupted and partial action of the hammer. By the operation of being long ſtirred, the ſulphureous particles are more diſpoſed to be diſengaged, and are burned away in the form of blue ſparks; the metal then begins to curdle, and to loſe its fuſibility, like ſolder when it juſt begins to ſettle; the metallic particles meeting and coaleſcing together, much like the churning of milk, where the cream is ſeparated by the union formed between the fibrous particles of the cheeſe. The curdles formed into a connected maſs become what is called *loops*. The proceſs is as follows:

17. Five or ſix hundred weight of raw caſt-iron (and even of cold ſhort iron) is brought into a low fuſion, on a kind of hearth or low furnace, in which it lies to the depth of about 6 inches. One or two workmen continually ſtir this fuſed maſs with long iron pokers for about 4 or 5 hours. The heat is then lowered: the men faſhion the iron into narrow pieces of about 3½ feet long, and 3 inches ſquare, with long knives or chiſſels made for that purpoſe. They are then heated to the welding degree, and hammered to expel and ſcatter the unmetallic droſs. Theſe ſlabs are then formed to a wedge-point at one end, in order to adapt them to be received between the rollers: they are malleable already, but they contain ſtill ſome droſs.

18. They are then heated again to the hotteſt welding heat in the air furnace: and immediately paſſed through large iron-rollers, turned by a water-wheel or by horſes. If the end preſented to the rollers ſhould ſlip inſtead of entering, a boy, who ſtands ready, throws ſome ſand upon the iron, and it goes in eaſily. Much foreign and heterogeneous matter is ſqueezed out by the rollers; and the iron comes out in a purer malleable ſtate. The ſame heat will ſerve to paſs the iron through two ſets of rollers, which are grooved ſo as to faſhion it into nail-rods or other forms according to the required purpoſes.

19. Various and repeated ſevere trials have been made in the royal dock-yards of England, in the preſence of perſons of knowledge and rank, to prove the ſtrength, malleability, and ſoftneſs or toughneſs of this new iron; and it has proved to be equal, and even ſometimes ſuperior, to the beſt Swediſh iron. But it is not eaſy to conceive by what ſingular fatality ſo great an improvement in manufacturing this moſt uſeful metal has not yet been generally adopted by the iron-maſters.

20. Steel is iron in an intermediate ſtate between caſt-iron and malleable iron, which is ſoft and tough. The iron run from ſome German ores is found to be a good ſteel when forged only to a certain point.

But the beſt ſteel is uſually made by cementation from the beſt forged iron, with matters chiefly of the inflammable kind. Two parts of pounded charcoal and one of wood aſhes is eſteemed a good cement. The charcoal duſt may be made of bones, horns, leather, and hairs of animals, or of any of theſe ingredients after they are burned in a cloſe veſſel till they are black: theſe being pulverized, and mixed with wood-aſhes, muſt be well mixed together. The iron ſhould be of pure metal, not over thick, and quite free from heterogeneous matters: their flexibility, both when hot and when cold, is a very good ſign thereof. A deep crucible, two or three inches higher than the bars, is to receive part of the cement, well preſſed at the bottom, the height of 1½ inch; and the bars are to be placed perpendicularly, about one inch diſtant from the ſides of the veſſel and from each other. All the interſtices are to be filled with the ſame cement, and the whole covered to the top with it; then a tile is applied to cover the veſſel, ſtopping the joints with thin lute.

21. The crucible is then to be put in the furnace, and a ſtrong fire is to be made, that it be kept moderately red hot for ſix or ten hours together; at the end of which time they will be found converted into ſteel. If the cementation be continued too long, the ſteel will become exceſſively brittle, incapable of being welded, and apt to crack and fly in forging. On the contrary, ſteel cemented with abſorbent earths is reduced to the ſtate of forged iron.

22. Steel is further purified for making the niceſt kinds of inſtruments, ſuch as lancets, pen-knives, razors, and various pieces, for the beſt kind of watches, time-keepers, or chronometers, and aſtronomical regulators. This purification of ſteel conſiſts in melting it again with a ſtrong but regular fire in a crucible, the better to free it from the heterogeneous parts, and little flaws that may be contained in it. It is then called *caſt-ſteel* when fuſed into bars: which name, however, does not imply that the pieces, for inſtance the caſt-ſteel razors, have been really caſt in their preſent ſhape; for they muſt be forged from the bar after it is caſt. The fuſion muſt have been perfect, ſo that the metallic parts be rendered uniform. The metal diminiſhes a little by this proceſs, for a bar of common ſteel 36 inches long, will afterwards produce another only of 35, if properly fuſed and purified.

23. The caſt-ſteel will not bear more than a red heat; otherwiſe it runs away, like ſand under the hammer, if the heat is puſhed to the welding degree. Dr Watſon ſays, that this manufacture of caſt-ſteel was introduced at Sheffield only about 40 years ago by one Waller. This man was ſtill living about the year 1765; he dwelt at St Bartholomew's cloſe, and was a galloon-wire drawer by trade. The difficulty of procuring ſmall cylinders of good ſteel to flatten the wire of lace-work in his buſineſs, whoſe defect proceeded from the bad texture of the ſteel, ſet his imagination on the enquiry after a method purifying the metal to a greater perfection: and he thought that a new fuſion of it was the moſt likely to accompliſh his views. After ſome trials, he at laſt ſucceeded; but it was ſoon known to others, who got the advantages for themſelves; of which ill fate the real inventor very bitterly complained till the end of his life. His own name was even forgotten, as one Huntſman practiſed this art to ſuch an extent, that caſt ſteel was known under his ſole name afterwards.

24. But before this diſcovery made by Wallerin England, this kind of ſteel was made already in Germany, as Watſon aſſerts; and from thence ſome ſmall quantities were brought to England at a conſiderable price. Since that time this branch of buſineſs is carried on advantageouſly at Sheffield; for the manufacturers there furniſh a great abundance of broken tools and old bits of ſteel, at a penny a pound, which, after fuſion and purification, ſell for 10 or 12 times as much.

25. It is a valuable property of iron, after it is reduced into the ſtate of ſteel, that though it is ſufficiently ſoft when hot, or when gradually cooled, to be formed without difficulty into various tools and utenſils; yet it may be afterwards rendered more or leſs hard, even to an extreme degree, by ſimply plunging it, when red-hot, into cold water. This is called *tempering*. The hardneſs produced is greater in proportion as the ſteel is hotter and the water colder. Hence ariſes the ſuperiority of this metal for making mechanic inſtruments or tools, by which all other metals, and even itſelf, are filed, drilled, and cut. The various degrees of hardneſs given to iron, depend on the quantity of ignition it poſſeſſes at the moment of being tempered, which is manifeſted by the ſucceſſion of colours, exhibited on the ſurface of the metal, in the progreſs of its receiving the increaſing heat. They are the yellowiſh-white, yellow, gold-colour, purple, violet, and deep-blue; after which, the complete ignition takes place. They proceed from a kind of ſcorification on the ſurface of the heated metal.

26. A bar of clean white ſteel may be made to aſſume all the above colours at once, by placing one end in the fire, and keeping the other end out, which is ſuppoſed of a proper length to remain cold.

27. Theſe colours ſerve as ſigns to direct the artiſt in tempering this metal. For though ignited ſteel, ſuddenly quenched in very cold water, proves exceſſively hard and brittle; yet it may be reduced to the required degree of temper by heating it till it exhibits a known colour. This is the method employed in this proceſs by the artiſts. As ſoon as the piece of ſteel is completely ignited, they plunge it in a very cold water; and as ſoon as it looſes its fiery appearance, they take it out, rub it quickly with a file, or on a plate covered with ſand, that it may have a white ſurface. The heat, which is ſtill within the metal, ſoon begins to produce the ſucceſſion of colours. If a hard temper is deſired, as ſoon as the yellow tinge appears, the piece is dipped again, and ſtirred about in the cold water. If the purple appears before the dipping it, the temper will be fit for tools employed in working upon metals; if dipped while blue, it will be proper for ſprings, and for other inſtruments fit to cut all ſorts of ſoft ſubſtances; but if the laſt pale colour be waited for, the ſteel will not be hard at all.

28. It deſerves notice, that a piece of iron is rendered conſiderably warm by hammering, ſo as even to become red hot. But after the iron has been completely hammered once, it is aſſerted that it cannot be rendered again red hot by the ſame operation, becauſe no further compreſſion can then be made. Hard ſteel is the only metal that, being ſtruck ſlantwiſe with the ſharp edge of a flint, or of another hard ſtone, produces ſparks of fire.

29. Iron is often manufactured ſo as to be 150 times, and even above 630 times, more valuable than gold. On weighing ſome common watch pendulum-ſprings at Mr Tho. Wright's, watch-maker to the king, ſuch as are ſold at half a crown by the London artiſts for common work, ten of them weighed but one ſingle grain. Hence one pound avoirdupois (= 7000 gr.) contains ten times as many of theſe ſprings; which, at half a crown a-piece, amount to 8750 l. Sterling. The troy ounce of gold ſells at 4 l. Sterling, and the pound (= 5760 gr.) at 48 l. Sterling, which gives 58,33 (or 58 l. 6 s. 7 d.) for each pound avoirdupois of gold: and of courſe $\frac{8750}{58,33}=150$. But the pendulum-ſprings of the beſt kind of watches ſell at half a guinea each; and at this rate the above-mentioned value muſt be increaſed in the ratio of 1. to 4.2: viz. of half a crown to half a guinea: which will amount to 36,750 l. Sterling; and this ſum divided

by the value of this pound of gold, gives above 630 to the quotient.

Under the article ELECTRICITY, we have taken notice of a curious experiment of burning iron in dephlogiſticated air; of which an account is alſo given under AEROLOGY, where the experiments of Dr Prieſtley are related. In the laſt number of the Chemical Annals we find the ſubjects particularly treated of by M. Lavoiſier. "The beautiful experiment of Mr Ingenhouſz (ſays he) is now well known. A piece of very fine iron wire is turned into a ſpiral form; one end of it is fixed in a bottle-cork; to the other a piece of agaric is faſtened: when this has been done, a bottle is filled with vital air; the agaric is lighted, and it is then, along with the iron wire, quickly introduced into the bottle, which is ſtopped with the cork. As ſoon as the agaric is plunged into the vital air, it begins to burn with a dazzling light; the inflamation is communicated to the iron, which alſo burns, throwing off bright ſparks which fall to the bottom of the bottle in round globules. Theſe globules become black as they cool, and preſerve ſome remains of their metallic luſtre. The iron thus burnt is more brittle than glaſs itſelf; it powders eaſily; is attractable by the magnet, but leſs ſo than before the operation."

M. Lavoiſier, in order to obſerve more fully the changes which happened to the metal on this occaſion, repeated the experiment upon a ſcale conſiderably larger. He immerſed chips of iron turned into a ſpiral form into a veſſel filled with pure air which contained about 12 quarts; fixing to the end of each chip a ſmall bit of agaric, and a particle of phoſphorus weighing ſcarce $\frac{1}{18}$th of a grain. Having ſet fire to the phoſphorus and agaric, the iron is wholly conſumed to the very laſt particle with a bright white light reſembling ſtars in rockets. The heat in this combuſtion melts the iron, which falls down in globules of different ſizes. In the firſt inſtant of this combuſtion there is a ſlight dilatation of the air; but this is ſucceeded by a very rapid diminution; and when the quantity of iron is ſufficient, and the air very pure, almoſt the whole gas is abſorbed. Our author recommends only ſmall quantities of iron to be burnt at a time; becauſe the heat produced by its combuſtion is ſo great, that the glaſs is apt to fly. A dram, or a dram and an half, is ſufficient for a jar holding four gallons, which ought to be very ſtrong in order to reſiſt the weight of the mercury with which it is to be filled. The increaſe of weight in the iron, by being burnt in this manner, is, according to our author, about 35 *per cent.* It is then in a ſtate of ethiops, and may be powdered in a mortar. When the air in which the combuſtion has been performed is very pure, there is no great difference betwixt that in which the iron has been burnt and the original quantity, excepting only a ſmall mixture of fixed air from the little portion of charcoal contained in the iron.

In this work alſo we find ſome obſervations on the ſolubility of iron in pure water from Crell's Annals for the year 1788. It has generally been ſuppoſed that pure water is incapable of diſſolving or holding iron in ſolution: but the fact ſeems now to be eſtabliſhed by the following experiment. A pound of freſh diſtilled water was poured upon two ounces of iron-filings into a narrow-necked glaſs retort; the veſſel was then put in a ſand heat, and the liquid evaporated to one half; after which the mouth was ſlightly ſtopped with a cork; and the matter left to digeſt in a gentle heat. On opening the veſſel it was found that the water had become ſtyptic, and had a ferruginous taſte; whence it appeared that part of the metal was diſſolved. Phlogiſticated alkali had no effect upon this ſolution until a few drops of pure diſtilled acetous acid were added, when a little Pruſſian blue fell to the bottom. Soon after making this experiment, our author met with a natural mineral water which contained iron in ſolution, though it would not precipitate any thing until a few drops of acid were added. This ſolubility of iron in pure water has been alſo taken notice of by M. Landriani and M. Monnet.

25 How to preſerve iron from ruſting.

Iron is eaſily calcinable by fire, and is ſoluble in all the acids, even that of fixed air. By expoſure to the atmoſphere it is attacked by the pure part of the ſurrounding fluid, which thus becomes converted into fixed air, the metal in the mean time being changed into a yellowiſh brown powder called *ruſt*. Common iron is much more ſubject to ruſt than ſteel; and this facility of calcination renders it a matter of great importance to diſcover ſome effectual method of preventing it from taking place. Various compoſitions have been recommended, but none have been found more effectual than common oil. As the uſe of this, however, muſt be on many occaſions troubleſome and diſagreeable, a ſtill more commodious method has been fallen upon. It is known that the metal, after having undergone that kind of calcination in which it combines with the baſe of dephlogiſticated air, or begins to combine with it, is not ſubject to ruſt. By giving it a coating of this kind, therefore, it is effectually preſerved from any action of the air; and this is done by heating it till it aſſumes a blue colour, which indicates a partial calcination on the outſide: and thus utenſils are made capable of being preſerved from ruſt for a long time; though even theſe, when expoſed wet, or even a long time to the atmoſphere, will be covered with ruſt and decay like others. For the chemical properties of iron, ſee CHEMISTRY; for its electrical and magnetical ones, ſee ELECTRICITY and MAGNETISM.

IRON-Moulds, and ſpots of ink in linen, may be taken out by dipping the ſtained part in water, ſprinkling it with a little of the powdered eſſential ſalt of woodſorrel, then rubbing on a pewter plate, and waſhing the ſpot out with warm water.

IRON-Sick, in the ſea-language, is ſaid of a ſhip or boat, when her bolts or nails are ſo eaten with ruſt, and ſo worn away, that they occaſion hollows in the planks, whereby the veſſel is rendered leaky.

IRON-Wood, in botany. See the article SIDEROXYLUM.

IRON-Work, in botany. See the article SIDERITIS.

IRONY, in rhetoric, is when a perſon ſpeaks contrary to his thoughts, in order to add force to his diſcourſe; whence Quintilian calls it *diverſiloquium*.

Thus, when a notorious villain is ſcornfully complimented with the titles of a very honeſt and excellent perſon; the character of the perſon commended, the air of contempt that appears in the ſpeaker, and the exorbitancy of the commendation, ſufficiently diſcover the diſſimulation of irony.

Ironical exhortation is a very agreeable kind of trope;

which, after having ſet the inconveniences of a thing in the cleareſt light, concludes with a feigned encouragement to purſue it. Such is that of Horace, when, having beautifully deſcribed the noiſe and tumults of Rome, he adds ironically,

> "Go now, and ſtudy tuneful verſe at Rome!"

IROQUOIS, the name of five nations of Indians in North America. They are bounded by Canada on the north, by the ſtates of New York and Pennſylvania on the eaſt and ſouth, and by the lake Ontario on the weſt.

IRRADIATION, the act of emitting ſubtile effluvia, like the rays of the ſun, every way. See EFFLUVIA.

IRREGULAR, ſomething that deviates from the common forms or rules: thus, we ſay an irregular fortification, an irregular building, an irregular figure, &c.

IRREGULAR, in grammar, ſuch inflections of words as vary from the general rules; thus we ſay, irregular nouns, irregular verbs, &c.

The diſtinction of irregular nouns, according to Mr Ruddiman, is into three kinds, viz. variable, defective, and abundant; and that of irregular verbs into anomalous, defective, and abundant.

IRRITABILITY, in anatomy and medicine, a term firſt invented by Gliſſon, and adopted by Dr Haller to denote an eſſential property of all animal bodies; and which, he ſays, exiſts independently of and in contradiſtinction to ſenſibility. This ingenious author calls that part of the human body *irritable*, which becomes ſhorter upon being touched; *very irritable*, if it contracts upon a ſlight touch; and the contrary, if by a violent touch it contracts but little. He calls that a ſenſible part of the human body, which upon being touched tranſmits the impreſſion of it to the ſoul; and in brutes, he calls thoſe parts ſenſible, the irritation of which occaſions evident ſigns of pain and diſquiet in the animal. On the contrary, he calls that inſenſible, which being burnt, tore, pricked, or cut till it is quite deſtroyed, occaſions no ſign of pain nor convulſion, nor any ſort of change in the ſituation of the body. From the reſult of many cruel experiments he concludes, that the epidermis is inſenſible; that the ſkin is ſenſible in a greater degree than any other part of the body; that the fat and cellular membrane are inſenſible; and the muſcular fleſh ſenſible, the ſenſibility of which he aſcribes rather to the nerves than to the fleſh itſelf. The tendons, he ſays, having no nerves diſtributed to them, are inſenſible. The ligaments and capſulæ of the articulations are alſo concluded to be inſenſible; whence Dr Haller infers, that the ſharp pains of the gout are not ſeated in the capſulæ of the joint, but in the ſkin, and in the nerves which creep upon its external ſurface. The bones are all inſenſible, ſays Dr Haller, except the teeth; and likewiſe the marrow. Under his experiments the perioſteum and pericranium, the dura and pia mater, appeared inſenſible; and he infers, that the ſenſibility of the nerves is owing to the medulla, and not to the membranes. The arteries and veins are held ſuſceptible of little or no ſenſation, except the carotid, the lingual, temporal, pharyngal, labial, thyroidal, and the aorta near the heart; the ſenſibility of which is aſcribed to the nerves that accompany them. Senſibility is allowed to the internal membranes of the ſtomach, inteſtines, bladder, ureters, vagina, and womb, on account of their being of the ſame nature with the ſkin: the heart is alſo admitted to be ſenſible: but the lungs, liver, ſpleen, and kidneys, are poſſeſſed of a very imperfect, if any, ſenſation. The glands, having few nerves, are endowed with only an obtuſe ſenſation. Some ſenſibility is allowed to the tunica choroidis and the iris, tho' in a leſs degree than the retina; but none to the cornea. Dr Haller concludes, in general, that the nerves alone are ſenſible ot themſelves; and that, in proportion to the number of nerves apparently diſtributed to particular parts, ſuch parts poſſeſs a greater degree of ſenſibility.

Irritability, he ſays, is ſo different from ſenſibility, that the moſt irritable parts are not at all ſenſible, and *vice verſa*. He alleges facts to prove this poſition, and alſo to demonſtrate, that irritability does not depend upon the nerves, which are not irritable, but upon the original formation of the parts which are ſuſceptible of it. Irritability, he ſays, is not proportioned to ſenſibility; in proof of which, he obſerves, that the inteſtines, though rather leſs ſenſible than the ſtomach, are more irritable; and that the heart is very irritable, though it has but a ſmall degree of ſenſation.

Irritability, according to Dr Haller, is the diſtinguiſhing characteriſtic between the muſcular and cellular fibres; whence he determines the ligaments, perioſteum, meninges of the brain, and all the membranes compoſed of the cellular ſubſtance, to be void of irritability. The tendons are unirritable; and though he does not abſolutely deny irritability to the arteries, yet his experiments on the aorta produced no contraction. The veins and excretory ducts are in a ſmall degree irritable, and the gall bladder, the ductus chole dochus, the ureters and urethra, are only affected by a very acrid corroſive; but the lacteal veſſels are conſiderably irritable. The glands and mucous ſinuſes, the uterus in quadrupeds, the human matrix, and the genitals, are all irritable; as are alſo the muſcles, particularly the diaphragm. The œſophagus, ſtomach, and inteſtines, are irritable: but of all the animal organs the heart is endued with the greateſt irritability. In general, there is nothing irritable in the animal body but the muſcular fibres; and the vital parts are the moſt irritable. This power of motion, ariſing from irritations, is ſuppoſed to be different from all other properties of bodies, and probably reſides in the glutinous mucus of the muſcular fibres, altogether independent of the influence of the ſoul. The irritability of the muſcles is ſaid to be deſtroyed by drying of the fibres, congealing of the fat, and more eſpecially by the uſe of opium in living animals. The phyſiological ſyſtem, of which an abſtract has been now given, has been adopted and confirmed by Caſtell and Zimmermann, and alſo by Dr Brockleby, who ſuggeſts, that irritability, as diſtinguiſhed from ſenſibility, may depend upon a ſeries of nerves different from ſuch as ſerve either for voluntary motion or ſenſation. This doctrine, however, has been controverted by M. le Cat, and particularly by Dr Whytt in his Phyſiological Eſſays. See alſo ANATOMY, n° 86, *et ſeq.* and n° 136.

IRROGATIO, a law term amongſt the *Romans*, ſignifying the inſtrument in which were put down the puniſhments which the law provided againſt ſuch offences as any perſon was accuſed of by a magiſtrate before the people. Theſe puniſhments were firſt proclaimed *viva voce* by the accuſer, and this was called *Inquiſitio:*

The ſame, being immediately after expreſſed in writing, took the name of *Rogatio*, in reſpect of the people, who were to be conſulted or aſked about it, and was called *Irrogatio* in reſpect of the criminal, as it imported the mulct or puniſhment aſſigned him by the accuſer.

IRROMANGO, or ERRAMONGO, one of the New Hebrides iſlands, is about 24 or 25 leagues in circuit; the middle of it lies in E. Long. 169. 19. S. Lat. 18. 54. The inhabitants are of the middle ſize, and have a good ſhape and tolerable features. Their colour is very dark; and they paint their faces, ſome with black, and others with red pigment: their hair is curly and criſp, and ſomewhat woolly. Few women were ſeen, and thoſe very ugly: they wore a petticoat made of the leaves of ſome plant. The men were quite naked, excepting a belt tied about the waiſt, and a piece of cloth, or a leaf, uſed for a wrapper. No canoes were ſeen in any part of the iſland. They live in houſes covered with thatch; and their plantations are laid out by line, and fenced round. An unlucky ſcuffle between the Britiſh ſailors and theſe people, in which four of the latter were deſperately wounded, prevented captain Cook from being able to give any particular information concerning the produce, &c. of this iſland.

IRTIS, a large river of Aſia, in Siberia, which riſes among the hills of the country of the Kalmucks, and, running north eaſt, falls into the Oby near Tobolik. It abounds with fiſh, particularly ſturgeon, and delicate ſalmon.

IRVINE, a ſea-port and parliament town of Scotland, in the bailiewick of Cunningham; ſeated at the mouth of a river of the ſame name on the frith of Clyde, in W. Long. 2. 55. N. Lat. 55. 36. This port had formerly ſeveral buſſes in the herring-fiſhery. At preſent that branch is given up; but the inhabitants ſtill employ a number of brigs in the coal-trade to Ireland. Irvine had a viſcount's title, now extinct.

ISAAC, the Jewiſh patriarch, and example of filial obedience, died 1716 B. C. aged 180.

ISÆUS, a Greek orator, born at Colchis, in Syria, was the diſciple of Lyſias, and the maſter of Demoſthenes; and taught eloquence at Athens, about 344 years B. C. Sixty-four orations are attributed to him; but he compoſed no more than 50, of which only ten are now remaining. He took Lyſias for his model, and ſo well imitated his ſtyle and elegance, that we might eaſily confound the one with the other, were it not for the figures which Iſæus firſt introduced into frequent uſe. He was alſo the firſt who applied eloquence to politics, in which he was followed by his diſciple Demoſthenes.

He ought not to be confounded with Iſæus, another celebrated orator, who lived at Rome in the time of Pliny the Younger, about the year 97.

ISAIAH, or *the Prophecy of* ISAIAH, a canonical book of the Old Teſtament. Iſaiah is the firſt of the four greater prophets; the other three being Jeremiah, Ezekiel, and Daniel. This prophet was of royal blood, his father Amos being brother to Azariah king of Judah. The five firſt chapters of his prophecy relate to the reign of Uzziah; the viſion in the ſixth chapter happened in the time of Jotham: the next chapters, to the fifteenth, include his prophecies under the reign of Ahaz; and thoſe that were made under the reigns of Hezekiah and Manaſſeh, are related in the next chapters to the end. Iſaiah foretold the deliverance of the Jews from their captivity in Babylon by Cyrus, one hundred years before it came to paſs. But the moſt remarkable of his predictions are thoſe concerning the Meſſiah, which deſcribe not only his deſcent, but all the remarkable circumſtances of his life and death. The ſtyle of this prophet is noble, nervous, ſublime, and florid, which he acquired by converſe with men of the greateſt abilities and elocution: Grotius calls him the Demoſthenes of the Hebrews. However, the profoundneſs of his thoughts, the loftineſs of his expreſſions, and the extent of his prophecy, render him one of the moſt difficult of all the prophets; and the commentaries that have been hitherto written on his prophecy fall ſhort of a full explication of it. Biſhop Lowth's new tranſlation, &c. publiſhed in 1778, throws conſiderable light on the compoſition and meaning of *Iſaiah*.

ISATIS, WOAD: A genus of the ſiliquoſa order, belonging to the tetradynamia claſs of plants; and in the natural method ranking under the 39th order, the *Siliquoſa*. The ſiliqua is lanceolated, unilocular, monoſpermous, bivalved, and deciduous; the valves navicular or canoe-ſhaped. There are four ſpecies; but the only one worthy of notice is the tinctoria, or common woad, which is cultivated in ſeveral parts of Britain for the purpoſes of dyeing; being uſed as a foundation for many of the dark colours. See *COLOUR-Making*, n° 37; and WOAD.

The plant is biennial; the lower leaves are of an oblong oval figure, and pretty thick conſiſtence, ending in obtuſe roundiſh points; they are entire on their edges, and of a lucid green. The ſtalks riſe four feet high, dividing into ſeveral branches, garniſhed with arrow-ſhaped leaves ſitting cloſe to the ſtalks; the branches are terminated by ſmall yellow flowers, in very cloſe cluſters, which are compoſed of four ſmall petals placed in form of a croſs, which are ſucceeded by pods ſhaped like a bird's tongue, which, when ripe, turn black, and open with two valves, having one cell, in which is ſituated a ſingle ſeed.

This ſort is ſown upon freſh land which is in good heart, for which the cultivators of woad pay a large rent. They generally chooſe to have their lands ſituated near great towns, where there is plenty of dreſſing; but they never ſtay long on the ſame ſpot: for the beſt ground will not admit of being ſown with woad more than twice; and if it is oftener repeated, the crop ſeldom pays the charges of culture, &c. Thoſe who cultivate this commodity have gangs of people who have been bred to the employment; ſo that whole families travel about from place to place wherever their principal fixes on land for the purpoſe. As the goodneſs of woad conſiſts in the ſize and fatneſs or thickneſs of the leaves, the only method to obtain this, is by ſowing the ſeed upon ground at a proper ſeaſon, and allowing the plants proper room to grow; as alſo to keep them clean from weeds, which, if permitted to grow, will rob the plants of their nouriſhment. After having made choice of a proper ſpot of land, which ſhould not be too light and ſandy, nor over ſtiff and moiſt, but rather a gentle hazel loam, whoſe parts will eaſily ſeparate, the next is to plough this up juſt before winter, laying it in narrow high ridges, that the froſt may penetrate through the ridges to mellow and ſoften the clods; then in the ſpring plough it again croſſwiſe, laying it again in narrow ridges. After it has lain for ſome time in this manner, and the weeds begin to grow, it ſhould be well harrowed to deſtroy them: this ſhould be repeated twice while the weeds are young; and, if there are any roots of large perennial weeds, they muſt be harrowed out, and carried off the ground. In June the ground ſhould be a third time ploughed, when the furrows ſhould be narrow, and the ground ſtirred as deep as the plough will go, that the parts may be as well ſeparated as poſſible; and when the weeds appear again, the ground ſhould be well harrowed to deſtroy them. Toward the end of July, or the beginning of Auguſt, it ſhould be ploughed the laſt time, when the land ſhould be laid ſmooth; and when there is a proſpect of ſhowers, the ground muſt be harrowed to receive the ſeeds, which ſhould be ſown in rows with the drill-plough, or in broad-caſt after the common method; but it will be proper to ſteep the ſeeds one night in water before they are ſown, which will prepare them for vegetation: if the ſeeds are ſown in drills, they will be covered with an inſtrument fixed to the plough for that purpoſe, but thoſe which are ſown broad caſt in the common way muſt be well harrowed in. If the ſeeds are good, and the ſeaſon favourable, the plants will appear in a fortnight, and in a month or five weeks will be fit to hoe; for the ſooner this is performed when the plants are diſtinguiſhable, the better they will thrive, and the weeds being then young will be ſoon deſtroyed. The method of hoeing theſe plants is the ſame as for turnips: with this difference only, that theſe plants need not be thinned ſo much; for at the firſt hoeing, if they are ſeparated to the diſtance of four inches, and at the laſt to ſix inches, it will be ſpace enough for the growth of the plants; and if this is carefully performed, and in dry weather, moſt of the weeds will be deſtroyed; but as ſome of them may eſcape in this operation, and young weeds will riſe, ſo the ground ſhould be a ſecond time hoed in the beginning of October, always chooſing a dry time for this work; at this ſecond operation, the plants ſhould be ſingled out to the diſtance they are to remain. After this, if carefully performed, the ground will be clean from weeds till the ſpring, when young weeds will come up: therefore about the middle of March will be a good time to hoe the ground again; for while the weeds are young, it may be performed in leſs than half the time it would require if the weeds were permitted to grow large, and the ſun and wind will much ſooner kill them: this hoeing will alſo ſtir the ſurface of the ground, and greatly promote the growth of the plants; if this is performed in dry weather, the ground will be clean till the firſt crop of woad is gathered, after which it muſt be again well cleaned; if this is carefully repeated after the gathering each crop, the land will always lie clean, and the plants will thrive the better. The expence of the firſt hoeing will be about ſix ſhillings *per* acre, and for the after hoeings half that price will be ſufficient, provided they are performed when the weeds are young, for if they are ſuffered to grow large, it will require more labour, nor can it be ſo well performed.

If the land, in which this ſeed is ſown, ſhould have been in culture before for other crops, ſo not in good heart, it will require dreſſing before it is ſown, in which caſe rotten ſtable-dung is preferable to any other; but this ſhould not be laid on till the laſt ploughing, juſt before the ſeeds are ſown, and not ſpread till the land is ploughed, that the ſun may not exhale the goodneſs of it, which in ſummer is ſoon loſt when ſpread on the ground. The quantity ſhould not be leſs than 20 loads to each acre, which will keep the ground in heart till the crop of woad is ſpent.

The time for gathering of the crop is according to the ſeaſon: but it ſhould be performed as ſoon as the leaves are fully grown, while they are perfectly green; for when they begin to change pale, great part of their goodneſs is over, for the quantity will be leſs, and the quality greatly diminiſhed.

If the land is good, and the crop well huſbanded, it will produce three or four gatherings; but the two firſt are the beſt. Theſe are commonly mixed together in the manufacturing of it; but the after crops are always kept ſeparate; for if theſe are mixed with the other, the whole will be of little value. The two firſt crops will ſell from 25 l. to 30 l. a ton; but the latter will not bring more than 7 l. or 8l. and ſometimes not ſo much. An acre of land will produce a ton of woad, and in good ſeaſons near a ton and an half.

When the planters intend to ſave the ſeeds, they cut three crops of the leaves, and then let the plants ſtand till the next year for ſeed; but if only one crop is cut, and that only of the outer leaves, letting all the middle leaves ſtand to nouriſh the ſtalks, the plants will grow ſtronger, and produce a much greater quantity of ſeeds.

Theſe ſeeds are often kept two years, but it is always beſt to ſow new ſeeds when they can be obtained. The ſeeds ripen in Auguſt; and when the pods turn to a dark colour, the ſeeds ſhould be gathered. It is beſt done by reaping the ſtalks in the ſame manner as wheat, ſpreading the ſtalks in rows upon the ground: and in four or five days the ſeeds will be fit to threſh out, provided the weather is dry; for if it lies long, the pods will open and let out the ſeeds.

There are ſome of the woad planters who feed down the leaves in winter with ſheep; which is a very bad method: for all plants which are to remain for a future crop ſhould never be eaten by cattle, for that greatly weakens the plants; therefore thoſe who eat down their wheat in winter with ſheep are equally blameable.

Isatis, in zoology, a ſynonyme of the canis lagopus. See Canis.

ISAURA, or Isaurus (anc. geog.), a ſtrong city at mount Taurus, in Iſauria, twice demoliſhed; firſt by Perdiccas, or rather by the inhabitants, who, thro' deſpair, deſtroyed themſelves by fire, rather than fall into the hands of the enemy; again by Servilius, who thence took the ſurname *Iſauricus*. Strabo ſays there were two Iſauras, the old and the new, but ſo near that other writers took them but for one.

ISAURIA, a country touching Pamphylia and Cilicia on the north, rugged and mountainous, ſituated almoſt in mount Taurus, and taking its name from Iſaura; according to ſome, extending to the Mediterranean by a narrow ſlip. Stephanus, Ptolemy, and Zoſimus, make no mention of places on the ſea; though Pliny does, as alſo Strabo; but doubtful, whether they are places in Iſauria Proper, or in Pamphylia, or in Cilicia.

ISAURICA, a part of Lycaonia, bordering on mount Taurus.

ISCA Dumniorum (anc. geog.); a town in Britain. Now Exeter, capital of Devonſhire. W. Long. 3° 40′, Lat. 50. 44. Called *Caer-Iſk* in Britiſh, (Camden.)

ISCA Silurum (anc. geog.); the ſtation of the Legio II. Auguſta, in Britain. Now *Caerleon*, a town of Monmouthſhire, on the Uſke.

ISCHALIS, or Iscalis (anc. geog.); a town of the Belgæ in Britain. Now *Ilcheſter*, in Somerſetſhire, on the river Ill.

ISCHÆMUM, in botany: A genus of the monœcia order, belonging to the polygamia claſs of plants; and in the natural method ranking under the 4th order, *Gramina*. The calyx of the hermaphrodite is a biflorous glume; the corolla bivalved; there are three ſtamina, two ſtyles, and one ſeed. The calyx and corolla of the male as in the former with three ſtamina.

ISCHIUM, in anatomy, one of the bones of the pelvis. See Anatomy, n° 41.

ISCHIA, an iſland of Italy, in the kingdom of Naples, about 15 miles in circumference, lying on the coaſt of the Terra di Lavoro, from which it is three miles diſtant. It is full of agreeable valleys, which produce excellent fruits. It hath alſo mountains on which grow vines of an excellent kind: likewiſe fountains, rivulets, and fine gardens.

Ischia, a town of Italy, and capital of an iſland of the ſame name, with a biſhop's ſee and a ſtrong fort. Both the city and fortreſs ſtand upon a rock, which is joined to the iſland by a ſtrong bridge; the rock is about ſeven furlongs in circumference. The city is like a pyramid of houſes piled upon one another, which makes a very ſingular and ſtriking appearance. At the end of the bridge next the city are iron gates, which open into a ſubterraneous paſſage, through which they enter the city. They are always guarded by ſoldiers who are natives of the iſland. E. Long. 13. 55. N. Lat, 40. 50.

ISCHURIA, ισχȣρια (formed from ισχω "I ſtop," and ȣρον "urine," in phyſic), a diſeaſe conſiſting in an entire ſuppreſſion of urine. See Medicine-*Index*.

It is occaſioned by any thing which may obſtruct the paſſages of the reins, ureters, or the neck of the bladder, as ſand, ſtone, mucus, &c. It may alſo ariſe from an obſtruction of the nerves which paſs to the reins or bladder, as we ſee it does in a palſy of the parts below the diaphragm. The too great diſtenſion of the bladder may alſo produce the ſame effect: for the fibres being much lengthened, and conſequently condenſed, the ſpirits neceſſary for their contraction cannot get admittance; whence it is that perſons who have retained their urine a long time, find a great deal of difficulty in diſcharging it.

ISELASTICS, a kind of games, or combats, celebrated in Greece and Aſia, in the time of the Roman emperors.

The victor at theſe games had very conſiderable privileges conferred on him, after the example of Auguſtus and the Athenians, who did the like to conquerors at the Olympic, Pythian, and Iſthmian games. They were crowned on the ſpot immediately after their victory, had penſions allowed them, were furniſhed with proviſions at the public coſt, and were carried in triumph to their country.

ISENACH, a town of Germany, in the circle of Upper Saxony, from whence one of the Saxon princes takes the title of *duke*. There are iron mines in the neighbourhood. E. Long. 9. 17. N. Lat. 51. 0.

ISENARTS, or Eisenarts, a conſiderable town of Germany in Auſtria and in Styria; famous for its iron mines. E. Long. 15. 25. N. Lat. 46. 56.

ISENBURG, a large town of Germany, capital of a county of the ſame name, with a handſome caſtle, ſeated on the river Seine, in E. Long. 7. 14. N. Lat. 50. 28. The county belongs to the elector of Treves.

ISENGHEIN, a town of the Auſtrian Netherlands, with the title of a *principality*, ſeated on the river Mandera, in E. Long. 3. 18. N. Lat. 50. 44.

ISERNIA, a town of Italy, in the kingdom of Naples, and in the county of Moliſe, with a biſhop's ſee. It is ſeated at the foot of the Appenines, in E. Long. 14. 20.

ISH, in Scots law, ſignifies *expiry*. Thus we ſay "the *iſh* of a leaſe." It ſignifies alſo *to go out*; thus we ſay "free *iſh* and entry" from and to any place.

ISIA, Ισεια, feaſts and ſacrifices anciently ſolemnized in honour of the goddeſs Iſis.—The Iſia were full of the moſt abominable impurities; and for that reaſon, thoſe who were initiated into them were obliged to take an oath of ſecrecy. They held for nine days ſucceſſively, but grew ſo ſcandalous, that the ſenate aboliſhed them at Rome, under the conſulate of Piſo and Gabinius. They were re-eſtabliſhed by Auguſtus, and the emperor Commodus himſelf aſſiſted at them, appearing among the prieſts of that goddeſs with his head ſhaven, and carrying the Anubis.

ISIAC table is one of the moſt conſiderable monuments of antiquity, diſcovered at Rome in 1525, and ſuppoſed by the various figures in baſs relief upon it, to repreſent the feaſts of Iſis, and other Egyptain deities. There have been various opinions as to the antiquity of this monument: ſome have ſuppoſed that it was engraved long before the time when the Egyptians worſhipped the figures of men and women. Others, among whom is biſhop Warburton, apprehend, that it was made at Rome by perſons attached to the worſhip of Iſis. Dr Warburton conſiders it as one of the moſt modern of the Egyptian monuments, on account of the great mixture of hieroglyphic characters which it bears.

ISIACI, prieſts of the goddeſs Iſis.—Dioſcorides tells us, that they bore a branch of ſea-wormwood in their hands inſtead of olive. They ſung the praiſes of the goddeſs twice a-day, viz. at the riſing of the ſun, when they opened her temple; after which they begged alms the reſt of the day, and returning at night, repeated their oriſons, and ſhut up the temple.

Such was the life and office of the *Iſiaci*; they never covered their feet with any thing but the thin bark of the plant papyrus, which occaſioned Prudentius and others to ſay they went bare-footed. They wore no garments but linen, becauſe Iſis was the firſt who taught mankind the culture of this commodity.

ISIDORUS, called Damiatensis, or Pelusiota, from his living in a ſolitude near that city, was one of the moſt famous of all St Chryſoſtom's diſciples, and flouriſhed in the time of the general council held in 421. We have 2012 of his epiſtles in five books. They are ſhort, but well written, in Greek. The beſt edition is that of Paris, in Greek and Latin, printed in 1638, in folio.

ISIGNI, a town of France, in Lower Normandy, with a ſmall harbour, and well known on account of its ſalt-works, its cyder, and its butter. W. Long. 0. 50. N. Lat. 49. 20.

ISINGLASS. See Ichthyocolla.

ISIS, a celebrated deity of the Egyptians, daughter of Saturn and Rhea, according to Diodorus of Sicily. Some ſuppoſe her to be the ſame as Io, who was changed into a cow, and reſtored to her human form in Egypt, where ſhe taught agriculture, and governed the people with mildneſs and equity, for which reaſons ſhe received divine honours after death. According to ſome traditions mentioned by Plutarch, Iſis married her brother Oſiris, and was pregnant by him even before ſhe had left her mother's womb. Theſe two ancient deities, as ſome authors obſerve, comprehended all nature and all the gods of the heathens. Iſis was the Venus of Cyprus, the Minerva of Athens, the Cybele of the Phrygians, the Ceres of Eleuſis, the Proſerpine of Sicily, the Diana of Crete, the Bellona of the Romans, &c. Oſiris and Iſis reigned conjointly in Egypt; but the rebellion of Typhon, the brother of Oſiris proved fatal to this ſovereign. The ox and the cow were the ſymbols of Oſiris and Iſis; becauſe theſe deities, while on earth, had diligently applied themſelves in cultivating the earth. As Iſis was ſuppoſed to be the moon as Oſiris the ſun, ſhe was repreſented as holding a globe in her hand, with a veſſel full of ears of corn. The Egyptians believed that the yearly and regular inundations of the Nile proceeded from the abundant tears which Iſis ſhed for the loſs of Oſiris, whom Typhon had baſely murdered. The word *Iſis*, according to ſome, ſignifies "ancient," and on that account the inſcriptions on the ſtatues of the goddeſs were often in theſe words; "I am all that has been, that ſhall be, and none among mortals has hitherto taken off my veil." The worſhip of Iſis was univerſal in Egypt, the prieſts were obliged to obſerve perpetual chaſtity, their head was cloſely ſhaved, and they always walked barefooted, and clothed themſelves in linen garments. They never eat onions, they abſtained from ſalt with their meat, and were forbidden to eat the fleſh of ſheep and of hogs. During the night they were employed in continual devotion near the ſtatue of the goddeſs. Cleopatra, the beautiful queen of Egypt, was wont to dreſs herſelf like this goddeſs, and affected to be called a ſecond Iſis.

Isis, or *Thames*, a river that has its riſe in Glouceſterſhire, and flows through only a ſmall part of Wiltſhire. It enters this county near its ſource, and begins to be navigable for boats at Cricklade; but after running in a ſerpentine manner about four miles, it leaves Glouceſterſhire at a village called *Caſtle Eaton*.

ISLAM; the true faith, according to the Mahometans. See Mahometanism.

ISLAND, a tract of dry land encompaſſed with water; in which ſenſe it ſtands contradiſtinguiſhed from Continent, or Terra Firma.

Several naturaliſts are of opinion, that the iſlands were formed at the deluge; others think, that there have been new iſlands formed by the caſting up of vaſt heaps of clay, mud, ſand, &c.; others think they have been ſeparated from the continent by violent ſtorms, inundations, and earthquakes. Theſe laſt have obſerved, that the Eaſt Indies, which abound in iſlands more than any other part of the world, are likewiſe more annoyed with earthquakes, tempeſts, lightnings, volcanoes, &c. than any other part. Others again conclude, that iſlands are as ancient as the world, and that there were ſome at the beginning; and, among other arguments, ſupport their opinion from Gen x. 5. and other paſſages of Scripture.

Varenius thinks that there have been iſlands produced each of theſe ways. St Helena, Aſcenſion, and other ſteep rocky iſlands, he ſuppoſes to have become ſo by the ſea's overflowing their neighbouring champaigns: but by the heaping up huge quantities of ſand, and other terreſtrial matter, he thinks the iſlands of Zealand, Japan, &c. were formed. Sumatra and Ceylon, and moſt of the Eaſt India iſlands, he thinks, were rent off from the main land; and concludes, that the iſlands of the Archipelago were formed in the ſame way, imagining it probable that Deucalion's flood might contribute towards it. The ancients had a notion that Delos, and a few other iſlands, roſe from the bottom of the ſea; which, how fabulous ſoever it may appear, agrees with later obſervations. Seneca takes notice, that the iſland Theraſia roſe thus out of the Ægean ſea in his time, of which the mariners were eye-witneſſes.

It is indeed very probable, that many iſlands have exiſted not only from the deluge, but from the creation of the world; and we have undoubted proofs of the formation of iſlands in all the different ways abovementioned. Another way, however, in which iſlands are frequently formed in the South Sea, is by the coralline inſects. On this ſubject the following curious diſſertation by Alexander Dalrymple, Eſq; hath appeared in the Philoſophical tranſactions for the year 1767.

"Theſe iſlands are generally long and narrow; they are formed by a narrow bar of land, incloſing the ſea within it; generally, perhaps always, with ſome ingreſs at leaſt to the tide; commonly with an opening capable of receiving a canoe, and frequently ſufficient to admit even larger veſſels.

"The origin of theſe iſlands will explain their nature. What led me firſt to this deduction was an obſervation of Abdul Roobin, a Sooloo pilot, that all the iſlands lying off the north-eaſt coaſt of Borneo had ſhoals to the eaſtward of them.

"Theſe iſlands being covered to the weſtward by Borneo, the winds from that quarter do not attack them with violence. But the north-eaſt winds, tumbling in the billows from a wide ocean, heap up the coral with which thoſe ſeas are filled. This, obvious after ſtorms, is perhaps at all other times imperceptibly effected.

"The coral banks, raiſed in the ſame manner, become dry. Theſe banks are found of all depths, at all diſtances from ſhore, entirely unconnected with the land, and detached from each other: although it often happens that they are divided by a narrow gut without bottom.

"Coral banks alſo grow, by a quick progreſſion, towards the ſurface; but the winds, heaping up the coral from deeper water, chiefly accelerate the formation of theſe into ſhoals and iſlands. They become gradually ſhallower; and, when once the ſea meets with reſiſtance, the coral is quickly thrown up by the force of the waves breaking againſt the bank; and hence it is, that, in the open ſea, there is ſcarce an inſtance of a coral bank having ſo little water that a large ſhip cannot paſs over, but it is alſo ſo ſhallow that a boat would ground on it.

"I have ſeen theſe coral banks in all the ſtages; ſome in deep water, others with few rocks appearing above the ſurface; ſome juſt formed into iſlands, without the leaſt appearance of vegetation; and others from ſuch as have a few weeds on the higheſt part, to thoſe which are covered with large timber, with a bottomleſs ſea at a piſtol-ſhot diſtance.

"The looſe coral, rolled inward by the billows in large pieces, will ground; and the reflux being unable to carry them away, they become a bar to coagulate the ſand, always found intermixed with coral; which ſand, being eaſieſt raiſed, will be lodged at top. When the ſand-bank is raiſed by violent ſtorms beyond the reach of common waves, it becomes a reſting-place to vagrant birds, whom the ſearch of prey draws thither. The dung, feathers, &c. increaſe the ſoil, and prepare it for the reception of accidental roots, branches, and ſeed, caſt up by the waves, or brought thither by birds. Thus iſlands are formed: the leaves and rotten branches intermixing with the ſand, form in time a light black mould, of which in general theſe iſlands conſiſt; more ſandy as leſs woody; and, when full of large trees, with a greater proportion of mould.

"Cocoa nuts, continuing long in the ſea without loſing their vegetative powers, are commonly to be found in ſuch iſlands; particularly as they are adapted to all ſoils, whether ſandy, rich, or rocky.

"The violence of the waves within the tropics, muſt generally be directed to two points, according to the monſoons.

"Hence the iſlands formed from coral banks muſt be long and narrow, and lie nearly in a meridional direction. For even ſuppoſing the banks to be round, as they ſeldom are when large, the ſea, meeting moſt reſiſtance in the middle, muſt heave up the matter in greater quantities there than towards the extremities: and, by the ſame rule, the ends will generally be open, or at leaſt loweſt. They will alſo commonly have ſoundings there, as the remains of the bank, not accumulated, will be under water.

"Where the coral banks are not expoſed to the common monſoon, they will alter their direction; and be either round, extending the parallel, or be of irregular forms, according to accidental circumſtances.

"The interior parts of theſe iſlands being ſea, ſometimes form harbours capable of receiving veſſels of ſome burthen, and, I believe, always abound greatly with fiſh; and, ſuch as I have ſeen, with turtle-graſs and other ſea-plants, particularly one ſpecies, called by the Sooloos *gammye*, which grows in little globules, and is ſomewhat pungent, as well as acid, to the taſte.

"It need not be repeated, that the ends of thoſe iſlands only are the places to expect ſoundings; and they commonly have a ſhallow ſpit running out from each point.

"Abdul Roobin's obſervation points out another circumſtance, which may be uſeful to navigators; by conſideration of the winds to which any iſlands are moſt expoſed, to form a probable conjecture which ſide has deepeſt water; and from a view which ſide has the ſhoals, an idea may be formed which winds rage with moſt violence."

Iſlands from their ſituation enjoy many great advantages, the principal of which are theſe. In the firſt place, many benefits are derived to the inhabitants of an iſland from its unity. The very largeſt country on a continent is ſtill but a part, which implies dependence, and is neceſſarily attended with a train of imperfections; from all of which, by the unerring and unalterable laws of nature, the people who live in an iſland are or may be entirely free. All countries on the continent are expoſed to continual dangers, againſt which their inhabitants muſt be perpetually upon their guard. This renders a large military force requiſite. It involves them in continual negociations, leagues, and alliances, all of which, however, cannot exempt them from frequent wars, or the miſeries that attend them, and which have commonly bad effects on their internal policy. In the next place, the climate is generally mild and ſalubrious from the vapours of the ſurrounding ſea, which according to the latitude abates the violence of heat, and moderates the rigour of cold, both which are ſenſibly and conſtantly leſs than on continents under the ſame elevation of the pole. We have a remarkable inſtance of this in the iſlands called anciently *Stœhades*, in the modern Latin *Inſulæ Arearum*, by us the iſlands of *Hieres*. They are three in number, lying in 43° north latitude, before the port of Toulon. In them, the fruits of France and Italy arrive at the higheſt perfection, and all the medical herbs of Italy, Greece, and Egypt, grow wild. Yet the climate is wonderfully temperate and pleaſant in all ſeaſons*.—There is alſo commonly a greater variety, and always a greater fertility, in the ſoil, occaſioned chiefly by the warmth of the circumambient air, frequent ſhowers, and, in conſequence of both, being continually impregnated with vegetable ſalts. Another conſiderable advantage ariſes from its acceſſibility on every ſide, by which it is open to receive ſupplies from other countries, and has the conveniency of exporting its commodities and manufactures to all markets, and, in compariſon of the continent, at all ſeaſons. The oppoſite ſides of an iſland may in regard to commerce be conſidered as two countries; each has its ports, its proper commodities, its proper correſpondencies; in conſequence of which, it promotes the cultivation, and procures vent for the manufactures, of a large diſtrict behind it; while the intermediate midland ſpace finds a profit in that inland trade, which theſe two diſtricts ſupply. The winds contrary on one ſide are favourable on the other; and the ſea, the common road to both coaſts, is continually ploughed by veſſels outward and homeward bound, which keeps up that active and enterprizing ſpirit which characterizes iſlanders. An iſland has at once the moſt extenſive and the moſt effectual frontier, and this on all ſides, ſubſiſting for ever, without repairs, and without expence: and, which is ſtill more, derives from this very frontier a great part of the ſubſiſtence of its inhabitants, and a valuable article in its commerce, from its fiſheries. It is commonly ſaid the ſea is a miſe, but in truth it is better; its treaſures are more laſting and more certain, procured by labour ſolely, and fit for uſe or for ſale as ſoon as procured, quickly conſumed, and thereby the ſource of continual employment to a ſtout, hardy, laborious race of men, who likewiſe find employment for numbers, and are in various reſpects otherwiſe beneficial members of the community. The defence of this natural barrier, which, as we have ſaid, coſts nothing, but on the contrary yields much, is not only permanent, but in every reſpect more to be relied on than any that could be raiſed by the ſkill and induſtry of men at the greateſt expence. All theſe bleſſings and benefits are inſured by the leſſon that Nature dictates, ſome would ſay the law which ſhe preſcribes, to the inhabitants of every iſland, to place all their hopes in the aſſiduous cultivation of their own country, to bend all their endeavours to raiſing and extending their commerce, and to put their truſt in Providence, and in the ſafeguard which ſhe directs; men accuſtomed to robuſt and hardy exerciſes, and in what neceſſarily ariſes from their way of life, a naval force. The firſt inhabitants come in veſſels, are for a time dependent on the country from whence they came, arrive at independence by enlarging their correſpondence: and thus commerce is natural and eſſential to the people of an iſland; which is the reaſon that they thrive ſo long as they poſſeſs it, and gradually decline in the ſame proportion in which that decays.

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* See *America*, n° 6—43.

Iſlands of Ice. See *Ice-Iſland.*

Floating-Iſlands. Hiſtories are full of accounts of floating iſlands; but the greateſt part of them are either falſe or exaggerated. What we generally ſee of this kind is no more than the concretion of the lighter and more viſcous matter floating on the ſurface of the water in cakes; and, with the roots of the plants, forming congeries of different ſizes, which, not being fixed to the ſhore in any part, are blown about by the winds and float on the ſurface. Theſe are generally found in lakes, where they are confined from being carried too far; and, in proceſs of time, ſome of them acquire a very conſiderable ſize. Seneca tells us of many of theſe floating Iſlands in Italy; and ſome later writers have deſcribed not a few of them in other places. But, however true theſe accounts might have been at the time when they were written, very few proofs of their authenticity are now to be found; the floating iſlands having either diſappeared again, or been fixed to the ſides in ſuch a manner as to make a part of the ſhore. Pliny tells us of a great iſland which at one time ſwam about in the lake Cutilia in the country of Reatinum, which was diſcovered to the old Romans by a miracle; and Pomponius tells us, that in Lydia there were ſeveral iſlands ſo looſe in their foundation, that every little accident ſhock and removed them.

Iſland (or *Iceland*) Cryſtal. See *Crystal Iceland).*

ISLE-ADAM, a town in France, with a handſome caſtle, and the title of a baron; ſeated on the river Oiſe, three miles from Beaumont, and 20 from Paris. E. Long. 2. 13. N. Lat. 49. 7.

Isle-de-Dieu, a ſmall iſland of France in the ſea of Gaſcony, and on the coaſt of Poitou, from which it is 14 miles. W. Long. 2. 5. N. Lat. 46. 45.

Isle-de-France, is one of the 12 general governments of France: bounded on the north by Picardy, on the weſt by Normandy, on the ſouth by the government of Orleannois, and on the eaſt by that of Champagne. It is about 90 miles in length, and as much in breadth; and is watered by the river Seine, Marne, Oiſe, and Aiſne. The air is temperate, and the ſoil fertile; and it abounds in wine, corn, and fruits. It contains 10 ſmall diſtricts, and Paris is the capital city.

ISLEBIANS, in eccleſiaſtical hiſtory, a name given to thoſe who adopted the ſentiments of a Lutheran divine of Saxony, called John Agricola, a diſciple and companion of Luther, a native of Iſleb, whence the name; who interpreting literally ſome of the precepts of St Paul with regard to the Jewiſh law, declaimed againſt the law and the neceſſity of good works. See Antinomians.

ISLINGTON, a village of Middleſex, on the north ſide of London, to which it is almoſt contiguous. It appears to be of a Saxon origin; and in the conqueror's time was written Iſledon, or Iſendon. The church is one of the prebends of St Paul's; to the dean and chapter of which a certain precinct here belongs, for the probate of wills, and granting adminiſtrations. The church was a Gothic ſtructure, erected in 1503, and ſtood till 1751, when the inhabitants applied to parliament for leave to rebuild it, and ſoon after erected the preſent ſtructure, which is a very ſubſtantial brick edifice, though it does not want an air of lightneſs. Its houſes are above 2000, including the Upper and Lower Holloways, three ſides of Newington-Green, and part of Kingſland, on the road to Ware. The White Conduit-houſe in this place, ſo called from a white ſtone conduit that ſtands before the entrance, has handſome gardens with good walks, and two large rooms one above the other for the entertainment of company at tea, &c. In the S. W. part of this village is that noble reſervoir, improperly called New-River Head; though they are only two baſons, which receive that river from Hertfordſhire, and from whence the water is thrown by an engine into the company's pipes for the ſupply of London. In the red-moat on the north ſide of theſe baſons, called Six-Acre-Field, from the contents of it, which is the third field beyond the White-Conduit, there appears to have been a fortreſs in former days, incloſed with a rampart and ditch, which is ſuppoſed to have been a Roman camp made uſe of by Suetonius Paulinus after his retreat, which Tacitus mentions, from London, before he ſallied thence, and routed the Britons under their queen Boadicea; and that which is vulgarly, but erroneouſly, called Jack Straw's caſtle, in a ſquare place in the S. W. angle of the field, ſuppoſed to have been the ſeat of the Roman general's pretorium or tent. In this pariſh are two charity-ſchools; one founded in 1613 by Dame Alice Owen, for educating 30 children. This foundation, together with that of a row of alms-houſes, are under the care of the brewers company. Here is an hoſpital with its chapel, and a workhouſe for the poor. There is a ſpring of chalybeate water, in a very pleaſant garden, which for ſome years was honoured by the conſtant attendance of the princeſs Amelia, and many perſons of quality, who drank the waters. To this place, which is called New Tunbridge Wells, many people reſort, particularly during the ſummer, the price of drinking the waters being 10s. 6. for the ſeaſon. Near this place is a houſe of entertainment called Saddler's Wells, where, during the ſummer ſeaſon, people are amuſed with balance-maſters, walking on the wire, rope-dancing, tumbling, and pantomime entertainments.

ISLIP, a town of Oxfordſhire, 56 miles from London, is noted for the birth and baptiſm of Edward the Confeſſor. By the late inland navigation, it has communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends about 500 miles, in the counties of Lincoln, Nottingham, York, Lancaſter, Weſtmoreland, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c. It has a good market for ſheep, and ſome remains of an ancient palace, ſaid to have been king Ethelred's. Here is a charity ſchool. The chapel wherein Edward was baptiſed ſtood at a ſmall diſtance north from the church, is ſtill called the king's chapel, was entirely deſecrated during Cromwell's uſurpation, and converted to the meaneſt uſes of a farm-yard; at preſent it has a roof of thatch. It is built of ſtone 15 yards long and 7 broad, and retains traces of the arches of an oblong window at the eaſt end. This manor was given by Edward the Confeſſor to Weſtminſter abbey, to which it belongs.

ISMAELITES, the deſcendents of Iſmael; dwelling from Havila to the wilderneſs of Sur, towards Egypt, and thus overſpreading Arabia Petræa, and therefore Joſephus calls Iſmael the founder of the Arabs.

ISMARUS (anc. geog.), a town of the Cicones in Thrace, giving name to a lake. In Virgil it is called Iſmara. Servius ſuppoſes it to be a mountain of Thrace; on which mountain Orpheus dwelt.

ISNARDIA, in botany: A genus of the monogynia order, belonging to the tetrandria claſs of plants; and in the natural method ranking under the 17th order, *Calycanthemæ*. There is no corolla; the calyx is quadrifid; the capſule quadrilocular, and girt with the calyx.

ISNY, an imperial town of Germany, in Suabia, and in Algow; ſeated on the river Iſny, in E. Long. 9. 10. N. Lat. 47. 33.

ISNIC, a town of Turkey in Aſia, and in Natolia, with a Greek archbiſhop's ſee. It is the ancient Nice, famous for the firſt general council held here in 325. There is now nothing remaining of its ancient ſplendor but an aqueduct. The Jews inhabit the greateſt part of it; and it is ſeated in a country fertile in corn and excellent wine. E. Long. 30. 9. N. Lat. 47. 15.

ISOCHRONAL, is applied to ſuch vibrations of a pendulum as are performed in the ſame ſpace of time: as all the vibrations or ſwings of the ſame pendulum are, whether the arches it deſcribes are ſhorter or longer.

Isochronal-Line, that in which a heavy body is ſuppoſed to deſcend without any acceleration.

ISOCRATES, one of the greateſt orators of Greece, was born at Athens, 436 B. C. He was the ſon of Theodorus, who had enriched himſelf by making muſical inſtruments, and gave his ſon a liberal education. Iſocrates was the diſciple of Prodicus, Gorgias, and other great orators. He endeavoured at firſt to declaim in public, but without ſucceſs; he therefore contented himſelf with inſtructing his ſcholars, and making private orations. He always ſhowed great love for his country; and being informed of the loſs of the battle of Cheronea, he abſtained four days from eating, and died, aged 98. There are ſtill extant 21 of his diſcourſes or orations, which are excellent performances, and have been tranſlated from the Greek into Latin by Wolfius. Iſocrates particularly excelled in the juſtneſs of his thoughts, and the elegance of his expreſſions. There are alſo nine letters attributed to him.

ISOETES, in botany; a genus of the natural order of filices, belonging to the cryptogamia claſs of plants. The antheræ of the male flower are within the baſe of the frons or leaf. The capſule of the female flower is bilocular, and within the baſe of the leaf.

ISOLA, a town of Italy, in the kingdom of Naples, and in the Farther Calabria, with a biſhop's ſee. It is a ſea-port town, and is ſeated 15 miles ſouth-eaſt of St Severina. E. Long. 7. 33. N. Lat. 39. 1.

ISOPERIMERTICAL FIGURES, in geometry, are ſuch as have equal perimeters or circumferences.

ISOPYRUM, in botany: A genus of the polygynia order, belonging to the polyandria claſs of plants; and in the natural method ranking under the 26th order, *Multiſiliquæ*. There is no calyx, but five petals; the nectaria trifid and tubular; the capſules recurved, and polyſpermous.

ISOSCELES TRIANGLE, in geometry, one that has two equal ſides.

ISPAHAN, or, as the Perſians pronounce it, *Spauhawn*, the capital of Perſia, is ſituated in the province of Irac Agemi, or Perſia Proper, upon the ruins, as is generally ſuppoſed, of the ancient Hecatompylos, or, as others think, of the Aſpa of Ptolemy. Moſt of the eaſtern aſtronomers and geographers place it in N. Lat. 32. 25. E. Long. 86. 40. It ſtands in a very extenſive plain, ſurrounded by mountains; and has eight diſtricts belonging to it, that contain about 400 towns and villages. The fertility of the ſoil, the mildneſs of the ſeaſons, and the fine temperature of the air, all conſpire to render Iſpahan one of the moſt charming and delightful cities in the world. It is unanimouſly agreed, that the preſent city is of no great antiquity; and the two parts into which it is divided, preſerve the names of two contiguous towns, from the junction of which it was formed. The inhabitants of theſe, notwithſtanding their neighbourhood, bear an inveterate antipathy to each other; which they diſcover on all public occaſions. Spauhawn owes the glory it now poſſeſſes to the great Shah Abas; who, after the conqueſt of the kingdoms of Lar and Ormus, charmed with the ſituation of this place, made it the capital of his empire, between the years 1620 and 1628. The mountains, with which this city is ſurrounded, defend it alike from the ſultry heats of ſummer and the piercing winds of the winter ſeaſon; and the plain on which it ſtands is watered by ſeveral rivers, which contribute alike to its ornament and uſe. Of theſe rivers, the Zenderoud, after being joined by the Mahmood, paſſes by Spauhawn; where it has three fine bridges over it, and is as broad as the Seine at Paris. The waters of theſe united ſtreams are ſweet, pleaſant and wholeſome, almoſt beyond compariſon; as, indeed, are all the ſprings found in the gardens belonging to the houſes of Spauhawn. The extent of Spauhawn is very great; not leſs, perhaps, than 20 miles within the walls, which are of earth, poorly built, and ſo covered with houſes and ſhaded with gardens, that in many places it is difficult to diſcover them. The Perſians are wont to ſay, *Spauhawn niſpigehon*, i. e. Spauhawn is half the world. Sir John Chardin ſays, that though ſome reckoned 11,000,000 inhabitants in it, he did not himſelf look upon it as more populous than London. At a diſtance, the city is not eaſily diſtinguiſhed; for many of the ſtreets being adorned with plantains, and every houſe having its garden, the whole looks like a wood. The ſtreets in general are neither broad nor convenient; there being three great evils which attend them: the firſt is, that being built on common ſewers, theſe are frequently broke up, which is very dangerous, conſidering that moſt people are on horſeback; the ſecond is, that there are many wells or pits in them, which are not leſs dangerous; the third ariſes from the people's emptying all their ordure from the tops of their houſes: this laſt, indeed, is in ſome meaſure qualified by the dryneſs of the air, and by its being quickly removed by the peaſants, who carry it away to dung their grounds. Some reckon eight, and others ten gates beſides poſterns; but all agree that there is no difficulty of entering at any hour of the day or night. The three principal ſuburbs annexed to it are, Abbas-abad, built by Shah Abas, and belonging to the people of Tauris; Julfa, inhabited by a colony of Armenians, called by ſome *New Julſa*, to diſtinguiſh it from the ancient city of that name, ſituated in Armenia, upon the Araxes, whence the original inhabitants of New Julfa were brought; and Ghebr-Abad, or, as the Arabs pronounce it, Kebr-Abad, the ſtreet of the magians, occupied entirely by the profeſſors of magiſm, or the religion of the ancient Perſians. The river Zenderoud ſeparates the city of Iſpahan and Abas-Abad from Julfa and Ghebr-Abad. This city has ſuffered greatly ſince the commencement of the dreadful rebellion in 1721; the whole kingdom from that period, till a few years ago, having been almoſt a continued ſcene of blood, ravages, and confuſion.

A celebrated modern traveller, who was on the ſpot, tells us, that the inhabitants of Julfa, not many years before the above revolution happened, amounted to 30,000 ſouls, had 13 churches, and above 100 prieſts; and paid the Perſian court 200 tomans yearly for the free exerciſe of their religion: that ſome of the ſtreets were broad and handſome, and planted with trees, with canals and fountains in the middle; others narrow and crooked, and arched a-top; others again, though extremely narrow, as well as turning and winding many ways, were of an incredible length, and reſembled ſo many labyrinths; that, at a ſmall diſtance from the town, there were public walks adorned with plane-trees on either hand, and ways paved with ſtones, fountains, and ciſterns: that there were above 100 caravanſeras for the uſe of merchants and travellers, many of which were built by the kings and prime nobility of Perſia: that, as little rain fell there, the ſtreets were frequently full of duſt, which rendered the city diſagreeable during a conſiderable part of the ſummer; that the citizens, however, to make this inconvenience more tolerable, uſed to water them when the weather was warmer than uſual: that there was a caſtle in the eaſtern part of the town, which the citizens looked upon as impregnable, in which the public money and moſt of the military ſtores, were ſaid to be kept: that, notwithſtanding the baths and caravanſeras were almoſt innumerable, there was not one public hoſpital: that moſt of the public buildings were rather neat than magnificent, though the great meydan or market-place, the royal palace (which is three quarters of a league in circumference), and the alley denominated *Tober-bag* adjoining to it, made a very grand appearance: that the former contained the royal moſque; the building denominated *kayſerich*, where all ſorts of foreign commodities were expoſed to ſale; and the mint, ſtyled by the Perſians *ſerraa-khoneh*, where the current-money of the kingdom was coined: that, beſides the native Perſians, there were then in Iſpahan above 10,000 Indians all ſupported by trade; 20,000 Georgians, Circaſſians, and Tartars of Dagheſtan or Leſgees, with a conſiderable number of Engliſh, Dutch, Portugueſe, and a few French: that the Capuchins, diſcalceated or bare-footed Carmelites, Jeſuits, Dominicans, and Auſtin friars, had likewiſe their convents here, though they were unable to make any converts; and that there were above 100 moſques and public colleges. But ſince the fatal period abovementioned, the ſuburb of Julfa was almoſt totally abandoned by the Armenians. The government of Iſpahan, 23 leagues long and as many broad, comprehending ſeveral diſtricts, moſt of them formerly well peopled, appeared not many years ago little better than a deſert; moſt of the inhabitants of that fertile and delightful tract being fled and diſperſed. Multitudes of them had taken a precarious refuge in the mountains of Loriſtan, lying between Iſpahan and Suſter, whoſe lands were left untilled, and their houſes mouldered into ruins. In ſhort, all the diſtreſſes of an unſucceſsful war, or the invaſion of a barbarous enemy, could not have plunged the people of Iſpahan into greater miſery than the victories of their tyrannical king Nadir Shah, who ſeemed more ſolicitous to humble his own ſubjects than his enemies. See Persia.

ISPIDA, in ornithology. See Alcedo.

ISRAEL, the name which the angel gave Jacob, after having wreſtled with him all night at Mahanaim or Penuel (Gen. xxxii. 1, 2, and 28, 29, 30. and Hoſea xii. 3.) It ſignifies *the conqueror of God*, or *a prince of God*, or, according to many of the ancients, *a man who ſees God*.

By the name of Iſrael is ſometimes underſtood the perſon of Jacob; ſometimes the whole people of Iſrael, or the whole race of Jacob; and ſometimes the kingdom of Iſrael, or of the ten tribes, diſtinct from the kingdom of Judah.

ISRAELITES, the deſcendants of Iſrael; who were at firſt called *Hebrews*, by reaſon of Abraham, who came from the other ſide of the Euphrates; and afterwards *Iſraelites*, from Iſrael the father of the twelve patriarchs; and laſtly *Jews*, particularly after their return from their captivity of Babylon, becauſe the tribe of Judah was then much ſtronger and more numerous than the other tribes, and foreigners had ſcarce any knowledge of this tribe.

ISSACHAR, one of the diviſions of Paleſtine by tribes; lying to the ſouth of Zabulon, ſo as by a narrow ſlip to reach the Jordan, between Zabulon and Manaſſeh, Joſh. xix. But whether it reached to the ſea, is a queſtion; ſome holding that it did: an aſſertion not eaſy to be proved, as Joſhua makes no mention of the ſea in this tribe, nor does Joſephus extend it farther than to mount Carmel; and in Joſh. xvii. 10. Aſher is ſaid to touch Manaſſeh on the north, which could not be if Iſſachar extended to the ſea.

ISSOUDUN, a conſiderable town of France, in Berry. It carries on a great trade in wood, cattle, cloth, hats, and ſtockings; is ſeated partly on a plain, and partly on an eminence. E. Long. 2. 5. N. Lat. 46. 57.

ISSUE, in common law, has various applications; being ſometimes taken for the children begotten between a man and his wife—ſometimes, for profits growing from amercements or fines—ſometimes, for profits of lands and tenements—but more frequently for the point of matter depending in ſuit, whereupon the parties join, and put their caſe to the trial of the jury.

In all theſe occaſions, iſſue has but one ſignification, which is. an effect of a cauſe preceding; as the children are the effect of the marriage between the parents; the profits growing to the king or lord, from the puniſhment of any man's offence, are the effect of his tranſgreſſion; the point referred to the trial of twelve men, is the effect of pleading, or proceſs. See PLEA *and Iſſue*.

ISSUES, in ſurgery, are little ulcers made deſignedly by the ſurgeon in various parts of the body, and kept open by the patient, for the preſervation and recovery of his health.

ISSUS, now AJAZO, a town of Cilicia in Natolia, with a harbour on the Levant Sea, a little to the north of Scanderoon. E. Long. 36. 25. N. Lat. 36. 56.

Near this place, in a difficult paſs between the mountains and the ſea, Alexander the Great fought his ſecond battle with Darius. One great cauſe of the defeat which the Perſians received here was the bad conduct of their monarch, who led his numerous forces into a narrow place, where they had not room to act. Alexander was ſo much ſurpriſed when he firſt received the news that Darius was behind him, that he could ſcarce believe it to be true: but when he was thoroughly ſatisfied of the fact, and that Darius had again paſſed the river Pinarus, he called a council of war, wherein, without aſking any body's advice, he only told them, that he hoped they would remember their former actions; and that they, who were always conquerors, were about to fight people who were always beat. He further obſerved, that Darius ſeemed to be infatuated, ſince he had with ſuch expedition quitted an open and champaign country, where his numbers might have acted with advantage, to fight in a place incloſed, where the Macedonian phalanx might be well drawn up, and where his numbers could only incommode him. He then made the neceſſary diſpoſitions for repaſſing the mountains, poſted guards where he found them neceſſary and then commanded his troops to refreſh themſelves, and to take their reſt till morning.

At break of day he began to repaſs the mountains, obliging his forces to move in cloſe order where the road was narrow, and to extend themſelves as they had more room; the right wing keeping always cloſe to the mountain, and the left to the ſea-ſhore. On the right there was a battalian of heavy-armed troops, beſides the targeteers under the command of Nicanor the ſon of Parmenio. Next theſe, extending to the phalanx, were the corps of Cœnus and Perdiccas; and on the left, the reſpective bodies commanded by Amyntas, Ptolemy, and Meleager. The foot appointed to ſupport them were commanded by Craterus; but the whole left wing was committed to Parmenio, with ſtrict orders not to decline from the ſea-ſhore, leſt the Perſians ſhould ſurround them. Darius ordered 20,000 foot and 30,000 horſe to retire, finding that he already wanted room to draw up the reſt. His firſt line conſiſted of 30,000 Greek mercenaries, having on their right and left 60,000 heavy-armed troops, being the utmoſt the ground would allow. On the left, towards the mountain, he poſted 20,000 men, which, from the hollow ſituation of the place, were brought quite behind Alexander's right wing. The reſt of his troops were formed into cloſe and uſeleſs lines behind the Greek mercenaries, to the number in all of 600,000 men. When this was done, he ſuddenly recalled the horſe who had retired, ſending part of them to take poſt on his right againſt the Macedonians commanded by Parmenio; and the reſt he ordered to the left towards the mountain: but, finding them unſerviceable there, he ſent the greateſt part of them to the right; and then took upon himſelf, according to the cuſtom of the Perſian kings, the command of the main body. As ſoon as Alexander perceived that the weight of the Perſian horſe was diſpoſed againſt his left wing, he diſpatched, with as much ſecrecy as he could, the Theſſalian cavalry thither, and ſupplied their places on the right by ſome brigades of horſe from the van, and light-armed troops. He alſo made ſuch diſpoſitions, that, notwithſtanding the mighty advantage of the hollow mountain, the Perſians could not ſurround him. But, as theſe precautions had conſiderably weakened the centre of his army, he ordered thoſe advanced poſts on the enemy's left, of which he was moſt apprehenſive, to be attacked at the very beginning of the fight; and, when they were eaſily driven from them, he recalled as many troops as were neceſſary to ſtrengthen his centre.

When all things were in order, Alexander gave ſtrict command, that his army ſhould march very ſlowly. As for Darius, he kept his troops fixed in their poſts, and in ſome places threw up ramparts; whence the

Macedonians rightly obſerved, that he thought himſelf already a priſoner. Alexander at the head of the right wing engaged firſt, and without any difficulty broke and defeated the left wing of Darius. But, endeavouring to paſs the river Pinarus after them, his troops in ſome meaſure loſing their order, the Greek mercenaries fell upon them in flank, and made them fight, not only for victory, but for their lives. Ptolemy the ſon of Seleucus, and 120 Macedonians of ſome rank, were killed upon the ſpot. But the foot next to Alexander's right wing coming in ſeaſonably to its relief, fell upon the mercenaries in flank, amongſt whom a dreadful carnage was made; they being in a manner ſurrounded by the horſe and light-armed troops, which at firſt purſued the left wing, and the foot that now paſſed the river. The Perſian horſe on the right ſtill fought gallantly; but, when they were thoroughly informed of the rout of their left wing and of the deſtruction of the Greek mercenaries, and that Darius himſelf was fled, they began to break, and betake themſelves to flight alſo. The Theſſalian cavalry purſued them cloſe at the heels; and the narrow craggy roads incommoded them exceedingly, ſo that vaſt numbers of them periſhed. As for Darius, he fled, ſoon after the left wing was broken, in a chariot with a few of his favourites: as far as the country was plain and open, he eſcaped well enough; but, when the roads became rocky and narrow, he quitted it, and, mounting a horſe, rode all the night: his chariot, in which were his cloak and his bow, fell into the hands of Alexander, who carried them back to his camp.

In reſpect to the battle of Iſſus, Diodorus informs us, that Alexander looked every where about for Darius; and, as ſoon as he diſcovered him, with this handful of guards attacked him and the flower of the Perſian army which was about him; being as deſirous of obtaining this victory by his perſonal valour, as of ſubduing the Perſian empire by the courage of his ſoldiers." But when Oxathres, the brother of Darius, ſaw Alexander's deſign, and how fiercely he ſought to accompliſh it, he threw himſelf, with the horſe who were about him, between his brother's chariot and the enemy, where an obſtinate fight was maintained, till the dead bodies roſe like an entrenchment about the chariot of Darius. Many of the Perſian nobility were ſlain, and Alexander himſelf was wounded in the thigh. At laſt, the horſes in the chariot of Darius ſtarted, and became ſo unruly, that the king himſelf was forced to take the reins; the enemy, however, preſſed ſo hard upon him, that he was conſtrained to call for another chariot, and mounted it in great danger. This was the beginning of the rout, which ſoon after became general. According to this author, the Perſians loſt 200,000 foot, and 10,000 horſe; the Macedonians 300 foot, and 150 horſe.

Juſtin informs us, that the Perſian army conſiſted of 400,000 foot, and 100,000 horſe. He ſays, that the battle was hard fought; that both the kings were wounded; and that the Perſians ſtill fought gallantly when their king fled, but that they were afterwards ſpeedily and totally routed: he is very particular as to their loſs, which he ſays amounted to 61,000 foot, 10,000 horſe, and 40,000 taken priſoners; of the Macedonians he ſays there fell no more than 130 foot, and 150 horſe. Curtius ſays, that of the Perſians there fell 100,000 foot, and 10,000 horſe: of Alexander's army 504, he ſays, were wounded; 32 foot and 150 horſe killed. That we may not ſuſpect any error in tranſcribers, his own obſervations confirms the fact: *Tantulo impendio ingens victoria ſtetit*, "So ſmall was the coſt of ſo great a victory."

ISTHMIA, or *Isthmian Games;* one of the four ſolemn games which were celebrated every fifth year in Greece. They had the name from the Iſthmus of Corinth, where they were celebrated. In their firſt inſtitution, according to Pauſanias, they conſiſted only of funeral rites and ceremonies in honour of Melicertes: but Theſeus afterwards, as Plutarch informs us, in emulation of Hercules, who had appointed games at Olympia in honour of Jupiter, dedicated thoſe to Neptune, his reputed father, who was regarded as the particular protector of the Iſthmus and commerce of Corinth. The ſame trials of ſkill were exhibited here as at the other three ſacred games; and particularly thoſe of muſic and poetry. Theſe games, in which the victors were only rewarded with garlands of pine-leaves, were celebrated with great magnificence and ſplendor as long as paganiſm continued to be the eſtabliſhed religion of Greece; nor were they omitted even when Corinth was ſacked and burnt by Mummius the Roman general; at which time the care of them was transferred to the Sicyonians, but was reſtored again to the Corinthians when their city was rebuilt.

ISTHMUS, a narrow neck, or ſlip of ground, which joins two continents; or joins a peninſula to the terra firma, and ſeparates two ſeas. See PENINSULA.

The moſt celebrated iſthmuſes are, that of Panama or Darien, which joins North and South America; that of Suez, which connects Aſia and Africa; that of Corinth, or Peloponneſus, in the Morea; that of Crim-Tartary, otherwiſe called *Taurica Cherſoneſus;* that of the peninſula Romania, and Eriſſo, or the iſthmus of the Thracian Cherſoneſus, twelve furlongs broad, being that which Xerxes undertook to cut through. The ancients had ſeveral deſigns of cutting the iſthmus of Corinth, which is a rocky hillock, about ten miles over; but they were all in vain, the invention of ſluices being not then known. There have been attempts too for cutting the iſthmus of Suez, to make a communication between the Red Sea and the Mediterranean: but theſe alſo failed; and in one of them, a king of Egypt is ſaid to have loſt 120,000 men.

ISTRIA, a peninſula of Italy, in the territory of Venice, lying in the north part of the Adriatic ſea. It is bounded by Carniola on the north; and on the ſouth, eaſt, and weſt, by the ſea. The air is unwholeſome, eſpecially near the coaſt; but the ſoil produces plenty of wine, oil, and paſtures; there are alſo quarries of fine marble. One part of it belongs to the Venetians, and the other to the houſe of Auſtria. Cabo d'Iſtria is the capital town.

ITALIAN, the language ſpoken in Italy. See the article LANGUAGE.

This tongue is derived principally from the Latin; and of all the languages formed from the Latin, there is none which carries with it more viſible marks of its original than the Italian.

It is accounted one of the moſt perfect among the modern tongues. It is complained, indeed, that it has too many diminutives and ſuperlatives, or rather augmentatives; but without any great reaſon: for if thoſe words convey nothing farther to the mind than the juſt ideas of things, they are no more faulty than our pleonaſms and hyperboles.

The language correſponds to the genius of the people, who are ſlow and thoughtful: accordingly, their language runs heavily, though ſmoothly; and many of their words are lengthened out to a great degree. They have a great taſte for muſic; and to gratify their paſſion this way, have altered abundance of their primitive words; leaving out conſonants, taking in vowels, ſoftening and lengthening out their terminations, for the ſake of the cadence.

Hence the language is rendered extremely muſical, and ſucceeds better than any other in operas and ſome parts of poetry: but it fails in ſtrength and nervouſneſs; and a great part of its words, borrowed from the Latin, become ſo far diſguiſed, that they are not eaſily known again.

The multitude of ſovereign ſtates into which Italy is divided, has given riſe to a great number of different dialects in that language; which, however, are all good in the place where they are uſed. The Tuſcan is uſually preferred to the other dialects, and the Roman pronunciation to that of the other cities; whence the Italian proverb, *Lingua Toſcana in bocca Romana*.

The Italian is generally pretty well underſtood throughout Europe; and is frequently ſpoken in Germany, Poland, and Hungary. At Conſtantinople in Greece, and in the ports of the Levant, the Italian is uſed as commonly as the language of the country: indeed in thoſe places it is not ſpoken ſo pure as in Tuſcany, but is corrupted with many of the proper words and idioms of the place; whence it takes a new name, and is called *Frank Italian*.

ITALIC CHARACTER, in printing. See LETTER.

ITALICA (anc. geog.), a town of Baetica in Spain, built by Scipio Africanus, after finiſhing the Spaniſh war, for the reception of the wounded ſoldiers. At firſt it was a municipium; afterwards a colony: which was a matter of wonder to the emperor Adrian, the privileges of a municipium being beyond thoſe of a colony (Gellius). Famous for being the birth-place of the emperors Trajan and Adrian, and of the poet Silius Italicus. Now *Sevilla Vieja*, ſcarce four miles from Seville; a ſmall village of Andaluſia on the Gaudalquivir.—*Corfinium* in Italy was alſo thus called.

ITALY, one of the fineſt countries of Europe, lying between 7 and 10 degrees of E. Long. and between 37 and 46 degrees of N. Lat. On the north, north-weſt, and north-eaſt, it is bounded by France, Switzerland, the country of the Griſons, and Germany; on the eaſt, by the Adriatic ſea or gulf of Venice; and on the ſouth and weſt, by the Mediterranean; its figure bearing ſome reſemblance to that of a boot. Its length from Aoſta, at the foot of the Alps in Savoy, to the utmoſt verge of Calabria, is about 600 miles; but its breadth is very unequal, being in ſome places near 400 miles, in others not above 25 or 30.

1
Its different names.

Italy was anciently known by the names of *Saturnia*, *Oenotria*, *Heſperia*, and *Auſonia*. It was called *Saturnia* from Saturn; who, being driven out of Crete by his ſon Jupiter, is ſuppoſed to have taken refuge here. The names of *Oenotria* and *Auſonia*, are borrowed from its ancient inhabitants the Oenotrians and Auſones; and that of *Heſperia* or *Weſtern* was given it by the Greeks, from its ſituation with reſpect to Greece. The names of *Italia* or *Italy*, which in proceſs of time prevailed over all the reſt, is by ſome derived from *Italus*, a king of the Siculi: by others, from the Greek word *Italos*, ſignifying an ox; this country abounding, by reaſon of its rich paſtures, with oxen of an extraordinary ſize and beauty. All theſe names were originally peculiar to particular provinces of Italy, but afterwards applied to the whole country.

2
Diviſion in ancient times.

This country, like moſt others, was in ancient times divided into a great number of petty ſtates and kingdoms. Afterwards when the Gauls ſettled in the weſtern, and many Greek colonies in the eaſtern parts, it was divided with reſpect to its inhabitants, into three great parts, *viz.* Gallia Ciſalpina, *Italy* properly ſo called, and Magna Grecia. The moſt weſtern and northern parts of Italy were in great part poſſeſſed by the Gauls; and hence took the name of *Gallia*, with the epithets of *Ciſalpina* and *Citerior*, becauſe they lay on the ſide of the Alps next to Rome; and *Togata*, with relation to the Roman gown or dreſs which the inhabitants uſed: but this laſt epithet is of a much later date than the former. This appellation was antiquated in the reign of Auguſtus, when the diviſion of Italy into eleven provinces, introduced by that prince, took place. Hence it is that the name of *Ciſalpine Gaul* frequently occurs in the authors who flouriſhed before, and ſcarce ever in thoſe who wrote after, the reign of Auguſtus. This country extended from the Alps and the river Varus, parting it from Tranſalpine Gaul, to the river Aeſus; or, as Pliny will have it, to the city of Ancona, in the ancient Picenum. On the north, it was divided from Rhætia by the Alps, called *Alpes Rhæticæ*; and from Illyricum by the river Formio: but on this ſide, the borders of Italy were, in Pliny's time, extended to the river Arſia in Iſtria. On the ſouth, it reached to the Liguſtic ſea, and the Apennines parting it from Etruria; ſo that under the common name of *Ciſalpine Gaul* were comprehended the countries lying at the foot of the Alps, called by Pliny and Strabo the *Subalpine countries*, Liguria, Gallia Ciſpadana, and Tranſpadana. *Italy*, properly ſo called, extended, on the coaſt of the Adriatic, from the city of Ancona to the river Trento, now the Fortore; and on the Mediterranean, from the Macra to the Silarus, now the Sele. Magna Græcia compriſed Apulia, Lucania, and the country of the Brutii. It was called *Greece*, becauſe moſt of the cities on the coaſt were Greek colonies. The inhabitants gave it the name of *Great*, not as if it was larger than Greece, but merely out of oſtentation, as Pliny informs us.

All theſe countries were inhabited by a great number of different nations ſettled at different times, and from many different parts. The names of the moſt remarkable of them were the *Aborigines*, or thoſe whoſe origin was utterly unknown, and conſequently were thought to have none; the *Sabines*, *Hetrurians*, or *Tuſcans*, the *Umbri*, *Samnites*, *Campani*, *Apulii*, *Calabrii*, *Lucanii*, the *Brutii*, and the *Latins*. From a colony of the latter proceeded the Romans, who gradually ſubdued all theſe nations one after another, and held them in ſubjection for upwards of 700 years. All theſe nations were originally brave, hardy, temperate, and well ſkilled in the art of war; and the Romans much more ſo than the reſt. Their ſubjection to Rome, however, inured them to ſlavery; their oppreſſion by the emperors broke their ſpirit; and the vaſt wealth which was poured into the country from all parts of the world, during the time of the Roman proſperity, corrupted their manners, and made them degenerate from their former valour. Of this degeneracy the barbarous nations of the north took the advantage to invade the empire in innumerable multitudes. Though often repelled, they never failed to return; and it was found neceſſary to take great numbers of them into the Roman ſervice, in order to defend the empire againſt the reſt of their countrymen. In the year 476, the Heruli, preſuming on the ſervices they had done the empire, demanded a third part of the lands of Italy; and being refuſed, choſe one Odoacer, a man of low birth, but of great valour and experience, for their king; and having totally deſtroyed the remains of the Roman empire, proclaimed Odoacer king of Italy. The new monarch, however, did not think proper to alter the Roman form of government, but ſuffered the people to be governed by the ſenate, conſuls, &c. as before. He enjoyed his dignity in peace till the year 488, when Zeno, emperor of Conſtantinople, being hard preſſed by Theodoric king of the Oſtrogoths, adviſed him to turn his arms againſt Odoacer, whom he could eaſily overcome, and thus make himſelf ſovereign of one of the fineſt countries in the world.

3
Subdued by the Romans.

4
By the Heruli.

5
Invaded by Theodoric the Oſtrogoth,

6
Odoacer defeated,

Theodoric accepted the propoſal with great joy, and ſet out for Italy, attended by an infinite number of people, carrying with them their wives, children, and effects, on waggons. Several Romans of great diſtinction attended him in this war; while, on the other hand, many of his countrymen choſe to remain in Thrace, where they became a ſeparate nation, and lived for a long time in amity with the Romans. The Goths, being deſtitute of ſhipping, were oblliged to go round the Adriatic. Their march was performed in the depth of winter; and during the whole time, a violent famine and plague raged in their army. They were alſo oppoſed by the Gepidæ and Sarmatians; but at laſt having defeated theſe enemies, and overcome every other obſtacle, they arrived in Italy in the year 489. Theodoric advanced to the river Sontius, now Zonzo, near Aquileia, where he halted for ſome time to refreſh his troops. Here he was met by Odoacer at the head of a very numerous army, but compoſed of many different nations commanded by their reſpective chiefs, and conſequently without ſufficient union or zeal for the common cauſe. Theodoric therefore gained an eaſy victory, cut many of his enemies in pieces, and took their camp. Odoacer retired to the plains of Verona, and encamped there at a ſmall diſtance from the city; but Theodoric purſued him cloſe, and ſoon forced him to a ſecond engagement. The Goths obtained another victory; but it coſt them dear. Odoacer's men made a much better reſiſtance than before, and great numbers fell on both ſides. The victory, however, was ſo far deciſive, that Odoacer was obliged to ſhut himſelf up in Ravenna; ſo that Theodoric having now no enemy to oppoſe him in the field, beſieged and took ſeveral important places, and among the reſt Milan and Pavia. At the ſame time, Tuſa, commander in chief of Odoacer's forces, deſerted to the enemy with the greateſt part of the troops he had with him, and was immediately employed in conjunction with a Gothic officer in purſuit of his ſovereign. Odoacer had left that city, and was advanced as far as Faenza, where he was cloſely beſieged by Tuſa; but the traitor, declaring again for his old maſter, joined him with all his troops, and delivered up ſeveral officers that had been appointed by Theodoric to ſerve under him. Theſe were ſent in irons to Ravenna; and Odoacer being joined by Frideric, one of Theodoric's allies, with a conſiderable body of troops, once more advanced againſt his enemies. He recovered all Liguria, took the city of Milan, and at laſt beſieged Theodoric himſelf in Pavia. The Goths, having brought all their families and effects along with them, were greatly diſtreſſed for want of room; and muſt have undoubtedly ſubmitted, if their enemies had continued to agree among themſelves. The quarrels of his followers proved the ruin of Odoacer. Theodoric, finding that the enemy remitted the vigour of their operations, applied for ſuccours to Alaric king of the Viſigoths, who had ſettled in Gaul. As the Viſigoths, and Oſtrogoths were originally one and the ſame nation, and the Viſigoths had received among them ſome years before a great number of Oſtrogoths under the conduct of Videmer couſin-german to Theodoric, the ſupplies were readily granted. The inaction of the enemy gave theſe ſuccours time to arrive; upon which Theodoric inſtantly joined them, and marching againſt his enemies gave them a total overthrow. Odoacer again took refuge in Ravenna, but was cloſely beſieged by Theodoric in 490. The ſiege laſted three years; during which Odoacer defended himſelf with great bravery, and greatly annoyed the beſiegers with his ſallies. Theodoric, however, impatient of delay, leaving part of his army to blockade the city, marched with the reſt againſt the ſtrong holds which Odoacer had garriſoned. All theſe he reduced with little difficulty; and in 492 returned to the ſiege of Ravenna. The beſieged were now reduced to great ſtraits both by the enemy without and a famine within, the price of wheat being riſen to ſix pieces of gold per buſhel. On the other hand, the Goths were quite worn out with the fatigues of ſuch a long ſiege; ſo that both parties being willing to put an end to the war, Odoacer ſent John biſhop of Ravenna to Theodoric with terms of accommodation. Jornandes informs us, that Odoacer only begged his life; which Theodoric bound himſelf, by a ſolemn oath, to grant him: but Procopius ſays, that they agreed to live together on equal terms. This laſt ſeems very improbable: but whatever were the terms of the agreement, it is certain that Theodoric did not keep them; for having a few days after invited Odoacer to a banquet, he diſpatched him with his own hand.

7
Submits, and is put to death.

hand. All his ſervants and relations were maſſacred at the ſame time; except his brother Arnulphus, and a few more, who had the good luck to make their eſcape, and retired beyond the Danube.

8 Theodoric proclaimed king of Italy, and uſes his power with moderation.

Thus Theodoric became maſter of all Italy, and took upon himſelf the title of *king* of that country, as Odoacer had done before; though, with a pretended deference to the emperor of Conſtantinople, he ſent meſſengers aſking liberty to aſſume that title after he had actually taken it. Having ſecured his new kingdom as well as he could by foreign alliances, Theodoric next applied himſelf to legiſlation, and enacted many ſalutary laws beſides thoſe of the Romans which he retained. He choſe Ravenna for the place of his reſidence, in order to be near at hand to put a ſtop to the incurſions of the barbarians. The provinces were governed by the ſame magiſtrates that had preſided over them in the times of the emperors, *viz.* the *conſulares*, *correctores*, and *præſides*. But beſides theſe, he ſent, according to the cuſtom of the Goths, inferior judges, diſtinguiſhed by the name of *counts*, to each city. Theſe were to adminiſter juſtice, and to decide all controverſies and diſputes. And herein the polity of the Goths far excelled that of the Romans. For in the Roman times a whole province was governed by a conſularis, a corrector, or a præſes, who reſided in the chief city, and to whom recourſe was to be had at a great charge from the moſt remote parts: but Theodoric, beſides theſe officers, appointed not only in the principal cities, but in every ſmall town and village, inferior magiſtrates of known integrity, who were to adminiſter juſtice, and by that means ſave thoſe who had law-ſuits the trouble and expence of recurring to the governor of the whole province; no appeals to diſtant tribunals being allowed, but in matters of the greateſt importance, or in caſes of manifeſt injuſtice.

Under the adminiſtration of Theodoric Italy enjoyed as great happineſs as had been experienced under the very beſt emperors. As he had made no alteration in the laws except that abovementioned; ſo he contented himſelf with the ſame tributes and taxes that had been levied by the emperors; but was, on all occaſions of public calamity, much more ready to remit them than moſt of the emperors had been. He did not treat the natives as thoſe of the other Roman provinces were treated by the barbarians who conquered them. Theſe ſtripped the ancient proprietors of their lands, eſtates, and poſſeſſions, dividing them among their chiefs; and giving to one a province with the title of *duke*, to another a frontier country with the title of *marquis;* to ſome a city with the title of *count*, to others a caſtle or village with the title of *baron*. But Theodoric, who piqued himſelf upon governing after the Roman manner, and obſerving the Roman laws and inſtitutions, left every one in the full enjoyment of his ancient property. As to religion, though he himſelf, like moſt of his countrymen, profeſſed the tenets of Arius, he allowed his ſubjects to profeſs the orthodox doctrine without moleſtation, giving liberty even to the Goths to renounce the doctrines in which they had been educated, and embrace the contrary opinions. In ſhort, his many virtues, and the happineſs of his ſubjects, are celebrated by all the hiſtorians of thoſe times. The end of his reign, however, was ſullied by the death of the celebrated philoſopher Boethius, and his father-in-law Symmachus. They were both beheaded in Pavia, on an unjuſt ſuſpicion of treaſon; and ſcarce was the ſentence put in execution when the king repented, and abandoned himſelf to the moſt pungent ſorrow. The exceſs of his grief affected his underſtanding: for not long after, the head of a large fiſh being ſerved up to ſupper, he fancied the head of the fiſh to be that of Symmachus threatening him in a ghaſtly manner. Hereupon, ſeized with horror and amazement, he was carried to his bed-chamber, where he died in a few days, on the 2d of September 526.

9 Beheads Boethius and Symmachus, and dies of grief.

After the death of Theodoric, the kingdom devolved to Athalric his grandſon; who being at that time only eight years of age, his mother Amalaſuntha took upon her the regency. Her adminiſtration was equally upright with that of Theodoric himſelf; but the barbarians of whom her court was compoſed, finding fault with the encouragement ſhe gave to learning, forced her to abandon the education of her ſon. The latter thereupon plunged into all manner of wickedneſs, and behaved to his mother with the greateſt arrogance; and the faction finding themſelves thus ſtrengthened, at laſt commanded the queen to retire from court.

10 Amalaſuntha regent governs equitably.

Amalaſuntha, exerting her authority, ſeized three of the ringleaders of the ſedition, whom ſhe confined in the moſt remote parts of Italy. But theſe maintaining a ſecret correſpondence with their friends and relations, never ceaſed to ſtir up the people againſt her; inſomuch, that the queen, apprehending that the faction might in the end prevail, wrote to the emperor Juſtinian, begging leave to take refuge in his dominions. The emperor readily complied with her requeſt, offering a noble palace at Durazzo for her habitation; but the queen having in the mean time cauſed the three ringleaders to be put to death, and no new diſturbances ariſing thereupon, ſhe did not accept of the emperor's offer. In 533, Athalric having contracted a lingering diſtemper, by his riotous living and debaucheries, Amalaſuntha, to avoid the calamities with which Italy was threatened in caſe of his death, formed a deſign of delivering it up to Juſtinian: but before her ſcheme was ripe for execution, Athalric died. Upon which the queen took for her colleague one Theodotus her couſin; obliging him, however, to ſwear that he would ſuffer her to enjoy and exerciſe her former power. This he very readily did, but ſoon forgot his promiſe; and when ſhe took the liberty to remind him of it, cauſed her to be ſeized and confined in an iſland of the lake Bolſena in Tuſcany. But as Theodotus had great reaſon to believe that this conduct would be reſented by Juſtinian, he obliged her to write to him that no injury or injuſtice had been done her. Along with this letter he ſent one written by himſelf, and filled with heavy complaints againſt Amalaſuntha. The emperor, however, was ſo far from giving credit to what Theodotus urged againſt her, that he openly eſpouſed her cauſe, wrote her a moſt affectionate letter, and aſſured her of his protection. But before this letter could reach her, the unhappy princeſs was ſtrangled in the bath by the friends of thoſe whom in the reign of her ſon ſhe had deſervedly put to death for raiſing diſturbances in the ſtate.

11 Is treacherouſly impriſoned, and put to death.

On the news of Amalaſuntha's death, Juſtinian reſolved

12
For which reaſon Juſtinian makes war on the Goths.

ſolved upon an immediate war with the Goths; and, to facilitate the enterpriſe, uſed his utmoſt endeavours to induce the Franks to aſſiſt him. To his ſolicitations he added a large ſum of money; which laſt was very acceptable to his new allies. They promiſed to aſſiſt the emperor to the utmoſt of their power; but inſtead of performing their promiſe, while Juſtinian's arms were employed againſt the Goths, Tierri, the eldeſt ſon of Clovis, ſeized on ſeveral cities of Liguria, the Alpes Cottiæ, and great part of the preſent territory of Venice, for himſelf. Juſtinian, however, found ſufficient reſources in the valour of Beliſarius, notwithſtanding the defection of his treacherous allies. This celebrated general was veſted with the ſupreme command, and abſolute authority. His inſtructions were to pretend a voyage to Carthage, but to make an attempt upon Sicily; and if he thought he could ſucceed in the attempt, to land there; otherwiſe to ſail for Africa, without diſcovering his intentions. Another general, named *Mundus*, commander of the troops in Illyricum, was ordered to march into Dalmatia, which was ſubject to the Goths, and attempt the reduction of Salonæ, the better to open a paſſage into Italy. This he accompliſhed without difficulty; and Beliſarius made himſelf maſter of Sicily ſooner than he himſelf had expected. The iſland was reduced on the laſt of December 535; upon which Beliſarius without loſs of time, paſſed over to Reggio, which opened its gates to him. From Reggio he purſued his march to Rome, the provinces of Abrutium, Lucania, Puglia, Calabria, and Samnium, readily ſubmitting to him. The city of Naples endured a ſiege: but Beliſarius entered in through an aqueduct, and gave it up to be plundered by his ſoldiers.

Theodotus, alarmed at theſe ſucceſſes, and having neither capacity nor inclination to carry on the war, ſent ambaſſadors to Juſtinian with propoſals of peace. He agreed to renounce all pretenſions to the iſland of Sicily; to ſend the emperor yearly a crown of gold weighing 300 pounds; and to ſupply him with 3000 men whenever he ſhould think proper to demand them. Several other articles were contained in the propoſal, which amounted to the owning of Juſtinian for his lord, and that he held the crown of Italy only through his favour. As he apprehended, however, that theſe offers might not yet be ſatisfactory, he recalled his ambaſſadors for further orders. They were now deſired to inform Juſtinian, that Theodotus was willing to reſign the kingdom to him, and content himſelf with a penſion ſuitable to his quality. But he obliged them by an oath not to mention this propoſal, till they found that the emperor would not accept of the other. The firſt propoſals were accordingly rejected as they had ſuppoſed; upon which the ambaſſadors produced the ſecond, ſigned by Theodotus himſelf, who in his letter to the emperor told him, among other things, that being unacquainted with war, and addicted to the ſtudy of philoſophy, he preferred his quiet to a kingdom. Juſtinian, tranſported with joy, and imagining the war already finiſhed, anſwered the king in a moſt obliging manner, extolling his wiſdom, and giving him beſides what edemanded, the greateſt honours of the empire. The agreement being confirmed by mutual oaths, lands were aſſigned to Theodotus out of the king's domain, and orders were diſpatched to Beliſarius to take poſſeſſion of Italy in his name.

13
Theodotus offers to reſign the kingdom.

In the mean time, a body of Goths having entered Dalmatia, with a deſign to recover the city of Salonæ, were encountered by an inferior army of Romans, commanded by the ſon of Mundus abovementioned. The Goths proved victorious; and the young general of the Romans was killed, and moſt of his army cut in pieces. Mundus marched againſt the enemy to revenge the death of his ſon; but met with no better ſucceſs, his troops being defeated, and he himſelf killed in the engagement. Upon this the Romans abandoned Salonæ and all Dalmatia; and Theodotus, elated with his ſucceſs, refuſed to fulfil the articles of the treaty. Juſtinian diſpatched Conſtantianus, an officer of great valour and experience, into Illyricum, with orders to raiſe forces there, and to enter Dalmatia; at the ſame time he wrote to Beliſarius to purſue the war with the utmoſt vigour.

14
Theodotus refuſes to fulfil the articles of the treaty.

The Goths were now reduced to the greateſt ſtraits. Conſtantianus drove them out of Dalmatia; and Beliſarius having reduced all the provinces which compoſe the preſent kingdom of Naples, advanced towards Rome. The chief men of the nation, finding their king incapable of preventing the impending ruin, aſſembled without his conſent, and diſpatched ambaſſadors to Beliſarius with propoſals of peace. Theſe propoſals were rejected; and Beliſarius returned for anſwer, that he would hearken to no terms, nor ſheath his ſword, till Italy was reannexed to the empire to which it belonged. The Goths finding Theodotus ſtill inactive, unanimouſly depoſed him; and choſe in his ſtead one Vitiges, a man of great valour, but of a mean deſcent. Theodotus fled to Ravenna; but the new king diſpatched after him a meſſenger, who ſoon overtook him and cut off his head.

15
He is depoſed, and Vitiges choſen in his ſtead.

Vitiges began his government by writing a circular letter, in which he exhorted his countrymen to exert their ancient courage, and fight bravely for their lives and liberties. He then marched with what forces he could collect towards Rome; but not thinking himſelf able to defend that city againſt the Roman forces, he abandoned it to Beliſarius, and arriving at Ravenna was joined by the Goths from all parts, ſo that he ſoon found himſelf at the head of a conſiderable army. Beliſarius in the mean time entered Rome without oppoſition, on the 9th or 10th of December 537. The Gothic garriſon retired by the Porta Flaminia, while Beliſarius entered by the Porta Aſinaria. Leudaris, governor of the city, who ſtaid behind, was ſent, together with the keys, to the emperor. Beliſarius immediately applied himſelf to the repairing of the walls and other fortifications; filled the granaries with corn, which he cauſed to be brought from Sicily; and ſtored the place with proviſions, as if he had been preparing for a ſiege; which gave no ſmall uneaſineſs to the inhabitants, who choſe rather that their city ſhould lie open to every invader, than that they ſhould be liable to the calamities of a ſiege. While Beliſarius was thus employed at Rome, the city of Benevento, with great part of the territory of Samnium, was delivered up to him: at the ſame time the cities of Narnia, Spoleto, and Peruſia, revolting from the Goths, received Roman garriſons; as did moſt of the cities of Tuſcany.

16 He collects a great army.

In the mean time, Vitiges having collected an army of 150,000 men, reſolved to march directly to Rome, and engage Beliſarius; or, if he declined an engagement, to lay ſiege to the city. But apprehending that the Franks, who were in confederacy with the emperor, might fall upon him at the ſame time, he ſent ambaſſadors to them, with offers of all the Gothic poſſeſſions in Gaul, beſides a conſiderable ſum of money, provided they joined him againſt the emperor. The Franks with their uſual treachery conſented to the propoſal, received the money and the territories agreed on, and then refuſed to fulfil the terms of the treaty. Vitiges, however, began his march to Rome, leaving behind him all the fortified towns on the road, the reduction of which he knew would coſt him too much trouble. Beliſarius, whoſe army, reduced by the many towns he had garriſoned, did not now amount to above 5000 men, diſpatched meſſengers to Conſtantianus in Tuſcany; and to Beſſas, by nation a Goth, but of the emperor's party, in Umbria, with orders to join him with all poſſible expedition; writing at the ſame time to the emperor himſelf for ſupplies in the moſt preſſing manner. Conſtantianus joined him purſuant to his orders; and ſoon after, Beſſas, falling in with part of the enemy's vanguard, killed a conſiderable number of them, and put the reſt to flight. Beliſarius had built a fort upon a bridge about a mile from Rome, and placed a ſtrong garriſon in it to diſpute the paſſage with the enemy; but the garriſon, ſeized with a panic at the approach of the Goths, abandoned their poſt in the night, and fled into Campania. Early in the morning Vitiges paſſed over great part of his army, and marched on till he was met by Beliſarius, who, knowing nothing of what had happened, came with 1000 horſe to view the ground about the bridge.

17 Obſtinate engagement between the Goths and Romans.

He was greatly ſurpriſed when he beheld the enemy marching up againſt him: however, leſt he ſhould heighten their courage by his flight or retreat, he ſtood his ground, and received the enemy at the head of his ſmall body, expoſing himſelf, without his uſual prudence and diſcretion, to the greateſt dangers. Being known by ſome fugitives, and diſcovered to the enemy, they all aimed at him alone, which made his own men the more ſolicitous to defend him; ſo that the whole conteſt was for ſome time about his perſon. At laſt the Goths were driven back to their camp, which the Romans with great temerity attempted to force. In this attempt, however, they met with ſuch a vigorous reſiſtance, that they ſoon abandoned the enterpriſe, and retired with precipitation to a neighbouring eminence; where they were forced down by the enemy, put to flight, and purſued to the very gates of the city. Here they were in greater danger than ever; for thoſe within, fearing that the enemy might in that confuſion enter with them, refuſed to admit them. The general himſelf cried out earneſtly to them, telling who he was, and commanding them to open the gates; but as they had been informed by thoſe who firſt fled, that he was ſlain, and they could not diſtinguiſh him on account of the blood and duſt with which his face was covered, they gave no ear to what he ſaid. In this extremity, having encouraged his men, who were now driven into a narrow compaſs, to make a laſt effort, he put himſelf at their head, and attacked the enemy with ſuch fury, that the Goths, imagining freſh troops were ſallying out upon them, began to give ground, and at laſt retired to their camp. The Roman general did not purſue them; but entered the city, where he was received with loud acclamations.

18 Rome beſieged by the Goths.

A few days after, the city was cloſely inveſted by Vitiges; who, to diſtreſs the inhabitants, pulled down the aqueducts by which water was conveyed into the city, and which had been built at an immenſe charge by the Roman emperors. Beliſarius on his part omitted nothing for his defence; inſomuch that the cowardly citizens aſſembled in a tumultuous manner, and railed at the general on account of his ſuppoſed temerity. Vitiges, to encourage this mutinous diſpoſition, diſpatched ambaſſadors to the ſenate with propoſals of peace. Theſe ambaſſadors, however, were diſmiſſed without any anſwer, and the ſiege was begun with great vigour. Beliſarius made a gallant defence; and in ſeven months is ſaid to have deſtroyed 40,000 of the Goths. About this time he received a ſupply of 1600 archers from the emperor; and theſe, in ſeveral ſucceſsful ſallies, are ſaid to have killed 4000 more of the enemy.

The Romans, elated with their ſucceſſes, now became impatient for an engagement: and at laſt, notwithſtanding all the remonſtrances of their general, forced him to lead them out againſt the enemy. The ſucceſs was anſwerable to the raſh attempt. The Romans were defeated, with the loſs of ſome of their braveſt officers, and a great many of their common ſoldiers; after which they contented themſelves with ſallying out in ſmall parties, which they commonly did with the greateſt ſucceſs.

But though the Romans had the ſatisfaction of thus cutting off their enemies, they were moſt grievouſly afflicted with a famine and plague; inſomuch that the inhabitants, no longer able to bear their calamities, were on the point of forcing Beliſarius to venture a ſecond battle, when a ſeaſonable ſupply of troops, viz. 3000 Iſaurians, 800 Thracian horſe, and 1300 horſe of other nations, together with 500 Italians who joined them by the way, arrived at Rome. Beliſarius immediately ſallied out by the Flaminian gate, and fell upon the Goths in order to give his allies time to enter by the oppoſite ſide of the city, which they did without the loſs of a man.—The Goths hearing of the arrival of theſe troops, and their numbers being magnified as is uſual in ſuch caſes, began to deſpair of becoming maſters of the city; eſpecially as the famine and plague raged with great violence in their camp, and their army was much reduced. Ambaſſadors were therefore diſpatched to Beliſarius with propoſals of peace; but the only thing they could obtain was a ceſſation of arms for three months, during which time they might ſend ambaſſadors to the emperor. The negociations with the emperor, however, proved unſucceſsful; and the ſiege was purſued with great vigour till Vitiges received the news of the taking of Rimini by the Romans. As this city was but a day's journey from Ravenna, the Goths were ſo much alarmed, that they immediately raiſed the ſiege of Rome, after it had continued a year and nine days. Beliſarius fell upon their rear as they paſſed the bridge of the Tiber, and cut great numbers of them to pieces, while others, ſtruck with a panic, threw themſelves into the river and were drowned.

19 The ſiege raiſed.

The firſt interpriſe of Vitiges, after raiſing the ſiege of Rome, was an attempt upon Rimini: but while he was employed in this ſiege, the Romans made themſelves maſters of Milan; upon which a Gothic general, named *Uraia*, was immediately diſpached with a powerful army to retake it. In the mean time, however, a ſupply of 7000 Romans arrived from the emperor, under the command of Narſes, a celebrated general. The immediate conſequence of this was the raiſing of the ſiege of Rimini; for Vitiges perceiving the two Roman armies coming againſt him, and concluding, from the many fires they made, that they were much more numerous than they really were, fled in ſuch haſte, that the greateſt part of the baggage was left behind. The confuſion of the Goths was ſo great, that, had not the garriſon been extremely feeble, they might have eaſily cut them off in their retreat, and thus put an end to the war at once. The ſucceſs of the Romans, however, was now retarded by ſome miſunderſtandings between the two generals: ſo that, though Beliſarius made himſelf Maſter of Urbinum and Urbiventum, while Narſus reduced ſome other places, yet the important city of Milan was ſuffered to fall into the hands of the Goths, who maſſacred all the inhabitants that were able to bear arms, to the number of 300,000, and ſold the women for ſlaves. The city was alſo totally demoliſhed; and this diſaſter made ſuch an impreſſion on the mind of Juſtinian, that he immediately recalled Narſes, and gave the command of his troops to Beliſarius.

20 Milan taken by the Goths.

Vitiges, who had promiſed himſelf great advantages from the diſagreement of the two generals, was much diſappointed by the recall of Narſes; and therefore dreading the power of Beliſarius when at the head of a formidable army, thought of engaging in alliance with ſome foreign prince. In his choice, however, he was ſomewhat at a loſs. He knew the treachery of the Franks, and therefore did not apply to them. He applied to the Lombards; but, though tempted by the offer of a large ſum of money, they continued inviolably attached to the Roman intereſt. At laſt he found means to perſuade Choſroes king of Perſia to make war upon Juſtinian, which he thought would infallibly procure the recall of Beliſarius. But the Roman general underſtanding his deſign, puſhed on the war in the moſt vigorous manner; while, in the mean time, the treacherous Franks, thinking both nations ſufficiently weakened by their mutual hoſtilities, reſolved to attack both, and ſieze upon the country for which they contended. Accordingly, Theodebert, unmindful of the oaths he had taken both to the Goths and Romans, paſſed the Alps at the head of 140,000, or, as ſome will have it, 200,000 men, and entered Liguria. As no hoſtilities were committed by them on their march, the Goths concluded that they were come to their aſſiſtance; and therefore took care to ſupply them with proviſions. Thus they croſſed the Po without oppoſition; and having ſecured the bridge, marched towards the place where a body of Goths were encamped; who, looking upon them as friends admitted them without heſitation. But they were ſoon convinced of their miſtake; for the Franks falling unexpectedly upon them, drove them out of the camp with great ſlaughter, and ſeized on their baggage and proviſions. A body of Romans that lay at a ſmall diſtance from the Goths concluding that they had been defeated by Beliſarius, advanced with great joy to meet *him* as they imagined; but the Franks falling unawares upon them, treated them as they had done the Goths, and made themſelves maſters of their camp. Thus they acquired a very conſiderable booty and ſtore of proviſions: but the latter being ſoon conſumed, and the country round about quite exhauſted, vaſt numbers of the Franks periſhed; ſo that Theodebert at laſt found himſelf obliged to return. In his way he deſtroyed Genoa and ſeveral other places, and arrived in his own dominions loaded with booty.

21 Italy invaded by the Franks.

22 Succeſs of Beliſarius.

In the mean time, Beliſarius was making great progreſs. He took the cities of Auximum and Fæſulæ after an obſtinate ſiege; the inhabitants of the former having for ſome time fed on graſs before they would ſurrender. After this he inveſted Ravenna, the capital of all the Gothic dominions in Italy. The place was defended by a very numerous garriſon, commanded by the king in perſon, who exerted all his bravery in the defence of his metropolis. As the ſiege, however, was puſhed on with great vigour, it was evident that the city muſt at laſt ſubmit; and the great ſucceſſes of the Romans began to give jealouſy to the neighbouring potentates. Theodebert king of the Franks offered to aſſiſt Vitiges with an army of 500,000 men; but Beliſarius, being informed of this negociation, ſent ambaſſadors to Vitiges, putting him in mind of the treachery of the Franks, and aſſured him that the emperor was ready to grant him very honourable terms. The king, by the advice of his counſellors, rejected the alliance of the Franks, and ſent ambaſſadors to Conſtantinople; but in the mean time, Beliſarius, in order to bring the citizens to his own terms, bribed one of them to ſet fire to a magazine of corn, by which means the city was ſoon ſtraitened for want of proviſions. But, notwithſtanding this diſaſter, they ſtill continued to hold out, till the arrival of the ambaſſadors from Conſtantinople, who brought very favourable terms. Theſe were, That the country beyond the Po, with reſpect to Rome, ſhould remain to the Goths; but that the reſt of Italy ſhould be yielded to the emperor, and the royal treaſure of the Goths ſhould be equally divided between him and the king. To thoſe conditions, however, Beliſarius poſitively refuſed to aſſent; being deſirous of leading captive the king of the Goths, as he had formerly done the king of the Vandals, to Conſtantinople. He therefore purſued the ſiege with more vigour than ever, without hearkening to the complaints of his ſoldiers and officers, who were quite tired out with the length of the ſiege: he only obliged ſuch of the officers as were of opinion that the town could not be taken, to expreſs their opinion in writing, that they might not deny it afterwards.

The Goths were as weary of the ſiege as the Romans; but fearing leſt Juſtinian ſhould tranſplant them to Thrace, formed a reſolution, without the conſent of their king, of ſurrendring to Beliſarius himſelf, and declaring him emperor of the weſt. To this they were the more encouraged by the refuſal of Beliſarius to agree to the terms propoſed by the emperor;

whence they concluded that he deſigned to revolt, and make himſelf emperor of Italy. Of this, however, Beliſarius had no deſign; but thought proper to accept of the title, in order to accelerate the ſurrender of the city, after acquainting his principal officers with what had paſſed. Vitiges at laſt diſcovered the plot; but finding himſelf in no condition to oppoſe it, he commended the reſolution of his people, and even wrote to Beliſarius, encouraging him to take upon him the title of *king*, and aſſuring him of his aſſiſtance. Hereupon Beliſarius preſſed the Goths to ſurrender; which, however, they ſtill refuſed, till he had taken an oath that he would treat them with humanity, and maintain them in the poſſeſſion of all their rights and privileges. Upon this he was admitted into the city, where he behaved with great moderation towards the Goths; but ſeized on the royal treaſure, and ſecured the perſon of the king. The Roman army, when it entered Ravenna, appeared ſo very inconſiderable, that the Gothic women on beholding it could not forbear ſpitting in the faces of their huſbands, and reviling them as cowards.

23
Ravenna reduced and Vitiges taken priſoner.

The captivity of Vitiges, and the taking of Ravenna, did not put an end to the war. Beliſarius was ſoon after recalled to take the command of the army in the eaſt. The Goths were greatly ſurpriſed that he ſhould leave his new kingdom out of regard to the orders of the emperor; but, after his departure, choſe one Ildebald, a man of great experience in affairs both civil and military, for their king. He revived the drooping ſpirits of his countrymen, defeated the Romans, and reduced all the province of Venetia; but was in a ſhort time murdered, and Eraric, a Rugian, ſucceeded to the throne. He was ſcarce inveſted with the ſovereignty, when his ſubjects began to think of depoſing him, and raiſing Totila to the throne; which the latter accepted, upon condition that they previouſly diſpatched Eraric. This was accordingly done; after which Totila was proclaimed king of Italy in the year 542.

24
Succeſs of Totila againſt the Romans.

The new king proved a very formidable enemy to the Romans, who now loſt ground every-where. They made an attempt on the city of Verona; in which they miſcarried through their own avarice, having diſputed about the diviſion of the plunder till the opportunity of taking the town was paſt. They were next defeated in two bloody engagements; the conſequence of which was, that the Goths made themſelves maſters of all the ſtrong places in Tuſcany. From thence marching into Campania and Samnium, they reduced the ſtrong town of Beneventum, and laid ſiege to Naples. During the ſiege of this laſt place, ſeveral detachments were ſent from the king's army, which took Cumæ, and recovered all Brutia, Lucania, Apulia, and Calabria, where they found conſiderable ſums which had been gathered for the emperor's uſe. The Romans, in the mean time, diſheartened by their loſſes, and deprived of thoſe ſums which ſhould have paid their wages, refuſed to take the field. A conſiderable fleet was therefore ſent by Juſtinian to the relief of Naples: but Totila, having timely notice of this deſign, manned, with incredible expedition, a great number of light veſſels; which, falling unexpectedly on the Roman fleet, took or ſunk every ſhip, and made priſoners of all on board, excepting a few who eſcaped in their boats. A ſimilar fate attended another fleet diſpatched from Sicily for the ſame purpoſe. They put to ſea in the depth of winter; and, meeting with a violent ſtorm, were driven aſhore near the enemy's camp; who ſunk the ſhips, and made what ſlaughter they pleaſed of the ſeamen and ſoldiers. Upon this ſecond diſaſter, the Neapolitans, deſpairing of further relief, ſubmitted to Totila; who granted them honourable terms, and treated them with great humanity. As they had been long pinched with famine, Totila, apprehending they might endanger their lives by indulging their appetites too much at firſt, placed guards at the gates to prevent their going out, taking care at the ſame time to ſupply them ſparingly with proviſions, but increaſing their allowance every day. Being thus by degrees reſtored to their former ſtrength, he ordered the gates to be ſet open, and gave every one full liberty to ſtay in the city or remove as he thought fit. The garriſon he treated with extraordinary kindneſs. They were firſt ſupplied with ſhips to carry them to Conſtantinople; but the king having diſcovered that their real deſign was to ſail to Rome, in order to reinforce the garriſon of that city (which they knew he was ſoon to beſiege), he was ſo far from puniſhing them as they expected, that he furniſhed them with horſes, waggons, and proviſions, and ordered a body of Goths to eſcort them to Rome by land, as the winds had proved unfavourable for their paſſage by ſea.

Totila having thus become maſter of Naples and moſt of the other fortreſſes in theſe parts, began to think of reducing Rome alſo. He firſt attempted to perſuade the citizens to a ſurrender: but finding his perſuaſions ineffectual, he ſent a detachment of his army into Calabria to reduce Otranto, which had not yet ſubmitted; after which, he marched with the reſt of his forces againſt the towns in the neighbourhood of Rome. The city of Tibur, now Tivoli, about 18 miles from Rome, was betrayed to him; and all the inhabitants, together with their biſhop, were put to the ſword. Several other ſtrong holds in the neighbourhood of that city he took by ſtorm; ſo that Rome was in a manner blocked up by land, all communication with the neighbouring country being cut off.

Juſtinian, in the mean time, being greatly perplexed by the bad news he every day received from Italy, recalled Beliſarius from Perſia, notwithſtanding the ſucceſs which attended him there. To ſave Rome, however, was now impoſſible even for Beliſarius himſelf. As ſoon as he arrived in Italy, finding himſelf unable either to relieve the towns which were beſieged, or to ſtop the progreſs of the Goths, he diſpatched letters to Juſtinian, informing him, that being deſtitute of men, arms, and money, it was impoſſible for him to proſecute the war; upon which the emperor ordered new levies to be made, all the veterans being engaged in the Perſian war. In the mean time, however, Totila purſued his good fortune; took the cities of Firmum, Aſculum, Auximum, Spoletum, &c. and at length advanced to Rome, which he inveſted on all ſides. As he drew near the city, two officers, whom Beliſarius had ſent into the city, ventured to make a ſally, though contrary to the expreſs orders of their

25
Rome beſieged.

general, thinking they ſhould ſurpriſe the Goths; but they were themſelves taken in an ambuſcade, and, moſt of their men being cut in pieces, narrowly eſcaped falling into the hands of the enemy. Beliſarius made ſeveral attempts to relieve the city: but all of them, however well concerted, by ſome accident or other proved unſucceſsful; which gave him ſo much uneaſineſs, that he fell into a feveriſh diſorder, and was for ſome time thought to be in danger of his life. The city was ſoon reduced to great ſtraits; a dreadful famine enſued; and the unhappy citizens having conſumed every thing that could be ſuppoſed to give them nouriſhment, even the graſs that grew near the walls, were obliged, it is ſaid, to feed on their own excrements. Many put an end to their lives, in order to free themſelves from the intolerable calamities they ſuffered. The reſt addreſſed their governor Beſſas in the moſt pathetic manner, intreating him to ſupply them with food; or if that was not in his power, either to give them leave to go out of the town, or to terminate their miſeries by putting them to death. Beſſas replied, that to ſupply them with food was impoſſible; to let them go, unſafe; and to kill them, impious. In the end, however, he ſuffered thoſe who were willing to retire, to leave the city, upon paying him a ſum of money; but moſt of them either died on the road, or were cut in pieces by the enemy. At laſt, the beſieged, unable to bear their miſeries any longer, began to mutiny, and to preſs their governor to come to an agreement with Totila. This, however, he ſtill refuſed; upon which, four of the Iſaurians who guarded one of the gates, went privately to the camp of Totila, and offered to admit him into the city. The king received this propoſal with great joy; and ſending four Goths of great ſtrength and intrepidity into the town along with them, he ſilently approached the gates in the night-time with his whole army. The gates were opened by the Iſaurians, as they had promiſed; and upon the firſt alarm, Beſſas with moſt of the ſoldiers and officers fled out of the town. The inhabitants took ſanctuary in the churches; and only 60 of them and 26 ſoldiers were killed after the town was taken. Totila, however, gave his ſoldiers full liberty to plunder the city: which they did for ſeveral days together, ſtripping the inhabitants of all their wealth, and leaving nothing in their houſes but naked walls; by which means many perſons of diſtinction were reduced to beg their bread from door to door. In the houſe of Beſſas was found an immenſe treaſure, which he had ſcandalouſly amaſſed during the ſiege, by ſelling to the people, at an exorbitant price, the corn which had been ſtored up for the uſe of the garriſon.

26
And taken.

Totila, thus become maſter of Italy, ſent ambaſſadors to Juſtinian with very reſpectful letters, deſiring to live on the ſame terms with him that Theodoric had done with his predeceſſor Anaſtaſius; promiſing in that caſe to reſpect him as his father, and to aſſiſt him, when he pleaſed, with all his force, againſt any other nation whatever. On the contrary, if the emperor rejected his offers, he threatened to level Rome with the ground, to put the whole ſenate to the ſword, and to carry the war into Illyricum. The emperor returned no other anſwer, than that he referred the whole to Beliſarius, who had full power to manage all things of that nature. Upon this Totila reſolved to deſtroy the city; and had actually thrown down a third part of the wall, when he received a letter from Beliſarius, diſſuading him from his intention. After having ſeriouſly conſidered this letter, Totila thought proper to alter his reſolution with regard to the deſtruction of the city; but ſent every one of the inhabitants into Lucania, without leaving a ſingle perſon in the metropolis. Beliſarius hearing of this, immediately returned to the capital, and undertook to repeople and repair it. He cleared the ditch which had been filled by Totila, but was for the preſent obliged to fill up the breaches in the walls with ſtones looſely heaped upon one another; and in this ſituation the city was again attacked by the Goths. Beliſarius, however, had taken care to ſupply the inhabitants with plenty of proviſions, ſo that they were now in no danger of ſuffering by famine; and the aſſaults of the enemy were vigorouſly repelled, notwithſtanding the bad ſituation of the fortifications, ſo that Totila at laſt abandoned the enterpriſe.

27
Beliſarius recalled.

In the mean time the Perſians gained great advantages over the Romans in the Eaſt, ſo that there was a neceſſity for recalling Beliſarius a ſecond time. He was no ſooner gone, than Totila renewed his efforts with greater vigour than ever; and at the ſame time the Franks, concluding that both Romans and Goths would be much weakened by ſuch a deſtructive war, ſeized upon Venetia, which belonged to both nations, and made it a province of the French empire. Totila did not oppoſe them; but having obtained a reinforcement of 6000 Lombards, returned immediately before Rome, fully intent on making himſelf maſter of that metropolis. Having cloſely inveſted it by ſea and land, he hoped in a ſhort time to reduce it by famine: but againſt this the governor wiſely provided, by cauſing corn to be ſown within the walls; ſo that he could probably have defied the power of Totila, had not the city been again betrayed by the Iſaurians, who opened one of the gates and admitted the enemy.

Thus the empire of the Goths was a third time eſtabliſhed in Italy; and Totila, immediately on his becoming maſter of Rome, diſpatched ambaſſadors to Juſtinian, offering to aſſiſt him as a faithful ally againſt any nation whatever, provided he would allow him the quiet poſſeſſion of Italy. But Juſtinian was ſo far from hearkening to this propoſal, that he would not even admit the ambaſſadors into his preſence; upon which Totila reſolved to purſue the war with the utmoſt vigour, and to make himſelf maſter not only of thoſe places which the Romans poſſeſſed in Italy, but in Sicily alſo. This he fully accompliſhed; when Narſes, who had formerly been joined in the command with Beliſarius, was appointed general, with abſolute and uncontrouled authority. But while this general was making the neceſſary preparations for his expedition, Totila, having equipped a fleet of 300 galleys, ſent them to pillage the coaſts of Greece, where they got an immenſe booty. They made a deſcent on the iſland of Corfu; and having laid it waſte, they ſailed to Epirus, where they ſurpriſed and plundered the cities of Nicopolis and Anchialus, taking many ſhips on the coaſt, among which were ſome laden with proviſions for the army of Narſes. After theſe ſucceſſes they laid ſiege to Ancona in Dalmatia. Being defeated, however, both by ſea and land, Totila once more ſent ambaſſadors to Conſtantinople, offering to yield

28
Narſes ſent into Italy.

Sicily and all Dalmatia, to pay an annual tribute for Italy, and to aſſiſt the Romans as a faithful ally in all their wars; but Juſtinian, bent upon driving the Goths out of Italy, would not even ſuffer the ambaſſadors to appear in his preſence.

Totila finding that no terms could be obtained, began to levy new forces, and to make great preparations by ſea and land. He ſoon reduced the iſlands of Corſica and Sardinia; but this was the laſt of his ſucceſſes. Narſes arrived in Italy with a very formidable army, and an immenſe treaſure to pay the troops their arrears, the want of which had been one great cauſe of the bad ſucceſs of Beliſarius in his laſt expedition. He immediately took the road to Rome; while Totila aſſembled all his forces, in order to decide the fate of Italy by a general engagement. The battle proved very obſtinate; but at laſt the Gothic cavalry being put to the rout, and retiring in great confuſion among the infantry, the latter were thereby thrown into ſuch diſorder, that they could never afterwards rally. Narſes, obſerving their confuſion, encouraged his men to make a laſt effort; which the Goths not being able to withſtand, betook themſelves to flight, with the loſs of 6000 men killed on the ſpot. Totila finding the day irrecoverably loſt, fled with only five horſemen for his attendants; but was purſued and mortally wounded by a commander of one of the bodies of barbarians who followed Narſes. He continued his flight, however, for ſome time longer; but was at laſt obliged to halt in order to get his wound dreſſed, ſoon after which he expired.

29
Who defeats and kills Totila,

This diſaſter did not yet entirely break the ſpirit of the Goths. They choſe for their king one Teia, deſervedly eſteemed one of the moſt valiant men of their nation, and who had on ſeveral occaſions diſtinguiſhed himſelf in a moſt eminent manner. All the valour and experience of Teia, however, were now inſufficient to ſtop the progreſs of the Romans. Narſes made himſelf maſter of a great number of cities, and of Rome itſelf, before the Goths could aſſemble their forces. The Roman general next proceeded to inveſt Cumæ; which Teia determined at all events to relieve, as the royal treaſure was lodged in that city. This brought on an engagement, which, if Procopius is to be credited, proved one of the moſt bloody that ever was fought. The Roman army conſiſted of vaſt multitudes brought from different nations; the Goths were few in compariſon; but, animated by deſpair, and knowing that all was at ſtake, they fought with the utmoſt fury. Their king placed himſelf in the firſt rank, to encourage his men by his example; and is ſaid to have given ſuch proofs of his valour and conduct as equalled him to the moſt renowned heroes of antiquity. The Romans diſcovering him, and knowing that his death would probably put an end to the battle, if not to the war itſelf, directed their whole force againſt him, ſome attacking him with ſpears, and others diſcharging againſt him ſhowers of darts and arrows. Teia maintained his ground with great intrepidity, received the miſſive weapons on his ſhield, and killed a great number of the enemy with his own hand. When his ſhield was ſo loaded with darts that he could not eaſily wield it, he called for another. Thus he ſhifted his ſhield three times; but as he attempted to change it another time, his breaſt being neceſſarily expoſed for a moment, a dart ſtruck him in that moment with ſuch force, that he immediately fell down dead in the place where he had ſtood from the beginning of the battle, and upon heaps of the enemy whom he had killed. The Romans, ſeeing him fall, cut off his head and expoſed it to the ſight of the Goths, not doubting but they would be immediately diſheartened and retire. In this, however, they were diſappointed. The Goths maintained the fight with great vigour, till night put an end to the engagement. The next day the engagement was renewed early in the morning, and continued till night: but on the third day, the Goths deſpairing of being able to overcome an enemy ſo much ſuperior to them in numbers, ſent deputies to Narſes, offering to lay down their arms, provided ſuch of them as choſe to remain in Italy were allowed to enjoy their eſtates and poſſeſſions without moleſtation, as ſubjects of the empire; and thoſe who were willing to retire elſewhere, were ſuffered to carry with them all their goods and effects. To theſe terms Narſes readily aſſented; and thus the empire of the Goths in Italy was finally deſtroyed, the country now becoming a province of the eaſtern Roman empire.

30
And Teia.

31
The end of the empire of the Goths in Italy.

In this conqueſt Narſes had been aſſiſted, as already obſerved, by many barbarous nations, among whom were the Lombards, at that time ſettled in Pannonia. On the concluſion of the war, they were diſmiſſed with rich preſents, and the nation for ſome time continued faithful allies to the Romans. In the mean time Juſtinian dying, Narſes, who governed Italy with an abſolute ſway, was accuſed to the emperor Juſtin II. and to the empreſs Sophia, of aſpiring to the ſovereignty of the country. Hereupon he was recalled, and Longinus ſent to ſucceed him. As Narſes was an eunuch, the empreſs is reported to have ſaid, that his employment at Conſtantinople ſhould be to diſtribute in the apartment of her women the portion of wool which each was to ſpin. Narſes, enraged at this ſarcaſm, replied, that he ſhould begin ſuch a web as ſhe ſhould never be able to finiſh; and immediately diſpatched meſſengers to Alboinus king of the Lombards, inviting them into Italy. Along with the meſſengers he ſent ſome of the beſt fruits the country afforded, in order to tempt him the more to become maſter of ſuch a rich kingdom.

32
Narſes invites the Lombards.

Alboinus, highly pleaſed with the opportunity of invading a country with which his ſubjects were already well acquainted, began without loſs of time to make the neceſſary preparations for his journey. In the month of April 568, he ſet out with his whole nation, men, women, and children: carrying with them all their moveables. This promiſcuous multitude arrived by the way of Iſtria; and advancing through the province of Venetia, found the whole country abandoned, the inhabitants having fled to the neighbouring iſlands, in the Adriatic. The gates of Aquileia were opened by the few inhabitants who had courage to ſtay: moſt of them, however, had fled with all their valuable effects; and among the reſt the patriarch Paulinus, who had carried with him all the ſacred utenſils of the churches. From Aquileia, Alboinus proceeded to Forum Julii, of which he likewiſe became maſter without oppoſition. Here he ſpent the winter; during which time he erected Friuli into a dukedom, which has continued ever ſince. In 569, he made himſelf maſter of Trivigi, Oderzo, Monte Selce, Vicenza, Verona, and Trent; in each of which cities he left a ſtrong garriſon of Lombards under the command of an officer, whom he diſtinguiſhed by the title of *duke*: but theſe dukes were only officers and governors of cities, who bore the title no longer than the prince thought proper to continue them in their command or government. Padua and ſome other cities Alboinus left behind him without attempting to reduce them, either becauſe they were too well garriſoned, or becauſe they lay too much out of his way. In 570, he entered Liguria. The inhabitants were ſo terrified at his approach, that they left their habitations with ſuch of their effects as they could carry off, and fled into the moſt mountainous and inacceſſible parts of the country. The cities of Breſcia, Bargamo, Lodi, Como, and others quite to the Alps, being left almoſt without inhabitants, ſubmitted of courſe; after which he reduced Milan, and was thereupon proclaimed king of Italy.

33 Who reduce the greateſt part of Italy.

But though the Lombards had thus conferred the title of king of Italy on their ſovereign, he was by no means poſſeſſed of the whole country, nor indeed was it ever in the power of the Lombards to get poſſeſſion of the whole. Alboinus having made himſelf maſter of Venetia, Liguria, Æmilia, Hetruria, and Umbria, applied himſelf to legiſlation and the civilization of his ſubjects. But before he could make any progreſs in this work, he was taken off by the treachery of his wife; and Clephis, one of the nobles, choſen king in his ſtead. Clephis rebuilt ſome cities which had been ruined during the wars between the Goths and Romans, and extended his conqueſts to the very gates of Rome; but as he behaved both to the Romans and Lombards with the greateſt cruelty, he was murdered, after a ſhort reign of 18 months. His cruelty gave the Lombards ſuch an averſion againſt regal power, that they changed their form of government, being governed only by their dukes for the ſpace of ten years. During this interregnum, they proved ſucceſsful in their wars with the Romans, and made themſelves maſters of ſeveral cities: but perceiving that their kingdom, thus divided, could not ſubſiſt, they reſolved once more to ſubmit to the authority of one man; and accordingly, in 585, Autharis was choſen king of the Lombards.

34 Subdued by Charlemagne.

The great object of ambition to the new race of Lombard monarchs was the conqueſt of all Italy; and this proved at laſt the ruin of their empire by Charles the Great, as related under the article FRANCE, n° 27. As the Lombards, however, had not been poſſeſſed of the whole territory of Italy, ſo the whole of it never came into the poſſeſſion of Charlemagne: neither, ſince the time of the Goths, has the whole of this country been under the dominion of any ſingle ſtate. Some of the ſouthern provinces were ſtill poſſeſſed by the emperors of Conſtantinople; and the liberal grants of Pepin and Charlemagne himſelf to the pope, had inveſted him with a conſiderable ſhare of temporal power. The territories of the pope indeed were ſuppoſed to be held in vaſſalage from France; but this the popes themſelves always ſtiffly denied. The undiſputed territory of Charlemagne in Italy, therefore, was reſtricted to Piedmont, the Milaneſe, the Mantuan, the territory of Genoa, Parma, Modena, Tuſcany, Bologna, the dukedoms of Friuli, Spoleto, and Benevento; the laſt of which contained the greateſt part of the preſent kingdom of Naples.

35 Extent of his Italian dominions.

The feudal government which the Lombards had introduced into Italy, naturally produced revolts and commotions, as the different dukes inclined either to change their maſters or to ſet up for themſelves. Several revolts indeed happened during the life of Charlemagne himſelf; which, however, he always found means to cruſh: but after his death, the ſovereignty of Italy became an object of contention between the kings of France and the emperors of Germany. That great monarch had divided his extenſive dominions among his children; but they all died during his lifetime, except Louis, whom he aſſociated with himſelf in the empire, and who ſucceeded to all his dominions after his death. From this time we may date the troubles with which Italy was ſo long overwhelmed: and of which, as they proceeded from the ambition of thoſe called kings of Italy and their nobles, of the kings of France, and of the emperors of Germany, it is difficult to have any clear idea. The following ſhort ſketch, however, may perhaps give ſome ſatiſfaction on this perplexed ſubject.

36 History of the diſturbances in Italy after the time of Charlemagne.

At the time Louis the ſon of Charlemage was declared emperor of the Weſt, Italy was held by Bernard the ſon of Pepin, brother to Louis. Though this Bernard bore the title of *king*, yet he was only accounted a vaſſal of the emperor. His ambition, however, ſoon prompted him to rebel againſt his uncle; but being abandoned by his troops, he was taken priſoner, had his eyes pulled out, and died three days after. As the diſturbances ſtill continued, and the nobles of Lombardy were yet very refractory, Lothaire, eldeſt ſon to the emperor, was in the year 823 ſent into Italy; of which country he was firſt crowned king at Rome, and afterwards emperor of the Weſt, during his father's lifetime. But though his abilities were ſufficient to have ſettled every thing in a ſtate of tranquillity, his unbounded ambition prompted him to engage in rebellion againſt his father; whom he more than once took priſoner; though in the end he was obliged to ſubmit, and aſk pardon for his offences, which was obtained only on condition of his not paſſing the Alps without leave obtained from his father.

In the mean time, the Saracens, taking advantage of theſe inteſtine wars, landed on the coaſts of Italy, and committed ſuch ravages, that even the biſhops were obliged to arm themſelves for the defence of the country. Lothaire, however, after returning from his unnatural war with his father, was ſo far from attempting to put an end to theſe ravages, or to reſtore tranquillity, that he ſeized on ſome places belonging to the ſee of Rome, under pretence that they were part of his kingdom of Lombardy; nor would he forbear theſe encroachments till expreſsly commanded to do ſo by his father. After having embroiled himſelf, and almoſt loſt all his dominions, in a war with his brothers after the death of Louis, and declared his ſon, alſo called *Louis*, king of Italy, this ambitious prince died, leaving to Louis the title of *emperor*, as well as *king of Italy*, with which he had before inveſted him.

The new emperor applied himſelf to the reſtoration of tranquillity in his dominions, and driving out the Saracens from thoſe places which they had ſeized in Italy. This he fully accompliſhed, and obliged the infidels to retire into Africa; but in 875 he died without naming any ſucceſſor. After his death, ſome of the Italian nobles, headed by the duke of Tuſcany, repreſented to the pope, that as Louis had left no ſucceſſor, the regal dignity, which had ſo long been uſurped by foreigners, ought now to return to the Italians. The pope, however, finding that Charles the Bald, king of France, had ſuch an ambition for the imperial crown, that he would ſtick at nothing to obtain it, reſolved to gratify him, though at as high a price as poſſible. He accordingly crowned him emperor and king of Lombardy, on condition of his owning the independency of Rome, and that he himſelf only held the empire by the gift of the pope. This produced a conſpiracy among the diſcontented nobles; and at the ſame time the Saracens renewing their incurſions, threatened the eccleſiaſtical territories with the utmoſt danger. The pope ſolicited the emperor's aſſiſtance with the greateſt earneſtneſs; but the latter died before any thing effectual could be done: after which, being diſtreſſed by the Saracens on one hand, and the Lombard nobles on the other, the unhappy pontiff was forced to fly into France. Italy now fell into the utmoſt confuſion and anarchy; during which time many of the nobles and ſtates of Lombardy aſſumed an independence, which they have ever ſince retained.

In 879, the pope was reconducted to Italy with an army by Boſon ſon-in-law to Louis II. of France: but though he inclined very much to have raiſed this prince to the dignity of king of Italy, he found his intereſt inſufficient for that purpoſe, and matters remained in their former ſituation. The nobles, who had driven out the pope, were now indeed reconciled to him: but notwithſtanding this reconciliation, the ſtate of the country was worſe than ever; the great men renouncing the authority of any ſuperior, and every one claiming to be ſovereign in his own territories. To add to the calamities which enſued through the ambition of theſe deſpots, the Saracens committed every where the moſt terrible ravages; till at laſt the Italian nobles, deſpiſing the kings of the Carlovingian race, who had weakened themſelves by their mutual diſſentions, began to think of throwing off even all nominal ſubmiſſion to a foreign yoke, and retaining the imperial dignity among themſelves. Thus they hoped, that, by being more united among themſelves, they might be more able to reſiſt the common enemy. Accordingly in 885 they went to pope Adrian; and requeſting him to join them in aſſerting the independency of Italy, they obtained of him the two following decrees, viz. That the popes, after their election, might be conſecrated without waiting for the preſence of the king or his ambaſſadors; and that, if Charles the Groſs died without ſons, the kingdom of Italy, with the title of *emperor*, ſhould be conferred on ſome of the Italian nobles.

Theſe decrees were productive of the worſt conſequences imaginable. The emperor complained of being deprived of his right; and the diſſenſions between the Italian nobles themſelves became more fatal than ever. The two moſt powerful of theſe noblemen, Berengarius duke of Friuli, and Guido or Vido duke of Spoleto, entered into an agreement, that on the death of the emperor the former ſhould ſeize on the kingdom of Italy, and the latter on the kingdom of France. Berengarius ſucceeded without oppoſition; but Vido was diſappointed, the French having already choſen Eudes or Otho for their king. Upon this he returned to Italy, and turned his arms againſt Berengarius. Vido proved victorious in an engagement, and drove his rival into Germany; where he ſought the aſſiſtance of Arnolphus, who had ſucceeded to the crown after the death of Charles. Having thus obtained the kingdom of Italy, Vido employed his time in reforming the abuſes of the ſtate, and confirming the grants formerly given to the pope, out of gratitude for his having ſanctified his uſurpation and declared him lawful king of Italy. This tranquillity, however, was of ſhort duration. Arnolphus ſent an army into Italy; the Saracens from Spain ravaged the northern parts of the country, and getting poſſeſſion of a caſtle near the Alps, held it for many years after, to the great diſtreſs of the neighbouring parts, which were expoſed to their continual incurſions; and at the ſame time Benevento was beſieged and taken by the forces of the eaſtern emperor, ſo that Vido found his empire very conſiderably circumſcribed in its dimenſions.

The new king, diſtreſſed by ſo many enemies, aſſociated his ſon Lambert with him in the government, and bribed the Germans to return to their own country. In 893, however, they again invaded Italy; but were ſuddenly obliged to leave the country, after having put Berengarius in poſſeſſion of Pavia. In the mean time, Vido died, and his ſon Lambert drove out Berengarius: but having joined a faction, headed by one Sergius, againſt pope Formoſus, the latter offered the kingdom of Italy to Arnolphus; who thereupon entered the country with an army, beſieged and took Rome, maſſacring the faction of Sergius with the moſt unrelenting cruelty.

Arnolphus thus maſter of Italy, and crowned emperor by the pope, began to form ſchemes of ſtrengthening himſelf in his new acquiſitions by putting out the eyes of Berengarius: but the latter having timely notice of this treachery, fled to Verona; and the Italians were ſo provoked at this and the other cruelties of Arnolphus, that they drove him out of the country. His departure occaſioned the greateſt confuſion at Rome. Formoſus died ſoon after; and the ſucceſſors to the papal dignity, having now no army to fear, excited the greateſt diſturbances. The body of Formoſus was dug up and thrown into the Tiber by one pope; after which that pope was ſtrangled, and Formoſus's body buried again in the Vatican, by order of another. At laſt the coronation of Arnolphus was declared void, the Sergian faction entirely demoliſhed, and the abovementioned decrees of Adrian were annulled; it being now determined that the elected popes ſhould not be conſecrated but in preſence of the emperor or his ambaſſadors.

During theſe confuſions Lambert enjoyed the kingdom in quiet; but the nobles hating him on account of his arbitrary and tyrannical government, began again to think of Berengarius. In the mean time, however, another faction offered the crown to Louis king of Arles. This new competitor entered Italy with an army in 899; but was forced by Berengarius to renounce his claim upon oath, and to ſwear that he would never again enter Italy, even though he ſhould be invited to be crowned emperor.—This oath, however, was ſoon forgot. Louis readily accepted of another invitation, and was crowned king of Italy at Pavia in 901. The following year he forced Berengarius to fly into Bavaria; but having unadviſedly diſbanded his army, as thinking himſelf now ſecurely ſeated on the throne, Berengarius, who watched every opportunity, ſurpriſed him at Verona, and put out his eyes.

Thus Berengarius at laſt became king of Italy without a rival; and held his kingdom for 20 years afterwards, without any oppoſition from his ſubjects, who at laſt became ſenſible of the miſchiefs ariſing from civil diſcords. He was not yet, however, without troubles. The Hungarians invaded Italy with a formidable army, and advanced within a ſmall diſtance of Pavia. Berengarius armed the whole force of his dominions; and came againſt them with ſuch a multitude, that the Hungarians retired without venturing an engagement. A great many of their men were loſt in paſſing a river; upon which they ſent deputies to Berengarius, offering to reſtore all their booty, and never to come again into Italy, provided they were allowed a ſafe retreat. Theſe conditions were imprudently denied; upon which the Hungarians attacked the army of Berengarius in deſpair, and defeated them with great ſlaughter. After this they over-ran the whole country, and plundered the towns of Treviſo, Vicenza, and Padua, without reſiſtance, the inhabitants flying every where into fortified places.

This devaſtation they continued for two years; nor could their departure be procured without paying them a large ſum of money: which, however, proved of little avail; for the following year they returned and ravaged the territory of Friuli without controul. Scarcely were theſe invaders departed, when the Saracens, who had ſettled at the foot of the Alps, invaded Apulia and Calabria, and made an irruption as far as Acqui in the neighbourhood of Pavia; while the inhabitants, inſtead of oppoſing them, fled to ſome forts which had been erected in the time of the firſt irruption of the Hungarians. In 912, however, John, preſbyter of Ravenna, having attained the papal dignity by means of Theodora wife of Alderbert count of Tuſcany, applied himſelf to regulate the affairs of the church, and to repreſs the inſults of the Saracens. While he was conſidering on the moſt proper methods of effecting this, one of the Saracens, who had received an injury from his countreymen, fled to Rome, and offered to deliver the Italians from their invaſions, if the pope would but allow him a ſmall body of men. His propoſals being accepted, 60 young men were choſen, all well armed; who being conducted by the Saracen into by-paths, attacked the infidels as they were returning from their inroads, and ſeveral times defeated great parties of them. Theſe loſſes affecting the Saracens, a general alliance was concluded amongſt all their cities! and having fortified a town on the Garigliano, they abandoned the reſt, and retired hither. Thus they became much more formidable than before; which alarming the pope, he conſulted with Arnulphus prince of Benevento and Capua, ſending at the ſame time ambaſſadors to Conſtantine the Greek emperor, inviting him to an alliance againſt the infidels. The Saracens, unable to withſtand ſuch a powerful combination, were beſieged in their city: where being reduced to great ſtraits, they at laſt ſet fire to it, and ſallied out into the woods; but being purſued by the Italians, they were all cut off to a man.

In this expedition it is probable that Berengarius gave great aſſiſtance; for this very year, 915, he was crowned emperor by the pope. This gave diſpleaſure to many of the ambitious nobles; conſpiracies were repeatedly formed againſt him; in 922, Rodolphus king of Burgundy was crowned alſo king of Italy; and in 924, Berengarius was treacherouſly aſſaſſinated at Verona; of which diſturbances the Hungarians taking the advantage, plundered the cities of Mantua, Breſcia, and Bergamo. Marching afterwards to Pavia, they inveſted it cloſely on all ſides; and about the middle of March 925, taking advantage of the wind, they ſet fire to the houſes next the walls, and during the confuſion broke open the gates, and getting poſſeſſion of the city treated the inhabitants with the greateſt barbarity. Having burnt the capital of the kingdom, they next proceeded to Placenza, where they plundered the ſuburbs; and then returned to Pannonia laden with booty.

37
Pavia plundered and burnt by the Hungarians.

The affairs of Italy now fell into the utmoſt confuſion. A faction was formed againſt Rodolphus in favour of Hugh count of Arles. The latter prevailed, and was crowned king at Pavia in 927. The Italians, however, ſoon repented of their choice. The Romans firſt invited him to be their governor, and then drove him out with diſgrace; at the ſame time chooſing a conſul, tribunes, &c. as if they had deſigned to aſſert their ancient liberty. One faction, in the mean time offered the crown to Rodolphus, and the other to Arnold duke of Bavaria, while the Saracens took this opportunity to plunder the city of Genoa.

Hugh, in the mean time, was not inactive. Having collected an army, he marched directly againſt Arnold, and entirely defeated him. Rodolphus delivered him from all apprehenſions on his part, by entering into an alliance with him, and giving his daughter Adelaide in marriage to Lotharius, Hugh's ſon. Being thus free from all danger from foreign enemies, he marched againſt the Romans; but with them he alſo came to an agreement, and even gave his daughter in marriage to Alberic, whom they had choſen conſul. In the mean time the country was infeſted by the Hungarians and Saracens, and at the ſame time depopulated by a plague. Endleſs conſpiracies were formed againſt Hugh himſelf; and at laſt, in 947, he was totally deprived of the regal power by Berengarius, grandſon to the firſt king of that name; ſoon after which he retired into Burgundy, and became a monk.

Though Berengarius was thus poſſeſſed of the ſupreme power, he did not aſſume the title of *king* till after the death of Lotharius, which happened in 950; but in the mean time Italy was invaded by Henry duke of Bavaria, and the Hungarians. The former took and plundered the city of Aquileia, and ravaged the neighbouring count y; after which he returned without moleſtation into Germany: the latter made a furious

38
Italy oppreſſed by the Hungarians and Berengarius.

furious irruption; and Berengarius being unable to oppoſe them, was at laſt obliged to purchaſe their departure by money. In raiſing the ſum agreed upon, however, Berengarius is ſaid to have been more oppreſſive than even the Hungarians themſelves. Every individual, without diſtinction of age or ſex, was obliged to pay ſo much for their head, not excepting even the poor. The churches were likewiſe robbed; by which means the king raiſed an immenſe ſum of money, 10 buſhels of which he gave to the Hungarians, but kept the much greater part to himſelf.

Berengarius, not yet ſatisfied, wanted to be put in poſſeſſion of Pavia, which was held by Adelaide, the widow of Lotharius. In order to obtain his purpoſe, he propoſed a marriage between her and his ſon Adelbert. This propoſal was rejected; upon which Berengarius beſieged and took the city. The queen was confined in a neighbouring caſtle, from whence ſhe made her eſcape by a contrivance of her confeſſor. With him and one female attendant ſhe concealed herſelf for ſome days in a wood; but being obliged to remove from thence for want of food, ſhe applied for protection to Adelard biſhop of Reggio. By him ſhe was recommended to his uncle Atho, who had a ſtrong caſtle in the neighbourhood of Canoza. Here ſhe was quickly beſieged by Berengarius; upon which meſſengers were diſpatched to Otho king of Germany, acquainting him, that, by expelling Berengarius; and marrying Adelaide, he might eaſily obtain the kingdom of Italy. This propoſal he readily accepted, and married Adelaide; but allowed Berengarius to retain the greateſt part of his dominions, upon condition of his doing homage for them to the kings of Germany. He deprived him, however, of the dukedom of Friuli and marquiſate of Verona, which he gave to Henry duke of Bavaria.

39
Otho crowned king of Italy and emperor of the weſt.

Berengarius, thus freed from all apprehenſion, not only oppreſſed his ſubjects in a moſt tyrannical manner, but revolted againſt Otho himſelf. This at laſt procured his ruin: for, in 961, Otho returned with an army into Italy, where he was crowned king by the archbiſhop of Milan; and the year following was crowned emperor by the pope. On this occaſion he received the imperial crown from his holineſs, and kiſſed his feet with great humility: after which they both went to the altar of St Peter, and bound themſelves by a ſolemn oath, the pope to be always faithful to the emperor, and to give no aſſiſtance to Berengarius or Adelbert his enemies; and Otho, to conſult the welfare of the church, and to reſtore to it all its patrimony granted by former emperors. Otho, beſides this, beſtowed very rich preſents on the church of St Peter. He ordained that the election of popes ſhould be according to the canons; that the elected pope ſhould not be conſecrated till he had publicly promiſed, in preſence of the emperor's commiſſaries, to obſerve every thing formerly ſpecified with regard to the rights of the emperors; that theſe commiſſaries ſhould conſtantly reſide at Rome, and make a report every year how juſtice was adminiſtered by the judges; and in caſe of any complaints, the commiſſaries ſhould lay them before the pope; but if he neglected to intimate them, the imperial commiſſaries might then do what they pleaſed.

Thus, we ſee that Otho, however much he might allow the pope's ſupremacy in ſpiritual matters, plainly aſſumed the ſovereignty in temporals to himſelf; and thus Italy was for upwards of 300 years accounted a part of the German empire. The popes, however, by no means reliſhed this ſuperiority of the emperor. The latter was hardly departed, when the pope (John XII.) broke the oath which he had juſt before ſworn with ſo much ſolemnity; and entered firſt into an alliance with Adelbert count of Tuſcany to expel the Germans, and then ſolicited the Hungarians to invade Italy. This treachery was ſoon puniſhed by Otho. He returned with part of his army, and aſſembled a council of biſhops. As the pope did not appear, Otho pretended great concern for his abſence. The biſhops replied, that the conſciouſneſs of his guilt made him afraid to ſhow himſelf. The emperor then inquired particularly into his crimes; upon which the biſhops accuſed him of filling the palace with lewd women, of ordaining a biſhop in a ſtable, caſtrating a cardinal, drinking the devil's health, &c. As the pope ſtill refuſed to appear in order to juſtify himſelf from theſe charges, he was formally depoſed; and Leo the chief ſecretary, though a layman, elected in his ſtead.

40
He depoſes the pope.

The new pope, in compliment to the emperor, granted a bull, by which it was ordained that Otho and his ſucceſſors ſhould have a right of appointing the popes and inveſting archbiſhops and biſhops; and that none ſhould dare to conſecrate a biſhop without leave obtained from the emperor. Thus were the affairs of the Italians ſtill kept in the utmoſt confuſion even during the reign of Otho I. who appears to have been a wiſe and active prince. He was no ſooner gone, than the new pope was depoſed, all his decrees annulled, and John replaced. The party of Leo was now treated with great cruelty: but John was ſoon ſtopped in his career; for about the middle of May, the ſame year (964) in which he had been reſtored, being ſurpriſed in bed with a Roman lady, he received a blow on the head from the devil (according to the authors of thoſe times), of which he died eight days after. After his death a cardinal-deacon, named *Benedict*, was elected by the Romans, but depoſed by Otho, and baniſhed to Hamburgh.

41
The Italians revolt, but are reduced.

The emperor was ſcarce returned to Germany, when his fickle Italians revolted, and ſent for Adelbert, who had fled to Corſica. But being ſoon reduced, they continued quiet for about a year; after which they revolted again, and impriſoned the pope. Otho, however, provoked at their rebellious diſpoſition, ſoon returned, and puniſhed the rebels with great ſeverity; after which he made ſeveral laws for the better regulation of the city of Rome, granted ſeveral privileges to the Venetians, and cauſed his ſon Otho, then only 13 years of age, to be crowned emperor.

This ceremony being over, Otho diſpatched an ambaſſador to Nicephorus, emperor of Conſtantinople, demanding his ſtep-daughter Theophania in marriage for the young emperor; but upon this alliance being rejected, and that not without circumſtances of the moſt atrocious perfidy, Otho inſtantly invaded the countries of Apulia and Calabria, and entirely defeated the Greek army in thoſe parts. In the mean time, however, Nicephorus being killed, and his throne uſurped by John Zimiſces, Otho immediately entered into an alliance with the latter, and eaſily obtained Theophania for his ſon. She was crowned with great ſolemnity on the 8th of April 969: at the ſame time it is pretended by ſome authors, that the Greeks renounced their rights to Calabria and Apulia; though this is denied by others. After the celebration of this marriage, the emperor undertook an expedition againſt the Saracens, who ſtill reſided at the foot of the Alps; but being informed of the death of ſeveral nobles in Germany, he thought proper to return thither, where he died of an apoplexy in the year 973.

42
State of Italy at the death of Otho.

At the time of Otho's death Italy was divided into the provinces of Apulia, Calabria, the dukedom of Benevento, Campania, Terra Romana, the dukedom of Spoleto, Tuſcany, Romagna, Lombardy, and the marquiſates of Acona, Verona, Friuli, Treviſo, and Genoa. Apulia and Calabria were ſtill claimed by the Greeks; but all the reſt were either immediately ſubject to, or held of, the kings of Italy. Otho conferred Benevento (including the ancient Samnium) on the duke of that name. Campania and Lucania he gave to the dukes of Capua, Naples, and Salerno. Rome with its territory, Ravenna with the exarchate, the dukedom of Spoleto, with Tuſcany, and the marquiſate of Ancona, he granted to the pope; and retained the reſt of Italy under the form of a kingdom. Some of the cities were left free, but all tributary. He appointed ſeveral hereditary marquiſates and counties, but reſerved to himſelf the ſovereign juriſdiction in their territories. The liberty of the cities conſiſted in a freedom to chooſe their own magiſtrates, to be judged by their own laws, and to diſpoſe of their own revenues, on condition that they took the oath of allegiance to the king, and paid the cuſtomary tribute. The cities that were not free were governed by the commiſſaries or lieutenants of the emperor; but the free cities were governed by two or more conſuls, afterwards called *poteſtates*, choſen annually, who took the oath of allegiance to the emperor before the biſhop of the city or the emperor's commiſſary. The tribute exacted was called *foderum, parata, et manſionaticum*. By the *foderum* was meant a certain quantity of corn which the cities were obliged to furniſh to the king when marching with an army or making a progreſs through the country; though the value of this was frequently paid in money. By the *parata* was underſtood the expence laid out in keeping the public roads and bridges in repair; and the *manſionaticum* included thoſe expences which were required for lodging the troops or accommodating them in their camp. Under pretence of this laſt article the inhabitants were ſometimes ſtripped of all they poſſeſſed except their oxen and ſeed for the land. Beſides regulating what regarded the cities, Otho diſtributed honours and poſſeſſions to thoſe who had ſerved him faithfully. The honours conſiſted in the titles of *duke*, *marquis*, *count*, *captain*, *valvaſor*, and *valvaſin*; the poſſeſſions were, beſides land, the duties ariſing from harbours, ferries, roads, fiſh-ponds, mills, ſalt-pits, the uſes of rivers, and all pertaining to them, and ſuch like. The dukes, marquiſes, and counts, were thoſe who received dukedoms, marquiſates, and counties, from the king in fiefs; the captains had the command of a certain number of men by a grant from the king, duke, marquis, or count; the valvaſors were ſubordinate to the captains, and the valvaſins to them.

43
Great diſturbances happen on the death of Otho I.

No ſooner was the death of Otho I. known in Italy, than, as if they had been now freed from all reſtraint, the nobles declared war againſt each other: ſome cities revolted and chooſe to themſelves conſuls; while the dominions of others were ſeized by the nobles, who confirmed their power by erecting citadels. Rome eſpecially was haraſſed by tumults, occaſioned chiefly by the ſeditious practices of one Cincius, who preſſed his fellow-citizens to reſtore the ancient republic. As the pope continued firm in the intereſts of the emperor, Cincius cauſed him to be ſtrangled by one Franco a cardinal deacon; who was ſoon after rewarded with the pontificate, and took upon him the name of *Boniface VII.* Another pope was choſen by the faction of the count of Tuſcany; who being approved of by the emperor, drove Cincius and Boniface out of the city. Diſturbances of a ſimilar kind took place in other cities, though Milan continued quiet and loyal in the midſt of all this uproar and confuſion.

In the mean time Boniface fled for refuge to Conſtantinople, where he excited the emperor to make war againſt Otho II. In 979 an army was accordingly ſent into Italy, which conquered Apulia and Calabria; but the next year Otho entered Italy with a formidable army; and having taken a ſevere revenge on the authors of the diſturbances, drove the Greeks entirely out of the provinces they had ſeized. Having then cauſed his ſon Otho III. at that time a boy of ten years of age, to be proclaimed emperor, he died at Rome in the year 983. Among the regulations made by this emperor, one is very remarkable and muſt give us a ſtrange idea of the inhabitants of Italy at that time. He made a law, That no Italian ſhould be believed upon his oath; and that in any diſpute which could not be decided otherwiſe than by witneſſes, the parties ſhould have recourſe to a duel.

Otho III. ſucceeded to the empire at twelve years of age; and during his minority the diſturbances in Italy revived. Cincius, called alſo *Creſcentius*, renewed his ſcheme of reſtoring the republic. The pope (John XV.) oppoſing his ſchemes, was driven out of the city; but was ſoon after recalled, on hearing that he had applied to the emperor for aſſiſtance. A few years after Creſcentius again revolted, and expelled Gregory V. the ſucceſſor of John XV; raiſing to the papal dignity a creature of his own, under the name of *John XVI.*

44
Rome taken by Otho III.

Otho, enraged at this inſult, returned to Rome with a powerful army in 998, beſieged and took it by aſſault; after which he cauſed Creſcentius to be beheaded, and the pope he had ſet up to be thrown headlong from the Caſtle of St Angelo, after having his eyes pulled out, and his noſe cut off. Four years after, he himſelf died of the ſmall-pox; or, according to ſome, was poiſoned by the widow of Creſcentius, whom he had debauched under a promiſe of marriage, juſt as he was about to puniſh the Romans for another revolt.

Otho was ſucceeded in the imperial throne by Henry duke of Bavaria, and grandſon to Otho II. Henry had no ſooner ſettled the affairs of Germany, than he found it neceſſary to march into Italy againſt Ardouin marquis of Ivrea, who had aſſumed the title of *King* *of Italy.* Him he defeated in an engagement, and was himſelf crowned king of Italy at Pavia in 1005; but a few years after, a new conteſt aroſe about the papal chair, which again required the preſence of the emperor. Before he arrived, however, one of the competitors (Benedict VIII.) had got the better of his rival, and both Henry and his queen received the imperial crown from his hands. Before the emperor entered the church, the pope propoſed to him the following queſtion: "Will you obſerve your fidelity to me and my ſucceſſors in every thing?" To which, though a kind of homage, he ſubmitted, and anſwered in the affirmative. After his coronation, he confirmed the privileges beſtowed on the Roman ſee by his predeceſſors, and added ſome others of his own; ſtill, however, reſerving for himſelf the ſovereignty and the power of ſending commiſſaries to hear the grievances of the people. Having repelled the incurſions of the Saracens, reduced ſome more rebellious of his ſubjects, and reduced the greateſt part of Apulia and Calabria, he died in the year 1024.

The death of this emperor was, as uſual, followed by a competition for the crown. Conrad being choſen emperor of Germany, was declared king of Italy by the archbiſhop of Milan; while a party of the nobles made offer of the crown to Robert king of France, or his ſon Hugh. But this offer being declined, and likewiſe another to William duke of Guienne, Conrad enjoyed the dignity conferred on him by the archbiſhop without moleſtation. He was crowned king of Italy at Monza in 1026, and the next year he received the imperial crown from pope John XX. in preſence of Canute the Great, king of England, Denmark, and Norway, and Rodolph III. king of Burgundy. His reign was ſimilar to that of his predeceſſors. The Italians revolted, the pope was expelled, the malecontents were ſubdued, and the pope reſtored; after which the emperor returned to Germany, and died in 1039.

45
The diſorders increaſe under Henry III.

Under Henry III. who ſucceeded Conrad, the diſturbances were prodigiouſly augmented. Pope Sylveſter II. was driven out by Benedict; who in his turn was expelled by John biſhop of Sabinum, who aſſumed the title of *Sylveſter III.* Three months after Benedict was reſtored, and excommunicated his rivals; but ſoon after reſigned the pontificate for a ſum of money. In a ſhort time he reclaimed it; and thus there were at once three popes, each of whom was ſupported on a branch of the papal revenue, while all of them made themſelves odious by the ſcandalous lives they led. At laſt a prieſt called *Gratian* put an end to this ſingular triumvirate. Partly by artifice, and partly by preſents, he perſuaded all the three to renounce their pretenſions to the papacy; and the people of Rome, out of gratitude for ſo ſignal a ſervice to the church, choſe him pope, under the name of *Gregory VI.* Henry III. took umbrage at this election, in which he had not been conſulted, and marched with an army into Italy. He depoſed Gregory, as having been guilty of Simony; and filled the papal chair with his own chancellor Heidiger, biſhop of Bamberg, who aſſumed the name of *Clement II.* and afterwards conſecrated Henry and the empreſs Agnes. This ceremony being over, and the Romans having ſworn never to elect a pope without the approbation of the reigning emperor, Henry proceeded to Capua, where he was viſited by Drago, Rainulphus, and other Norman adventurers; who leaving their country at different times, had made themſelves maſters of great part of Apulia and Calabria, at the expence of the Greeks and Saracens. Henry entered into treaty with them; and not only ſolemnly inveſted them with thoſe territories which they had acquired by conqueſt, but prevailed on the pope to excommunicate the Beneventines, who had refuſed to open their gates to him, and beſtowed that city and its dependences, as fiefs of the empire, upon the Normans, provided they took poſſeſſion by force of arms. The emperor was ſcarce returned to Germany when he received intelligence of the death of Clement II. He was ſucceeded in the apoſtolic ſee by Damaſcus II.; who alſo dying ſoon after his elevation, Henry nominated Bruno biſhop of Toul to the vacant chair. This Bruno, who was the emperor's relation, immediately aſſumed the pontificals; but being a modeſt and pious prelate, he threw them off on his journey, by the perſuaſion of a monk of Cluny, named *Hildebrand*, afterwards the famous Gregory VII. and went to Rome as a private man. "The emperor alone (ſaid Hildebrand) has no right to create a pope." He accompanied Bruno to Rome, and ſecretly retarded his election, that he might arrogate to himſelf the merit of obtaining it. The ſcheme ſucceeded to his wiſh: Bruno, who took the name of *Leo IX.* believing himſelf indebted to Hildebrand for the pontificate, favoured him with his particular friendſhip and confidence; and hence originated the power of this enterpriſing monk, of obſcure birth, but boundleſs ambition, who governed Rome ſo long, and whoſe zeal for the exaltation of the church occaſioned ſo many troubles to Europe.

46
He inveſts the Normans with ſome territories in Apulia and Calabria.

Leo ſoon after his elevation waited on the emperor at Worms, to crave aſſiſtance againſt the Norman princes, who were become the terror of Italy, and treated their ſubjects with great ſeverity. Henry furniſhed the pope with an army; at the head of which he marched againſt the Normans, after having excommunicated them, accompanied by a great number of biſhops and other eccleſiaſtics, who were all either killed or taken priſoners, the Germans and Italians being totally routed. Leo himſelf was led captive to Benevento, which the Normans were now maſters of, and which Henry had granted to the pope in exchange for the fief of Bamberg in Germany; and the apoſtolic ſee is to this day in poſſeſſion of Benevento, by virtue of that donation. The Normans, however, who had a right to the city by a prior grant, reſtored it, in the mean time, to the princes of Lombardy; and Leo was treated with ſo much reſpect by the conquerors, that he revoked the ſentence of excommunication, and joined his ſanction to the imperial inveſtiture for the lands which they held in Apulia and Calabria. Leo died ſoon after his releaſe; and the emperor about the ſame time cauſed his infant ſon, afterwards the famous Henry IV. to be declared king of the Romans, a title ſtill in uſe for the acknowledged heir of the empire. Gebehard, a German biſhop, was elected pope, under the title of *Victor II.* and confirmed by the addreſs of Hildebrand, who waited on the emperor in perſon for that purpoſe, though he diſdained

47
Henry IV. declared king of the Romans.

to conſult him beforehand. Perhaps Hildebrand would not have ſound this taſk ſo eaſy, had not Henry been involved in a war with the Hungarians, who preſſed him hard, but whom he obliged at laſt to pay a large tribute, and furniſh him annually with a certain number of fighting men.

As ſoon as the emperor had finiſhed this war and others to which it gave riſe, he marched into Italy to inſpect the conduct of his ſiſter Beatrice, widow of Boniface marquis of Mantua, and made her priſoner. She had married Gozelo, duke of Lorrain, without the emperor's conſent; and contracted her daughter Matilda, by the marquis of Mantua, to Godfrey duke of Spoleto and Tuſcany, Gozelo's ſon by a former marriage. This formidable alliance juſtly alarmed Henry; he therefore attempted to diſſolve it, by carrying his ſiſter into Germany, where he died ſoon after his return, in the 39th year of his age, and the 16th of his reign.

This emperor, in his laſt journey to Italy, concluded an alliance with Contarini, doge of Venice. That republic was already rich and powerful, though it had only been enfranchiſed in the year 998, from the tribute of a mantle of cloth of gold, which it formerly paid, as a mark of ſubjection to the emperors of Conſtantinople. Genoa was the rival of Venice in power and in commerce, and was already in poſſeſſion of the iſland of Corſica which the Genoeſe had taken from the Saracens. Theſe two cities engroſſed at this time almoſt all the trade of Europe. There was no city in any reſpect equal to them either in France or Germany.

48
Increaſe of the pope's power.

Henry IV. was only five years old at his father's death. The popes made uſe of the reſpite given them by his minority, to ſhake off in a great meaſure their dependence upon the emperors. After a variety of conteſts about the pontificate, Nicholas II. a creature of Hildebrand's, was elected; who, among others, paſſed the following celebrated decree, viz. That for the future, the cardinals only ſhould elect the pope; and that the election ſhould afterwards be confirmed by the reſt of the clergy and the people, "ſaving the honour (adds he) due to our dear ſon Henry, now king; and who, if it pleaſe God, ſhall be one day emperor, according to the right which we have already conferred upon him." After this he entered into a treaty with the Norman princes abovementioned; who, though they had lately ſworn to hold their poſſeſſions from the emperor, now ſwore to hold them from the pope; and hence aroſe the pope's claim of ſovereignty over the kingdom of Naples and Sicily.

49
His conteſt with the emperor.

Thus was the power of the German emperors in Italy greatly diminiſhed, and that of the popes proportionally exalted; of which Henry ſoon had ſufficient evidence. For having aſſumed the government into his own hands in the year 1072, being then 22 years of age, he was ſummoned by Alexander II. to appear before the tribunal of the holy ſee, on account of his looſe life, and to anſwer the charge of having expoſed the inveſtiture of biſhops to ſale; at the ſame time that the pope excited the German ſubjects to rebel againſt him. The rebels, however, were defeated, and peace was reſtored to Germany: but ſoon after, Hildebrand abovementioned being elected to the pontificate under the name of *Gregory VII.* openly aſſumed the ſuperiority over every earthly monarch whatever. He began with excommunicating every eccleſiaſtic who ſhould receive a benefice from the hands of a layman, and every layman who ſhould take upon him to confer ſuch a benefice. Henry, inſtead of reſenting this inſolence, ſubmitted, and wrote a penitential letter to the pope: who, upon this, condeſcended to take him into favour, after having ſeverely reprimanded him for his looſe life; of which the emperor now confeſſed himſelf guilty.

50
The emperor depoſes the pope,

51
And he the emperor.

The quarrel between the church and the emperor was, however, ſoon brought to a criſis by the following accident. Solomon, king of Hungary, being depoſed by his brother Geyſa, had fled to Henry for protection, and renewed the Homage of Hungary to the empire. Gregory, who favoured Geyſa, exclaimed againſt this act of ſubmiſſion; and ſaid in a letter to Solomon, "You ought to know that the kingdom of Hungary belongs to the Roman church; and learn that you will incur the indignation of the holy ſee, if you do not acknowledge that you hold your dominions of the pope and not of the emperor." Henry, though highly provoked at this declaration, thought proper to treat it with neglect; upon which Gregory reſumed the diſpute about inveſtitures. The predeceſſors of Henry had always enjoyed the right of nominating biſhops and abbots, and of giving them inveſtiture by the croſs and the ring. This right they had in common with almoſt all princes. The predeceſſors of Gregory VII. had been accuſtomed, on their part, to ſend legates to the emperors, in order to intreat their aſſiſtance, to obtain their confirmation, or deſire them to come and receive the papal ſanction, but for no other purpoſe. Gregory, however, ſent two legates to ſummon Henry to appear before him as a delinquent, becauſe he ſtill continued to beſtow inveſtitures, notwithſtanding the apoſtolic decree to the contrary; adding, that if he ſhould fail to yield obedience to the church, he muſt expect to be excommunicated and dethroned. Incenſed at this arrogant meſſage from one whom he conſidered as his vaſſal, Henry diſmiſſed the legates with very little ceremony, and in 1076 convoked an aſſembly of all the princes and dignified eccleſiaſtics at Worms; where, after mature deliberation, they concluded, that Gregory having uſurped the chair of St Peter by indirect means, infected the church of God with a great many novelties and abuſes, and deviated from his duty to his ſovereign in ſeveral ſcandalous attempts, the emperor, by that ſupreme authority derived from his predeceſſors, ought to diveſt him of his dignity, and appoint another in his place. In conſequence of this determination, Henry ſent an ambaſſador to Rome, with a formal deprivation of Gregory; who, in his turn, convoked a council, at which were preſent 110 biſhops, who unanimouſly agreed that the pope had juſt cauſe to depoſe Henry, to diſſolve the oath of allegiance which the princes and ſtates had taken in his favour, and to prohibit them from holding any correſpondence with him on pain of excommunication; which was immediately fulminated againſt the emperor and his adherents. "In the name of Almighty God, and by our authority (ſaid Gregory), I prohibit Henry, the ſon of our emperor Henry, from governing the Teutonic kingdom and Italy: I releaſe all Chriſtians from their oath of allegiance to him; and ſtrictly forbid all perſons from ſerving or attending him as king!" The circular letters written by this pontiff breathe the ſame ſpirit with his ſentence of depoſition. He there repeats ſeveral times, that "biſhops are ſuperior to kings, and made to judge them!" expreſſions alike artful and preſumptuous, and calculated for bringing in all the churchmen of the world to his ſtandard.

Gregory knew well what conſequences would follow the thunder of the church. The German biſhops came immediately over to his party, and drew along with them many of the nobles: the flame of civil war ſtill lay ſmothering, and a bull properly directed was ſufficient to ſet it in a blaze. The Saxons, Henry's old enemies, made uſe of the papal diſpleaſure as a pretence for rebelling againſt him. Even Guelfe, to whom the emperor had given the duchy of Bavaria, ſupported the malcontents with that power which he owed to his ſovereign's bounty: nay, thoſe very princes and prelates who had aſſiſted in depoſing Gregory, gave up their monarch to be tried by the pope; and his holineſs was ſolicited to come to Augſburg for that purpoſe.

52 Who is at laſt obliged to ſubmit.

Willing to prevent this odious trial at Augſburg, Henry took the unaccountable reſolution of ſuddenly paſſing the Alps at Tirol, accompanied only by a few domeſtics, to aſk abſolution of Pope Gregory his oppreſſor; who was then in Canoza, on the Apennine mountains, a fortreſs belonging to the counteſs or ducheſs Matilda abovementioned. At the gates of this place the emperor preſented himſelf as an humble penitent. He alone was admitted without the outer court; where, being ſtripped of his robes, and wrapped in ſack-cloth, he was obliged to remain three days, in the month of January, bare-footed and faſting, before he was permitted to kiſs the feet of his holineſs; who all that time was ſhut up with the devout Matilda, whoſe ſpiritual director he had long been, and, as ſome ſay, her gallant. But be that as it may, her attachment to Gregory, and her hatred to the Germans, was ſo great, that ſhe made over all her eſtates to the apoſtolic ſee; and this donation is the true cauſe of all the wars which ſince that period have raged between the emperors and the popes. She poſſeſſed in her own right great part of Tuſcany, Mantua, Parma, Reggio, Placentia, Ferrara, Modena, Verona, and almoſt the whole of what is now called the *Patrimony of St Peter*, from Viterbo to Orvietto; together with part of Umbria, Spoleto, and the Marche of Ancona.

The emperor was at length permitted to throw himſelf at the pontiff's feet; who condeſcended to grant him abſolution, after he had ſworn obedience to him in all things, and promiſed to ſubmit to his ſolemn deciſion at Augſburg: ſo that Henry got nothing but diſgrace by his journey; while Gregory, elated by his triumph, and now looking upon himſelf (not altogether without reaſon) as the lord and maſter of all the crowned heads in Chriſtendom, ſaid in ſeveral of his letters, that it was his duty "to pull down the pride of kings."

This extraordinary accommodation gave much diſguſt to the princes of Italy. They never could forgive the inſolence of the pope, nor the abject humility of the emperor. Happily, however, for Henry, their indignation of Gregory's arrogance overbalanced their deteſtation of his meanneſs. He took advantage of this temper, and by a change of fortune, hitherto unknown to the German emperors, he found a ſtrong party in Italy, when abandoned in Germany. All Lombardy took up arms againſt the pope, while he was raiſing all Germany againſt the emperor. Gregory, on the other hand, made uſe of every art to get another emperor elected in Germany; and Henry, on his part, left nothing undone to perſuade the Italians to elect another pope. The Germans choſe Rodolph, duke of Suabia, who was ſolemnly crowned at Mentz; and Gregory, heſitating on this occaſion, behaved truly like the ſupreme judge of kings. He had depoſed Henry, but ſtill it was in his power to pardon that prince: he therefore affected to be diſpleaſed that Rodolph was conſecrated without his order; and declared, that he would acknowledge as emperor and king of Germany, him of the two competitors who ſhould be moſt ſubmiſſive to the holy ſee.

53 Rodolph choſen emperor of Germany.

Henry, however, truſting more to the valour of his troops than to the generoſity of the pope, ſet out immediately for Germany, where he defeated his enemies in ſeveral engagements: and Gregory, ſeeing no hopes of ſubmiſſion, thundered out a ſecond ſentence of excommunication againſt him, confirming at the ſame time the election of Rodolph, to whom he ſent a golden crown, on which the following well-known verſe, equally haughty and puerile, was engraved:

Petra dedit Petro, Petrus diadema Rodolpho.

This donation was alſo accompanied with a moſt enthuſiaſtic anathema againſt Henry. After depriving him of *ſtrength in combat*, and condemning him *never to be victorious*, it concludes with the following remarkable apoſtrophe to St Peter and St Paul: "Make all men ſenſible, that as you can bind and looſe every thing in heaven, you can alſo upon earth take from or give to every one, according to his deſerts, empires, kingdoms, principalities—let the kings and the princes of the age then inſtantly feel your power, that they may not dare to deſpiſe the orders of your church; let your juſtice be ſo ſpeedily executed upon Henry, that nobody may doubt but he falls by your means, and not by chance."

54 Defeated and killed.

In order to avoid the effects of this ſecond excommunication, Henry aſſembled at Brixen, in the county of Tirol, about 20 German biſhops: who acting alſo for the biſhops of Lombardy, unanimouſly reſolved, that the pope, inſtead of having power over the emperor, owed him obedience and allegiance; and that Gregory VII. having rendered himſelf unworthy of the papal chair by his conduct and rebellion, ought to be depoſed from a dignity he ſo little deſerved. They accordingly degraded Hildebrand; and elected in his room Guibert, archbiſhop of Ravenna, a perſon of undoubted merit, who took the name of *Clement III.* Henry promiſed to put the new pope in poſſeſſion of Rome: but he was obliged, in the mean time, to employ all his forces againſt his rival Rodolph, who had reaſſembled a large body of troops in Saxony. The two armies met near Merſburg, and both fought with great fury: but the fortune of the day ſeemed inclined to Rodolph, when his hand was cut off by the famous Godfrey of Bouillon, then in the ſervice of Henry, and afterwards renowned for his conqueſt of Jeruſalem. Diſcouraged by the misfortune of their chief, the rebels immediately gave way; and Rodolph perceiving his end approaching, ordered the hand that was cut off to be brought him, and made a ſpeech to his officers on the occaſion, which could not fail to have an influence on the emperor's affairs. "Behold (ſaid he) the hand with which I took the oath of allegiance to Henry; and which oath, at the inſtigation of Rome, I have violated, in perfidiouſly aſpiring at an honour that was not my due."

55
Rome taken by Henry IV.

Thus delivered from this formidable antagoniſt, Henry ſoon diſperſed the reſt of his enemies in Germany, and ſet out for Italy in order to ſettle Clement in the papal chair. But the gates of Rome being ſhut againſt him, he was obliged to attack it in form. The ſiege continued upwards of two years; Henry during that time being obliged to quell ſome inſurrections in Germany. The city was at length carried by aſſault, and with difficulty ſaved from being pillaged; but Gregory was not taken: he retired into the caſtle of St Angelo, and thence defied and excommunicated the conqueror. The new pope was, however, conſecrated with the uſual ceremonies; and expreſſed his gratitude by crowning Henry, with the concurrence of the Roman ſenate and people. Mean while the ſiege of St Angelo was going on; but the emperor being called about ſome affairs into Lombardy, Robert Guiſcard took advantage of his abſence to releaſe Gregory, who died ſoon after at Salerno. His laſt words, borrowed from the Scripture, were worthy of the greateſt ſaint: "I have loved juſtice, and hated iniquity; therefore I die in exile!"

Henry, however, did not enjoy all the advantages which might have been expected from the death of Gregory. The ſubſequent popes trod in the paths of their predeceſſor. In 1101, Paſcal II. excited young Henry to rebel againſt his father. The emperor did all in his power to diſſuade him from proceeding to extremities, but in vain. The young prince perſiſted in his rebellious intentions; and having by feigned ſubmiſſions prevailed on the emperor to diſband his army, he treacherouſly ſeized and confined him. Henry, however, found means to eſcape from his confinement, and attempted to engage all the ſovereigns of Europe in his quarrel; but before any thing effectual could be done, he died at Liege in the year 1106.

56
Diſpute between the pope and Henry V.

The diſpute about inveſtitures was not terminated by the depoſition and death of Henry IV. His ſon Henry V. purſued the very ſame conduct for which he had depoſed his father. Paſcal oppoſed him with violence; upon which Henry gave him an invitation into Germany, to end the diſpute in an amicable manner. Paſcal did not think proper to accept of this invitation; but put himſelf under the protection of Philip I. king of France, who undertook to mediate between the contending parties. His mediation, however, proved ineffectual, and Henry was prevented by the wars in Hungary and Poland from paying any further attention to the affair of inveſtitures. At laſt, having ſettled his affairs in Germany, he took a reſolution of going to Rome, in order to ſettle the diſpute perſonally with the pope. To give his arguments the greater weight, however, he marched at the head of an army of 80,000 men. Paſcal received him with great appearance of friendſhip, but would not renounce the claim of inveſtitures; and Henry, finding himſelf deceived in his expectations, ordered the pope to be ſeized. The conſul put the citizens in arms to defend the pope, and a battle was fought within the walls of Rome. The ſlaughter was ſo great, that the waters of the Tiber were tinged with blood. The Romans were defeated, and Paſcal was taken priſoner. The latter renounced his right of inveſtiture; ſolemnly ſwore never to reſume it, and broke his oath as ſoon as Henry was gone, by fulminating the ſentence of excommunication againſt him. In 1114 died the counteſs Matilda, who had bequeathed all her dominions to the pope, as we have already obſerved; but Henry thinking himſelf the only lawful heir, alleged, that it was not in Matilda's power to alienate her eſtates, which depended immediately on the empire. He therefore ſet out for Lombardy, and ſent ambaſſadors to the pope, beſeeching him to revoke the ſentence of excommunication abovementioned. Paſcal, however, would not even favour the ambaſſadors with an audience; but dreading the approach of Henry himſelf, he took refuge among the Norman princes in Apulia. Henry arrived at Rome in 1117; but being ſoon after obliged to leave it in order to ſettle ſome affairs in Tuſcany, the pope returned to Rome, but died in a few days. On the third day after his deceaſe, cardinal Cajetan was elected his ſucceſſor, without the privity of the emperor, under the name of *Gelaſius II.* The new pope was inſtantly depoſed by Henry; who ſet up the archbiſhop of Prague, under the name of *Gregory VIII.* Gelaſius, though ſupported by the Norman princes, was obliged to take refuge in France, where he died; and the archbiſhop of Vienna was elected by the cardinals then preſent under the name of *Calixtus II.*

The new pope attempted an accommodation with Henry; which not ſucceeding, he excommunicated the emperor, the antipope, and his adherents. He next ſet out for Rome, where he was honourably received; and Gregory VIII. was forced to retire to Sutri, a ſtrong town garriſoned by the emperor's troops. Here he was beſieged by Calixtus and the Norman princes. The city was ſoon taken, and Gregory thrown into priſon by his competitor; but at laſt, the ſtates of the empire being quite wearied out with ſuch a long quarrel, unanimouſly ſupplicated Henry for peace. He referred himſelf entirely to their deciſion; and a diet being aſſembled at Wurtzburg, it was decreed that an embaſſy ſhould be immediately ſent to the pope, deſiring that he would convoke a general council at Rome, by which all diſputes might be determined. This was accordingly done, and the affair of inveſtitures at length regulated in the following manner, viz. That the emperor ſhould leave the communities and chapters at liberty to fill up their own vacancies, without beſtowing inveſtitures with the croſs and ring; that he ſhould reſtore all that he had unjuſtly taken from the church; that all elections ſhould be made in a canonical manner, in preſence of the emperor or his commiſſaries: and whatever diſputes might happen, ſhould be referred to the deciſion of the emperor, aſſiſted by the metropolitan and his ſuffragans; that the perſon elected ſhould receive from the emperor the inveſtiture of the fiefs and ſecular rights, not with the croſs, but with the ſceptre; and ſhould pay allegiance to him for theſe rights only.

57
Determination of the affair of inveſtitures.

After the death of Henry, the uſual diſorders took place in Italy; during which, Roger duke of Apulia conquered the iſland of Sicily, and aſſumed the right of creating popes, of whom there were two at that time, viz. Innocent II. and Anacletus. Roger drove out the former, and Lothario emperor of Germany the latter, forcing Roger himſelf at the ſame time to retire into Sicily. The emperor then conducted Innocent back to Rome in triumph; and having ſubdued all Apulia, Calabria, and the reſt of Roger's Italian dominions, erected them into a principality, and beſtowed it, with the title of *duke*, upon Renaud a German prince, and one of his own relations.

In the reign of Conrad III. who ſucceeded Lothario, the celebrated factions called the *Guelphs* and *Gibelines* *, aroſe, which for many years deluged the cities of Italy with blood. They took their origin during a civil war in Germany, in which the enemies of the emperor were ſtyled *Guelphs*, and his friends *Gibelines*; and theſe names were quickly received in Italy as well as other parts of the emperor's dominions Of this civil war many of the cities in Italy took the advantage to ſet up for themſelves; neither was it in the power of Conrad, who during his whole reign was employed in unſucceſsful cruſades, to reduce them; but in 1158 Frederic Barbaroſſa, ſucceſſor to Conrad, entered Italy at the head of a very numerous and well diſciplined army. His army was divided into ſeveral columns for the conveniency of entering the country by as many different routes. Having paſſed the Alps, he reduced the town of Breſcia; where he made ſeveral ſalutary regulations for the preſervation of good order and military diſcipline. Continuing to advance, he beſieged Milan, which ſurrendered at diſcretion. He was crowned king of Lombardy at Monza; and having made himſelf maſter of all the other cities of that country, he ordered a minute inquiry to be ſet on foot concerning the rights of the empire, and exacted homage of all thoſe who held of it, without excepting even the biſhops. Grievances were redreſſed; magiſtracies reformed; the rights of regality diſcuſſed and aſcertained; new laws enacted for the maintenance of public tranquillity and the encouragement of learning, which now began to revive in the ſchool of Bologna; and, above all, ſubvaſſals were not only prohibitted from alienating their lands, but alſo compelled, in their oath to their lords paramount, to except the emperor nominally, when they ſwore to ſerve and aſſiſt them againſt all their enemies. The pope took umbrage at this behaviour towards the eccleſiaſtics: but Frederic juſtified what he had done, telling his deputies it was but reaſonable they ſhould do homage for the fiefs they poſſeſſed; as Jeſus Chriſt himſelf, though the lord of all the ſovereigns upon earth, had deigned to pay for himſelf and St Peter the tribute which was due to Cæſar.

* See *Guelphs* and *Gibelines*.

58
Italy invaded by Frederic Barbaroſſa.

Frederic having ſent commiſſaries to ſuperintend the election of new magiſtrates at Milan, the inhabitants were ſo much provoked at this infringement of their old privileges, that they inſulted the imperialiſts, revolted, and refuſed to appear before the emperor's tribunal. This he highly reſented, and reſolved to chaſtiſe them ſeverely: for which purpoſe he ſent for a reinforcement from Germany, which ſoon after arrived with the empreſs, while he himſelf ravaged Liguria, declared the Milaneſe rebels to the empire, and plundered and burnt the city of Crema which was in alliance with that of Milan.

In the mean time, pope Adrian IV. dying, two oppoſite factions elected two perſons known by the names of *Victor II.* and *Alexander III.* The emperor's allies neceſſarily acknowledged the pope choſen by him; and thoſe princes who were jealous of the emperor, acknowledged the other. Victor II, Frederic's pope, had Germany, Bohemia, and one half of Italy, on his ſide; while the reſt ſubmitted to Alexander III. The emperor took a ſevere revenge on his enemies: Milan was razed from the foundation, and ſalt ſtrewed on its ruins; Breſcia and Placentia were diſmantled; and the other cities which had taken part with them were deprived of their privileges. Alexander III. however, who had excited the revolt, returned to Rome after the death of his rival; and at his return the civil war was renewed. The emperor cauſed another pope, and after his death a third, to be elected. Alexander then fled to France, the common aſylum of every pope who was oppreſſed by the emperors; but the flames of civil diſcord which he had raiſed continued daily to ſpread. In 1168, the cities of Italy, ſupported by the Greek emperor and the king of Sicily, entered into an aſſociation for the defence of their liberties; and the pope's party at length prevailed. In 1176, the imperial army, worn out by fatigues and diſeaſes, was defeated by the confederates, and Frederic himſelf narrowly eſcaped. About the ſame time, he was defeated at ſea by the Venetians; and his eldeſt ſon Henry, who commanded his fleet, fell into the hands of the enemy. The pope, in honour of this victory, ſailed out into the open ſea, accompanied by the whole ſenate; and after having pronounced a thouſand benedictions on that element, threw into it a ring as a mark of his gratitude and affection. Hence the origin of that ceremony which is annually performed by the Venetians, under the notion of eſpouſing the Adriatic. Theſe misfortunes diſpoſed the emperor towards a reconciliation with the pope: but, reckoning it below his dignity to make an advance, he rallied his troops, and exerted himſelf with ſo much vigour in repairing his loſs, that the confederates were defeated in a battle; after which he made propoſals of peace, which were now joyfully accepted, and Venice was the place appointed for a reconciliation. The emperor, the pope, and a great many princes and cardinals, attended; and there the emperor, in 1177, put an end to the diſpute, by acknowledging the pope, kiſſing his feet, and holding his ſtirrup while he mounted his mule. This reconcilation was attended with the ſubmiſſion of all the towns of Italy which had entered into an aſſociation for their mutual defence. They obtained a general pardon, and were left at liberty to uſe their own laws and forms of government, but were obliged to take the oath of allegiance to the emperor as their ſuperior lord. Calixtus, the antipope, finding himſelf abandoned by the emperor in conſequence of this treaty, made alſo his ſubmiſſion to Alexander, who received him with great humanity; and in order to prevent for the future thoſe diſturbances which had ſo often attended the elections of the popes, he called a general council, in which it was

59
He takes and deſtroys Milan, &c.

60
Submits to the pope.

decreed, that no pope ſhould be deemed duly elected without having two-thirds of the votes in his favour.

61 Frederic ſucceeded by Henry VI.

The affairs of Italy being thus ſettled, Barbaroſſa returned to Germany; and having quieted ſome diſturbances which had ariſen during his abſence in Italy, at laſt undertook an expedition into the Holy Land; where having performed great exploits, he was drowned as he was ſwimming in the river Cydnus, in the year 1190. He was ſucceeded by his ſon Henry VI. who at the ſame time became heir to the dominions of Sicily by the right of his wife, daughter of William king of that country. After ſettling the affairs of Germany, the new emperor marched with an army into Italy, in order to be crowned by the pope, and to recover the ſucceſſion of Sicily, which was uſurped by Tancred his wife's natural brother. For this purpoſe, he endeavoured to conciliate the affections of the Lombards, by enlarging the privileges of Genoa, Piſa, and other cities in his way to Rome; where the ceremony of the coronation was performed by Celeſtin III. on the day after Eaſter in the year 1191. The pope, then in the 86th year of his age, had no ſooner placed the crown upon Henry's head than he kicked it off again, as a teſtimony of the power reſiding in the ſovereign pontiff to make and unmake emperors at his pleaſure.

The coronation being over, Henry prepared for the conqueſt of Naples and Sicily; but in this he was oppoſed by the pope: for though Celeſtin conſidered Tancred as an uſurper, and deſired to ſee him deprived of the crown of Sicily, which he claimed as a fief of the ſee, yet he was much more averſe to the emperor's being put in poſſeſſion of it, as that would render him too powerful in Italy for the intereſt of the church. Henry, however, without paying any regard to the threats and remonſtrances of his holineſs, took almoſt all the towns of Campania, Calabria, and Apulia; inveſted the city of Naples; and ſent for the Genoeſe fleet, which he had before engaged, to come and form the blockade by ſea: but before its arrival, he was obliged to raiſe the ſiege, in conſequence of a dreadful mortality among his troops: and all future attempts upon Sicily were ineffectual during the life of Tancred.

62 His perfidy and cruelty.

The whole reign of Henry from this time ſeems to have been a continued train of the moſt abominable perfidies and cruelties. Having treacherouſly ſeized and impriſoned Richard I. of England, in the manner related under that article, n° 128—130. he had no ſooner received the ranſom paid for his royal captive, than he made new preparations for the conqueſt of Sicily. As Tancred died about this time, the emperor, with the aſſiſtance of the Genoeſe, accompliſhed his purpoſe. The queen-dowager ſurrendered Salerno, and her right to the crown, on condition that her ſon William ſhould poſſeſs the principality of Tarentum; but Henry no ſooner found himſelf maſter of the place, than he ordered the infant king to be caſtrated, to have his eyes cut out, and to be confined in a dungeon. The royal treaſure was tranſported to Germany, and the queen and her daughter confined in a convent.

In the mean time, the empreſs, though near the age of 50, was delivered of a ſon, named *Frederic*; and Henry ſoon after aſſembled a diet of the princes of Germany, to whom he explained his intentions of rendering the imperial crown hereditary, in order to prevent thoſe diſturbances which uſually attended the election of emperors. A decree paſſed for this purpoſe; and Frederic, yet in his cradle, was declared king of the Romans. Soon after, the emperor being ſolicited to undertake a cruſade, obeyed the injunctions of the pope, but in ſuch a manner as to make it turn out to his own advantage. He convoked a general diet at Worms, where he ſolemnly declared his reſolution of employing his whole power, and even of hazarding his life, for the accompliſhment of ſo holy an enterpriſe; and he expatiated upon the ſubject with ſo much eloquence, that almoſt the whole aſſembly took the croſs. Nay, ſuch multitudes from all the provinces of the empire enliſted themſelves, that Henry divided them into three large armies; one of which, under the command of the biſhop of Mentz, took the route of Hungary, where it was joined by Margaret, queen of that country, who entered herſelf in this pious expedition, and actually ended her days in Paleſtine: the ſecond was aſſembled in Lower Saxony, and embarked in a fleet furniſhed by the inhabitants of Lubec, Hamburgh, Holſtein, and Friezeland: and the emperor in perſon conducted the third into Italy, in order to take vengeance on the Normans in Naples and Sicily who had riſen againſt his government.

The rebels were humbled; and their chiefs were condemned to periſh by the moſt excruciating tortures. One Jornandi, of the houſe of the Norman princes, was tied naked on a chair of red hot iron, and crowned with a circle of the ſame burning metal, which was nailed to his head. The empreſs, ſhocked at ſuch cruelty, renounced her faith to her huſband, and encouraged her countrymen to recover their liberties. Reſolution ſprung from deſpair. The inhabitants betook themſelves to arms; the empreſs Conſtantia headed them; and Henry, having diſmiſſed his troops, no longer thought neceſſary to his bloody purpoſes, and ſent them to purſue their expedition to the Holy Land, was obliged to ſubmit to his wife, and to the conditions which ſhe was pleaſed to impoſe on him in favour of the Sicilians. He died at Meſſina in 1197, ſoon after this treaty; and, as was ſuppoſed, of poiſon adminiſtered by the empreſs.

63 Diſturbances in the beginning of the reign of Frederic II.

The emperor's ſon Frederic had already been declared king of the Romans, and conſequently became emperor on the death of his father: but as Frederic II. was yet a minor, the adminiſtration was committed to his uncle the duke of Suabia, both by the will of Henry and by an aſſembly of the German princes. Other princes, however, incenſed to ſee an elective empire become hereditary, held a new diet at Cologne, and choſe Otho duke of Brunſwick, ſon of Henry the Lion. Frederic's title was confirmed in a third aſſembly, at Arnſburg; and his uncle, Philip duke of Suabia, was elected king of the Romans, in order to give greater weight to his adminiſtration. Theſe two elections divided the empire into two powerful factions, and involved all Germany in ruin and deſolation. Innocent III. who had ſucceeded Celeſtin in the papal chair, threw himſelf into the ſcale of Otho, and excommunicated Philip and all his adherents. This able and ambitious pontiff was a ſworn enemy of the houſe of Suabia; not from any perſonal animoſity, but out of a principal of policy. That houſe had long been terrible to the popes, by its continual poſſeſſion of the imperial crown; and the acceſſion of the kingdom of Naples and Sicily made it ſtill more to be dreaded: Innocent, therefore, gladly ſeized the preſent favourable opportunity for diveſting it of the empire, by ſupporting the election of Otho, and ſowing diviſions among the Suabian party. Otho was alſo patroniſed by his uncle, the king of England; which naturally inclined the king of France to the ſide of his rival. Faction claſhed with faction; friendſhip with intereſt; caprice, ambition, or reſentment, gave the ſway; and nothing was beheld on all hands but the horrors and the miſeries of civil wars.

Meanwhile, the empreſs Conſtantia remained in Sicily, where all was peace, as regent and guardian for her infant ſon Frederic II. who had been crowned king of that iſland, with the conſent of pope Celeſtin III. But ſhe alſo had her troubles. A new inveſtiture from the holy ſee being neceſſary, on the death of Celeſtin, Innocent III. his ſucceſſor, took advantage of the critical ſituation of affairs for aggrandizing the papacy, at the expence of the kings of Sicily. They poſſeſſed, as has been already obſerved, the privilege of filling up vacant benefices, and of judging all eccleſiaſtical cauſes in the laſt appeal: they were really popes in their own iſland, though vaſſals of his holineſs. Innocent pretended that theſe powers had been ſurreptitiouſly obtained; and demanded, that Conſtantia ſhould renounce them in the name of her ſon, and do liege, pure and ſimple homage for Sicily. But before any thing was ſettled relative to this affair, the empreſs died, leaving the regency of the kingdom to the pope: ſo that he was enabled to preſcribe what conditions he thought proper to young Frederic. The troubles of Germany ſtill continued; and the pope redoubled his efforts, to detach the princes and prelates from the cauſe of Philip, notwithſtanding the remonſtrances of the king of France, to whom he proudly replied, "Either Philip muſt loſe the empire, or I the papacy." But all theſe diſſenſions and troubles in Europe did not prevent the formation of another cruſade, or expedition into Aſia, for the recovery of the Holy Land. Thoſe who took the croſs were principally French and Germans: Baldwin, count of Flanders, was their commander; and the Venetians, as greedy of wealth and power as the ancient Carthaginians, furniſhed them with ſhips, for which they took care to be amply paid both in money and territory. The chriſtian city of Zara, in Dalmatia, had withdrawn itſelf from the government of the republic; the army of the croſs undertook to reduce it to obedience; and it was beſieged and taken, notwithſtanding the threats and excommunications of the pope.

While the cruſaders were ſpreading deſolation through the eaſt, Philip and Otho were in like manner deſolating the weſt. At length Philip prevailed; and Otho, obliged to abandon Germany, took refuge in England. Philip, elated with ſucceſs, confirmed his election by a ſecond coronation, and propoſed an accommodation with the pope, as the means of finally eſtabliſhing his throne; but before it could be brought about, he fell a ſacrifice to private revenge, being aſſaſſinated by the count Palatine of Bavaria, whoſe daughter he had promiſed to marry, and afterwards rejected. Otho returned to Germany on the death of Philip; married that prince's daughter; and was crowned at Rome by pope Innocent III. after yielding to the holy ſee the long diſputed inheritance of the counteſs Matilda, and confirming the rights and privileges of the Italian cities. But theſe conceſſions, as far at leaſt as regarded the pope, were only a ſacrifice to preſent policy: Otho, therefore, no ſooner found himſelf in a condition to act offenſively, than he reſumed his grant; and in 1210 not only recovered the poſſeſſions of the empire, but made hoſtile incurſions into Apulia, ravaging the dominions of young Frederic king of Naples and Sicily, who was under the protection of the holy ſee. For this reaſon he was excommunicated by Innocent; and Frederic, now 17 years of age, was elected emperor by a diet of the German princes. Otho, however, on his return to Germany, finding his party ſtill conſiderable, and not doubting but he ſhould be able to humble his rival by means of his ſuperior force, entered into an alliance with his uncle John king of England, againſt Philip Auguſtus king of France, A. D. 1213. The unfortunate battle of Bouvines, where the confederates were defeated, completed the fate of Otho. He attempted to retreat into Germany, but was prevented by young Frederic; who had marched into the empire at the head of a powerful army, and was every where received with open arms. Thus abandoned by all the princes of Germany, and altogether without recourſe, Otho retired to Brunſwick, where he lived four years as a private man, dedicating his time to the duties of religion.

Frederic II. being now univerſally acknowledged emperor, was crowned at Aix-la-Chapelle in 1215, with great magnificence; when, in order to preſerve the favour of the pope, he added to the other ſolemnities of his coronation, a vow to go in perſon to the Holy Land.

64
His quarrel with the pope.

The bad ſucceſs of this expedition hath been already taken notice of under the article CROISADE. The emperor had, on various pretences, refuſed to go into the eaſt: and in 1225, the pope, incenſed at the loſs of Damietta, wrote a ſevere letter to him, taxing him with having ſacrificed the intereſts of Chriſtianity by delaying ſo long the performance of his vow, and threatening him with immediate excommunication if he did not inſtantly depart with an army into Aſia. Frederic, exaſperated at theſe reproaches, renounced all correſpondence with the court of Rome; renewed his eccleſiaſtical juriſdiction in Sicily; filled up vacant ſees and benefices; and expelled ſome biſhops, who were creatures of the pope, on pretence of their being concerned in practices againſt the ſtate.

The pope at firſt threatened the emperor with the thunder of the church, for preſuming to lift up his hand againſt the ſanctuary; but finding Frederic not to be intimidated, he became ſenſible of his own imprudence in wantonly incurring the reſentment of ſo powerful a prince, and thought proper to ſoothe him by ſubmiſſive apologies and gentle exhortations. They were accordingly reconciled, and conferred together at Veroli in 1226; where the emperor, as a proof of his ſincere attachment to the church, publiſhed ſome very ſevere edicts againſt hereſy, which ſeem to have authoriſed the tribunal of the inquiſition. A ſolemn aſſembly was afterwards held at Ferentino, where both the pope and the emperor were preſent, together with John de Brienne, titular king of Jeruſalem, who was come to Europe to demand ſuccours againſt the ſoldan of Egypt. John had an only daughter named *Yolanda*, whom he propoſed as a wife to the emperor, with the kingdom of Jeruſalem as her dower, on condition that Frederic ſhould within two years perform the vow he had made to lead an army into the Holy land. Frederic married her on theſe terms, becauſe he choſe to pleaſe the pope; and ſince that time the kings of Sicily have taken the title of *king of Jeruſalem*. But the emperor was in no hurry to go and conquer his wife's portion, having buſineſs of more importance on his hands at home. The chief cities of Lombardy had entered into a ſecret league, with a view to renounce his authority. He convoked a diet at Cremona, where all the German and Italian noblemen were ſummoned to attend. A variety of ſubjects were there diſcuſſed; but nothing of conſequence was ſettled. An accommodation, however, was ſoon after brought about by the mediation of the pope; who, as umpire of the diſpute, decreed, that the emperor ſhould lay aſide his reſentment againſt the confederate towns, and that the towns ſhould furniſh and maintain 400 knights for the relief of the Holy Land.

Peace being thus concluded, Honorius reminded the emperor of his vow; Frederic promiſed compliance: but his holineſs died before he could ſee the execution of a project which he ſeemed to have ſo much at heart. He was ſucceeded in the papal chair by Gregory IX. brother of Innocent III.; who, purſuing the ſame line of policy, urged the departure of Frederic for the holy land; and finding the emperor ſtill backward, declared him incapable of the imperial dignity, as having incurred the ſentence of excommunication. Frederic, incenſed at ſuch inſolence, ravaged the patrimony of St Peter; and was actually excommunicated. The animoſity between the Guelphs and Ghibellines revived; the pope was obliged to quit Rome; and Italy became a ſcene of war and deſolation, or rather of an hundred civil wars; which, by inflaming the minds and exciting the reſentment of the Italian princes, accuſtomed them but too much to the horrid practices of poiſoning and aſſaſſination.

65
His expedition to the Holy Land.

During theſe tranſactions, Frederic, in order to remove the cauſe of all theſe troubles, and gratify the prejudices of a ſuperſtitious age, by the advice of his friends reſolved to perform his vow: and he accordingly embarked for the Holy Land, leaving the affairs of Italy to the management of Renaldo duke of Spoleto. The pope prohibited his departure before he ſhould be abſolved from the cenſures of the church; but Frederic went in contempt of the church, and ſucceeded better than any perſon who had gone before him. He did not indeed deſolate Aſia, and gratify the barbarous zeal of the times by ſpilling the blood of infidels; but he concluded a treaty with Miliden, ſoldan of Egypt and maſter of Syria; by which the end of his expedition ſeemed fully anſwered. The ſoldan ceded to him Jeruſalem and its territory as far as Joppa; Bethlehem, Nazareth, and all the country between Jeruſalem and Ptolemais; Tyre, Sidon, and the neighbouring territories: in return for which, the emperor granted the Saracens a truce of ten years; and in 1230 prudently returned to Italy, where his preſence was much wanted.

Frederic's reign, after his return from the eaſt, was one continued quarrel with the popes. The cities of Lombardy had revolted during his abſence, at the inſtigation of Gregory IX.; and before they could be reduced, the ſame pontiff excited the emperor's ſon Henry, who had been elected king of the Romans, to rebel againſt his father. The rebellion was ſuppreſſed, the prince was confined, and the emperor obtained a complete victory over the aſſociated towns. But his troubles were not yet ended. The pope excommunicated him anew, and ſent a bull, filled with the moſt abſurd and ridiculous language, into Germany, in order to ſow diviſion between Frederic and the princes of the empire.

Frederic retorted in the ſame ſtrain, in his apology to the princes of Germany, calling Gregory *the Great Dragon*, the *Antichriſt*, &c. The emperor's apology was ſuſtained in Germany: and finding he had nothing to fear from that quarter, he reſolved to take ample vengeance on the pope and his aſſociates. For that purpoſe he marched to Rome, where he thought his party was ſtrong enough to procure him admiſſion; but this favourite ſcheme was defeated by the activity of Gregory, who ordered a cruſade to be preached againſt the emperor, as an enemy of the Chriſtian faith; a ſtep which incenſed Frederic ſo much, that he ordered all his priſoners who wore the croſs to be expoſed to the moſt cruel tortures. The two factions of the Guelphs and Ghibellines continued to rage with greater violence than ever, involving cities, diſtricts, and even private families, in troubles, diviſions, and civil butchery; no quarter being given on either ſide. Meanwhile Gregory IX. died, and was ſucceeded in the ſee of Rome by Celeſtin IV. and afterwards by Innocent IV. formerly cardinal Fieſque, who had always expreſſed the greateſt regard for the emperor and his intereſt. Frederic was accordingly congratulated upon this occaſion: but having more penetration than thoſe about him, he ſagely replied, "I ſee little reaſon to rejoice; the cardinal was my friend, but the pope will be my enemy." Innocent ſoon proved the juſtice of this conjecture. He attempted to negociate a peace for Italy; but not being able to obtain from Frederic his exorbitant demands, and in fear for the ſafety of his own perſon, he fled into France, aſſembled a general council at Lyons, and in 1245 depoſed the emperor.

66
Is depoſed by the pope.

Conrad, the emperor's ſecond ſon, had already been declared king of the Romans, on the death of his brother Henry, which ſoon followed his confinement: but the empire being now declared vacant by the pope, the German biſhops (for none of the princes were preſent), at the inſtigation of his holineſs, proceeded to the election of a new emperor; and they choſe Henry landgrave of Thuringia, who was ſtyled in deriſion, *The king of prieſts*. Innocent now renewed the cruſade againſt Frederic. It was proclaimed by the preaching friars, ſince called *Dominicans*, and the minor friars, known by the name of *Cordeliers* or *Franciſcans*. The pope, however, did not confine himſelf to theſe meaſures only, but engaged in conſpiracies againſt the life of an emperor who had dared to reſiſt the decree of a council, and oppoſe the whole body of the monks and zealots. Frederic's life was ſeveral times in danger from plots, poiſonings, and aſſaſſinations; which induced him, it is ſaid, to make choice of Mahometan guards, who, he was certain, would not be under the influence of the prevailing ſuperſtition.

About this time the landgrave of Thuringia dying, the ſame prelates who had taken the liberty of creating one emperor made another; namely, William count of Holland, a young nobleman of 20 years of age, who bore the ſame contemptuous title with his predeceſſor. Fortune, which had hitherto favoured Frederic, ſeemed now to deſert him. He was defeated before Parma, which he had long beſieged; and to complete his misfortune, he ſoon after learned, that his natural ſon Entius, whom he had made king of Sardinia, was worſted and taken priſoner by the Bologneſe.

67 Decline of the power of the German emperors.

In this extremity Frederic retired to the kingdom of Naples, in order to recruit his army; and there died of a fever in the year 1250. After his death, the affairs of Germany fell into the utmoſt confuſion, and Italy continued long in the ſame diſtracted ſtate in which he had left it. The clergy took arms againſt the laity; the weak were oppreſſed by the ſtrong; and all laws divine and human were diſregarded. After the death of Frederic's ſon Conrad, who had aſſumed the imperial dignity as ſucceſſor to his father, and the death of his competitor William of Holland, a variety of candidates appeared for the empire, and ſeveral were elected by different factions; among whom was Richard earl of Cornwall, brother to Henry II. king of England: but no emperor was properly acknowledged till the year 1273, when Rodolph, count of Hapſburg, was unanimouſly raiſed to the vacant throne. During the interregnum which preceded the election of Rodolph, Denmark, Holland, and Hungary, entirely freed themſelves from the homage they were wont to pay to the empire; and much about the ſame time ſeveral German cities erected a municipal form of government, which ſtill continues. Lubec, Cologne, Brunſwic, and Dantzic, united for their mutual defence againſt the encroachments of the great lords, by a famous aſſociation, called the *Hanſeatic league;* and theſe towns were afterwards joined by 80 others, belonging to different ſtates, which formed a kind of commercial republic. Italy alſo during this period, aſſumed a new plan of government. That freedom for which the cities of Lombardy had ſo long ſtruggled, was confirmed to them for a ſum of money: they were emancipated by the fruits of their induſtry. Sicily likewiſe changed its government and its prince; of which revolution a particular account is given under the article SICILY.

68 Expedition of Henry VII. into Italy.

From the time of Frederic II. we may date the ruin of the German power in Italy. The Florentines, the Piſans, the Genoeſe, the Luccans, &c. became independent, and could not again be reduced. The power of the emperor, in ſhort, was in a manner annihilated, when Henry VII. undertook to reſtore it in the beginning of the 14th century. For this purpoſe a diet was held at Francfort, where proper ſupplies being granted for the emperor's journey, well known by the name of the *Roman expedition*, he ſet out for Italy, accompanied by the dukes of Auſtria and Bavaria, the archbiſhop of Triers, the biſhop of Liege, the counts of Savoy and Flanders, and other noblemen, together with the militia of all the imperial towns. Italy was ſtill divided by the factions of the Guelphs and Ghibelines, who butchered one another without humanity or remorſe. But their conteſt was no longer the ſame: it was not now a ſtruggle between the empire and the prieſthood, but between faction and faction, inflamed by mutual jealouſies and animoſities. Pope Clement V. had been obliged to leave Rome, which was in the anarchy of popular government. The Colonnas, the Urſini, and the Roman barons, divided the city; and this diviſion was the cauſe of a long abode of the popes in France, ſo that Rome ſeemed equally loſt to the popes and the emperors. Sicily was in the poſſeſſion of the houſe of Arragon, in conſequence of the famous maſſacre called the *Sicilian veſpers*, which delivered that iſland from the tyranny of the French *. Carobert, king of Hungary, diſputed the kingdom of Naples with his uncle Robert, ſon of Charles II. of the houſe of Anjou. The houſe of Eſte had eſtabliſhed itſelf at Ferrara; and the Venetians wanted to make themſelves maſters of that country. The old league of the Italian cities no longer ſubſiſted. It had been formed with no other view than to oppoſe the emperors; and ſince they had neglected Italy, the cities were wholly employed in aggrandizing themſelves, at the expence of each other. The Florentines and the Genoeſe made war upon the republic of Piſa. Every city was alſo divided into factions within itſelf. In the midſt of theſe troubles Henry VII. appeared in Italy in the year 1311, and cauſed himſelf to be crowned king of Lombardy at Milan. But the Guelphs had concealed the old iron crown of the Lombard kings, as if the right of reigning were attached to a ſmall circlet of metal. Henry ordered a new crown to be made, with which the ceremony of inauguration was performed.

Cremona was the firſt place that ventured to oppoſe the emperor. He reduced it by force, and laid it under heavy contributions. Parma, Vicenza, and Placentia, made peace with him on reaſonable conditions. Padua paid 100,000 crowns, and received an imperial officer as governor. The Venetians preſented Henry with a large ſum of money, an imperial crown of gold enriched with diamonds, and a chain of very curious workmanſhip. Breſcia made a deſperate reſiſtance, and ſuſtained a very ſevere ſiege; in the courſe of which the emperor's brother was ſlain, and his army diminiſhed to ſuch a degree, that the inhabitants marched out under the command of their prefect Thibault de Druſſati, and gave him battle: but they were repulſed with great loſs, after an obſtinate engagement; and at laſt obliged to ſubmit, and their city was diſmantled. From Breſcia Henry marched to Genoa, where he was received with expreſſions of joy, and ſplendidly entertained. He next proceeded to Rome; where, after much bloodſhed, he received the imperial crown from the hands of the cardinals. Clement V. who had originally invited Henry into Italy, growing jealous of his ſucceſs, had leagued with Robert king of Naples and the Urſini faction, to oppoſe his entrance into Rome. He entered it in ſpite of them by the aſſiſtance of the Colonnas. Now maſter of that ancient city, Henry appointed it a governor; and ordered, that all the cities and ſtates of Italy ſhould pay him an annual tribute. In this order he comprehended the kingdom of Naples, to which he was going to make a good claim of his ſuperiority by arms, when he died at Benevento in 1313, as is commonly ſuppoſed, of poiſon given him by a Dominican friar, in the conſecrated wine of the ſacrament.

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* See Sicily.

69 State of Italy ſince that time.

The efforts of Henry VII. were unable to reſtore the imperial power in Italy. From this time the authority of the emperor in that country conſiſted in a great meaſure in the conveniency which the Ghibellines found in oppoſing their enemies under the ſanction of his name. The power of the pope was much of the ſame nature. He was leſs regarded in Italy than in any other country in Chriſtendom. There was indeed a great party who called themſelves *Guelphs;* but they affected this diſtinction only to keep themſelves independent of the imperialiſts; and the ſtates and princes who called themſelves *Guelphs* paid little more acknowledgment to his holineſs than ſheltering themſelves under his name and authority. The moſt deſperate wars were carried on by the different cities againſt each other; and in theſe wars Caſtruccio Caſtraccani, and Sir John Hawkwood an Engliſhman, are celebrated as heroes. A detail of theſe tranſactions would furniſh materials for many volumes; and after all ſeems to be but of little importance, ſince nothing material was effected by the utmoſt efforts of valour, and the belligerent ſtates were commonly obliged to make peace without any advantage on either ſide. By degrees, however, this martial ſpirit ſubſided; and in the year 1492, the Italians were ſo little capable of reſiſting an enemy, that Charles VIII. of France conquered the whole kingdom of Naples in ſix weeks, and might eaſily have ſubdued the whole country had it not been for his own imprudence. Another attempt on Italy was made by Louis XII. and a third by Francis I. as related under the article FRANCE. In the reigns of Louis XIII. and XIV. an obſtinate war was carried on between the French and Spaniards, in which the Italian ſtates bore a very conſiderable ſhare. The war concluded in 1660, with very little advantage to the French, who have been always unſucceſsful in their Italian wars. The like bad ſucceſs attended them in that part of the world, in the war which commenced between Britain and Spain in the year 1740. But the particulars of theſe wars, with regard to the different ſtates of Italy, naturally fall to be conſidered under the hiſtory of thoſe ſtates into which the country is now divided; viz. Sardinia, Milan or the Milaneſe, Genoa, Venice, Tuſcany or Florence, Lucca, St Marino, Parma, Mantua, Modena, Rome, and Naples.

70 Air, &c. of Italy.

The air of Italy is very different, according to the different ſituations of the ſeveral countries contained in it. In thoſe on the north of the Apennines it is more temperate, but on the ſouth it is generally very warm. The air of the Campania of Rome, and of the Ferrareſe, is ſaid to be unhealthful; which is owing to the lands not being duly cultivated, nor the marſhes drained. That of the other parts is generally pure, dry, and healthy. In ſummer, the heat is very great in the kingdom of Naples; and would be almoſt intolerable, if it was not ſomewhat alleviated by the ſea-breezes. The ſoil of Italy in general is very fertile, being watered by a great number of rivers. It produces a great variety of wines, and the beſt oil in Europe; excellent ſilk in abundance; corn of all ſorts, but not in ſuch plenty as in ſome other countries; oranges, lemons, citrons, pomegranates, almonds, raiſins, ſugar, mulberry-trees without number, figs, peaches, nectarines, apricots, pears, apples, filberts, cheſnuts, &c. Moſt of theſe fruits were at firſt imported by the Romans from Aſia Minor, Greece, Africa, and Syria, and were not the natural products of the ſoil. The tender plants are covered in the winter on the north ſide of the Apennines, but on the ſouth ſide they have no need of it. This country alſo yields good paſture; and abounds with cattle, ſheep, goats, buffaloes, wild boars, mules, and horſes. The foreſts are well ſtored with game; and the mountains yield not only mines of iron, lead, alum, ſulphur, marble of all ſorts, alabaſter, jaſper, porphyry, &c. but alſo gold and ſilver; with a great variety of aromatic herbs, trees, ſhrubs, and ever-greens, as thyme, lavender, laurel, and bays, wild olive-trees, tamarinds, juniper oaks, and pines.

A very extenſive trade is carried on in many places in Italy, particularly at Leghorn, Genoa, Bologna, Venice, and Naples; the country having a great variety of commodities and manufactures for exportation, eſpecially wine, oil, perfumes, fruits and ſilks. Travellers alſo bring large ſums of money into Italy, beſides what they lay out in pictures, curioſities, relics, antiquities, &c.

71 Dreſs, diſpoſition, &c. of the inhabitants

The Italians are generally well proportioned, though their complexions are none of the beſt. As to dreſs, they follow the faſhions of the countries on which they border, or to which they are ſubject; namely, thoſe of France, Spain, and Germany. With reſpect to their genius and taſte in architecture, painting, carving, and muſic, they are thought to excel greatly, and to leave the other nations of Europe far behind them; but their muſic ſeems too ſoft and effeminate to deſerve all the praiſe beſtowed on it; and their houſes are far inferior to thoſe of England in reſpect of convenience. No country hath produced better politicians, hiſtorians, poets, painters, and ſculptors; we mean ſince the revival of the arts and ſciences, excluſive of thoſe of ancient times. The Italians are very affable, courteous, ingenious, ſober, and ready-witted; but extremely jealous, vindictive, laſcivious, ceremonious, and ſuperſtitious. In reſpect to jealouſy, indeed, we are told, that a very extraordinary change has lately taken place; and that the Italians are now no leſs indulgent and complaiſant to their wives than the moſt polite huſbands in France itſelf. In their tempers, the Italians ſeem to be a good medium between the French and Spaniards; neither ſo gay and volatile as the one, nor ſo grave and ſolemn as the other. Boiled ſnails, ſerved up with oil and pepper, or fried in oil, and the hinder parts of frogs, are reckoned dainty diſhes. Kites, jackdaws, hawks, and magpies, are alſo eaten not only by the common people but by the better ſort. Wine is drank here both in ſummer and winter cooled by ice or ſnow, The women affect yellow hair, as the Roman ladies and courtezans formerly did. They alſo uſe paint and waſhes, both for their hands and faces. The day here is reckoned from ſunſet to ſunſet, as the Athenians did of old.

ITCH, a cutaneous diſeaſe, appearing in ſmall watery puſtules on the ſkin; commonly of a mild nature, though ſometimes attended with obſtinate and dangerous ſymptoms. See MEDICINE-*Index*.

Itch-Inſect. See ACARUS.

In ſpeaking of the manner of finding theſe inſects in the itch, Fabricius obſerves, that the failure of many who have ſought for them has been owing to their having expected to meet with them in the larger veſicles that contain a yellowiſh fluid like pus; in theſe, however, he tells us, he has never found them, but in thoſe puſtules only which are recent, and contain only a watery fluid. We muſt therefore, he obſerves, not expect to find them in the ſame proportionate number in patients who for many months have been afflicted with the diſeaſe, as in thoſe in whom its appearance is recent, and where it is confined to the fingers or wriſts. The cauſe of this difference with reſpect to the puſtules, he conjectures, may be owing to the death of the inſect after it has depoſited its eggs.

A ſmall tranſparent veſicle being found, a very minute white point, diſtinct from the ſurrounding fluid, may be diſcovered, and very often even without the aſſiſtance of a glaſs; this is the inſect, which may be eaſily taken out on the point of a needle or penknife, and when placed on a green cloth may be ſeen much more diſtinctly, and obſerved to move.

The author remarks, that even before ſuch a tranſparent veſicle is formed, we may often diſcover traces of the inſect on the fingers or hands, in a reddiſh ſtreak or furrow, which is occaſioned by the acarus; and he adds, that it is even more uſual to find it in theſe furrows than in the puſtules themſelves. He tells us, that a friend of his at Hanover (who had the itch in a ſlight degree, and to whoſe accurate inquiries with an excellent microſcope he acknowledges himſelf much indebted) found ſeveral inſects in ſuch furrows. Two of the longeſt of the furrows were about an inch in extent. They ſeemed to be thoroughly dry, but exhibited here and there very minute ſhining and tranſparent ſpots. Theſe ſpots, however, were not at all elevated above the ſurface of the ſkin; and although ſeveral of them were opened and examined, no inſect was found in them. Theſe furrows he has obſerved only on the hands and fingers, having in vain ſought for them on the legs and other parts of the body, in his children, who had the itch in a high degree.

ITEA, in botany: A genus of the monogynia order, belonging to the pentandria claſs of plants; and in the natural method ranking with thoſe of which the order is doubtful. The petals are long, and inſerted into the calyx; the capſule unilocular and bivalved. There is but one ſpecies, a native of North-America. It grows by the ſides of rivers, and in other parts where the ground is moiſt. It riſes to the height of eight or ten feet, ſending out many branches garniſhed with ſpear-ſhaped leaves placed alternately, and ſlightly ſawed on their edges, of a light green colour. At the extremity of the branches are produced fine ſpikes of white flowers three or four inches long, ſtanding erect. When theſe ſhrubs are in vigour, they will be entirely covered with flowers, ſo that they make a beautiful appearance during the flowering ſeaſon, which is in July. They are propagated by layers, and are not injured by the cold of Britain; but are apt to die in ſummer, if they are planted on a dry gravelly ſoil. The ſhoots ſhould be laid down in autumn, and will be rooted in one year.

ITHACA (anc. geog.); an iſland in the Ionian ſea, on the coaſt of Epirus; the country of Ulyſſes, near Dulichium, with a town and port ſituated at the foot of mount Neius. According to Pliny it is about 25 miles in compaſs; according to Artemidorus only 10; and is now found to be only eight miles round. It is now uninhabited, and called *Jathaco*.

ITINERARY, ITINERARIUM; a journal or an account of the diſtances of places. The moſt remarkable is that which goes under the names of *Antoninus* and *Æthicus*; or, as Barthius found in his copy, *Antoninus Æthicus*; a Chriſtian writer, poſterior to the times of Conſtantine. Another, called *Hieroſolymitanum*, from Bourdeaux to Jeruſalem, and from Heraclea through Aulona and Rome to Milan, under Conſtantine.——*Itinerarium* denotes a day's march.

ITIUS PORTUS (anc. geog.), the *crux geographorum*, ſuch being the difficulty of aſcertaining its poſition. It would be endleſs to recite the ſeveral opinions concerning it, with the ſeveral reaſons advanced in ſupport of them. Three ports are mentioned by Cæſar; two without any particular name, *viz.* the Higher and the Lower, with reſpect to the *Portus Itius*. Calais, Boulogne, St Omer, and Whitſand, have each in their turn had their ſeveral advocates. Cæſar gives two diſtinctive characters or marks which ſeem to agree equally to Bologne, and Whitſand, namely, the ſhortneſs of the paſſage, and the ſituation between two other ports; therefore nothing can with certainty be determined about the ſituation of the *Portus Itius*.

ITTIGIUS (Thomas), a learned profeſſor of divinity at Leipſic, and ſon of John Ittigius, profeſſor of phyſic in the ſame univerſity. He firſt publiſhed A Treatiſe upon Burning Mountains; after which he became a miniſter, and exerciſed that function in various churches there. He furniſhed ſeveral papers in the Leipſic acts, beſides publiſhing ſome hiſtorical works and diſſertations. He died in 1710.

ITYS (fab. hiſt.), a ſon of Tereus king of Thrace, by Procne daughter of Pandion king of Athens. He was killed by his mother when he was about ſix years old, and ſerved up before his father. He was changed into a pheaſant, his mother into a ſwallow, and his father into an owl.

Plate CCXLIX.

ITZECUINTEPOTZOTLI, or HUNCH-BACKED DOG, a Mexican quadruped ſimilar to a dog. It is as large as a Malteſan dog, the ſkin of which is varied with white, tawny, and black. Its head is ſmall in proportion to its body, and ſeems to be joined directly to it on account of the ſhortneſs and greatneſs of its neck; its eyes are pleaſing, its ears looſe, its noſe has a conſiderable prominence in the middle, and its tail ſo ſmall, that it hardly reaches half way down its leg; but the characteriſtic of it is a great hunch which it bears from its neck to its rump. The place where this quadruped moſt abounds is the kingdom of Michuacan, where it is called *Ahora*.

ITZEHOA, an ancient and handſome town of Germany, in the circle of Lower Saxony, and duchy of Holſtein. It belongs to the king of Denmark, and is ſeated on the river Stoer, in E. Long. 9. 25. N. Lat. 54. 8.

IVA, in botany: A genus of the pentandria order, belonging to the monœcia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The male calyx is common and triphyllous; the florets of the diſc monopetalous and quinquefid; the receptacle divided by ſmall hairs. There is no female calyx nor corolla: but five florets in the radius; two long ſtyles; and one naked and obtuſe ſeed.

IVAHAH is the name of one of the canoes or boats uſed by the iſlanders of the South ſea for ſhort excurſions to ſea: it is wall-ſided and flat-bottomed. Theſe boats are of different ſizes, their length being from 72 feet to 10: but their breadth is by no means in proportion; for thoſe of ten feet are about a foot wide, and thoſe of more than 70 are ſcarcely two. The fighting ivahah is the longeſt, with its head and ſtern conſiderably raiſed above the body in a ſemicircular form: the ſtern is ſometimes 17 or 18 feet high. When they go to ſea, they are faſtened together ſide by ſide, at the diſtance of about three feet, by ſtrong poles of wood laid acroſs and laſhed to the gun-wales. On theſe, in the fore-part, a ſtage or platform is raiſed, about 10 or 12 feet long, ſomewhat wider than the boats, and ſupported by pillars about ſix feet high: on this ſtage are ranged the fighting men, whoſe miſſile weapons are ſlings and ſpears; and below the ſtage the rowers ſit. The fiſhing ivahahs are from 40 feet long to 10; thoſe of 25 feet and upwards occaſionally carry ſail. The travelling ivahah is always double, and furniſhed with a ſmall neat houſe about five or ſix feet broad, and ſix or ſeven feet long.

JUAN (St) DE LA FRONTERA, a town of South-America, in Chili, in the province of Chiquito, near the lake Guanacho. The territory of this town is inhabited by 20,000 native Americans, who are tributary to Spain. It contains mines of gold, and produces a kind of almonds that are very delicate. It is ſeated at the foot of the Andes, in W. Long. 66. 35. S. Lat. 23. 25.

Juan de Porto Ricco, an iſland of America, and one of the Caribbees, being 100 miles in length and 50 in breadth. It belongs to the Spaniards; and is full of very high mountains, and extremely fertile valleys, interſperſed with woods, and well watered with ſprings and rivulets. It produces ſugar, rum, ginger, corn, and fruits; partly proper to the climate, and partly introduced from Spain. Beſides, there are ſo many cattle, that they often kill them for the ſake of the ſkins alone. Here are a great number of uncommon trees, and there is a little gold in the north part of the iſland. It is commonly ſaid that the air is healthy; and yet the earl of Cumberland, when he had taken this iſland, loſt moſt of his men by ſickneſs; and for that reaſon was forced to abandon it. This happened in the reign of Queen Elizabeth. It is ſubject to ſtorms and hurricanes, like the reſt of theſe iſlands. It lies to the eaſt of Hiſpaniola, at the diſtance of 50 miles.

Juan de Porto Ricco, the capital town of the iſland of Porto Ricco, with a good harbour defended by ſeveral forts, and a biſhop's ſee. It is ſeated on the north coaſt of the iſland, in W. Long. 65. 35. N. Lat. 18. 30.

Juan Fernandes, an iſland in the great South Sea, in S. Lat. 33. 40. and W. Long. 78. 30. from London. It was formerly a place of reſort for the buccaneers who annoyed the weſtern coaſt of the Spaniſh continent. They were led to reſort hither from the multitude of goats which it nouriſhed; to deprive their enemies of which advantage, the Spaniards tranſported a conſiderable number of dogs, which increaſing greatly, have almoſt extirpated the goats, which now only find ſecurity among the ſteep mountains in the northern parts, which are inacceſſible to their purſuers. There are inſtances of two men living, at different times, alone on this iſland for many years; the one a Muſquito Indian; the other Alexander Selkirk, a Scotchman, who was, after five years, taken on board an Engliſh ſhip, which touched here in about 1710, and brought back to Europe. From the hiſtory of this recluſe, Daniel de Foe is ſaid to have conceived the idea of writing the adventures of Robinſon Cruſoe. This iſland was very propitious to the remains of Commodore Anſon's ſquadron in 1741, after having been buffeted with tempeſts, and debilitated by an inveterate ſcurvy, during a three months paſſage round Cape Horn: they continued here three months; during which time the dying crews, who on their arrival could ſcarcely with one united effort heave the anchor, were reſtored to perfect health. Captain Carteret, in the Swallow, in 1767, having met with many difficulties and impediments in his paſſage into the South Sea, by the Straits of Magelhaens, attempted to make this iſland in order to recruit the health of his men; but he found it fortified by the Spaniards, and therefore choſe rather to proceed to the iſland of Maſafuero. But M. de Bougainville that ſame year is ſaid to have touched here for refreſhments, although in the narrative of the voyage the fact is cautiouſly ſuppreſſed. This iſland is not quite 15 miles long and about ſix broad; its only ſafe harbour is on the north ſide. It is ſaid to have plenty of excellent water, and to abound with a great variety of eſculent vegetables highly antiſcorbutic; beſides which, Commodore Anſon ſowed a variety of garden-ſeeds, and planted the ſtones of plums, apricots, and peaches, which he was many years afterwards informed had thriven greatly; and now doubtleſs furniſh a very valuable addition to the natural productions of this ſpot. Vaſt ſhoals of fiſh of various kinds frequent this coaſt, particularly cod of a prodigious ſize; and it is ſaid in not leſs abundance than on the banks of Newfoundland. There are but few birds here, and thoſe few are of ſpecies well known and common.

Juan Blanco. See PLATINA.

JUBA, a king of Numidia and Mauritania. He had ſucceeded his father Hiempſal, and he favoured the cauſe of Pompey againſt Julius Cæſar. He defeated Curio whom Cæſar had ſent to Africa, and after the battle of Pharſalia he joined his forces to thoſe of Scipio. He was conquered in a battle at Thapſus, and totally abandoned by his ſubjects. He killed himſelf with Petreius, who had ſhared his good fortune and his adverſity, in the year of Rome 707. His kingdom became a Roman province, of which Salluſt was the firſt governor.

JUBA II. ſon of the former, was led among the captives to Rome to adorn the triumph of Cæſar. His captivity was the ſource of the greateſt honours, and his application to ſtudy procured him more glory than he would have obtained from the inheritance of a kingdom. He gained the hearts of the Romans by the courteouſneſs of his manners, and Auguſtus rewarded his fidelity by giving him in marriage Cleopatra the daughter of Antony, and conferring upon him the title of *king*, and making him maſter of all the territories which his father once poſſeſſed, in the year of Rome 723. His popularity was ſo great, that the Mauritanians rewarded his benevolence by making him one of their gods. The Athenians raiſed him a ſtatue, and the Æthiopians worſhipped him as a deity. Juba wrote an hiſtory of Rome in Greek, which is often quoted and commended by the ancients. Of it only few fragments remain. He alſo wrote on the hiſtory of Arabia, and the antiquities of Aſſyria, chiefly collected from Beroſus. Beſides theſe he compoſed ſome treatiſes upon the drama, Roman antiquities, the nature of animals, painting, grammar, &c. now loſt.

JUBILEE, among the Jews, denotes every fiftieth year; being that following the revolution of ſeven weeks of years; at which time all the ſlaves were made free, and all lands reverted to their ancient owners. The jubilees were not regarded after the Babyloniſh captivity. —The word, according to ſome authors, comes from the Hebrew, *jobel*, which ſignifies *fifty*: but this muſt be a miſtake, for the Hebrew יובל *jobel* does not ſignify fifty; neither do its letters, taken as cyphers, or according to their numerical power, make that number; being 10, 6, 2, and 30, that is 48.——Others ſay, that *jobel* ſignifies a *ram*, and that the jubilee was thus called, becauſe proclaimed with a ram's horn, in memory of the ram that appeared to Abraham in the thicket. Maſius chooſes to derive the word from *Jubal*, the firſt inventor of muſical inſtruments, which, for that reaſon, were called by his name; whence the words *jobel* and *jubilee* came to ſignify the year of deliverance and remiſſion, becauſe proclaimed with the ſound of one of thoſe inſtruments which at firſt was no more than the horn of a ram. Others derive *jobel* from יבל, *jabal*, in hiphil הביל, *hobil*, which ſignifies to recal or return; becauſe this year reſtored all ſlaves to their liberty, &c. The inſtitution of this feſtival is in Lev. xxv. 8, 17.

The learned are divided about the year of jubilee; ſome maintaining that it was every forty-ninth, and others that it was every fiftieth, year. The ground of the former opinion is chiefly this, that the forty-ninth year being of courſe a ſabbatical year, if the jubilee had been kept on the fiftieth, the land muſt have had two ſabbaths, or have lain fallow two years, which, without a miracle, would have produced a dearth. On the other hand, it is alleged, that the Scripture expreſsly declares for the fiftieth year, Lev. xxv. 10, 11. And beſides, if the jubilee and ſabbatical year had been the ſame, there would have been no need of a prohibition to ſow, reap, &c. becauſe this kind of labour was prohibited by the law of the ſabbatical year, Lev. xxv. 4. 5. The authors of the Univerſal Hiſtory, book i. chap. 7. note R, endeavour to reconcile theſe opinions, by obſerving, that as the jubilee began in the firſt month of the civil year, which was the ſeventh of the eccleſiaſtical, it might be ſaid to be either the forty-ninth or fiftieth, according as one or other of theſe computations were followed. The political deſign of the law of the jubilee was to prevent the too great oppreſſions of the poor, as well as their being liable to perpetual ſlavery. By this means a kind of equality was preſerved through all the families of Iſrael, and the diſtinction of tribes was alſo preſerved, that they might be able, when there was occaſion, on the jubilee-year, to prove their right to the inheritance of their anceſtors. It ſerved alſo, like the Olympiads of the Greeks, and the Luſtra of the Romans, for the readier computation of time. The jubilee has alſo been ſuppoſed to be typical of the goſpel ſtate and diſpenſation, deſcribed by Iſaiah, lxi. ver. 1, 2. in reference to this period, as the "acceptable year of the Lord."

JUBILEE, in a more modern ſenſe, denotes a grand church ſolemnity or ceremony, celebrated at Rome, wherein the pope grants a plenary indulgence to all ſinners; at leaſt to as many as viſit the churches of St Peter and St Paul at Rome.

The jubilee was firſt eſtabliſhed by Boniface VII. in 1300, in favour of thoſe who ſhould go *ad limina apoſtolorum;* and it was only to return every hundred years. But the firſt celebration brought in ſuch ſtore of wealth to Rome, that the Germans called this the *golden year;* which occaſioned Clement VI. in 1343, to reduce the period of the jubilee to fifty years. Urban VI. in 1389, appointed it to be held every thirty-five years, that being the age of our Saviour; and Paul II. and Sixtus IV. in 1475, brought it down to every twenty-five, that every perſon might have the benefit of it once in his life. Boniface IX. granted the privilege of holding jubilees to ſeveral princes and monaſteries: for inſtance, to the monks of Canterbury, who had a jubilee every fifty years; when people flocked from all parts to viſit the tomb of Thomas a Becket. Jubilees are now become more frequent, and the pope grants them as often as the church or himſelf have occaſion for them. There is uſually one at the inauguration of a new pope. To be intitled to the privileges of the jubilee, the bull enjoins faſtings, alms, and prayers. It gives the prieſts a full power to abſolve in all caſes even thoſe otherwiſe reſerved to the pope: to make commutations of vows, &c. in which it differs from a *plenary indulgence.* During the time of Jubilee, all other indulgences are ſuſpended.

One of the Engliſh kings, viz. Edward III. cauſed his birth-day to be obſerved in manner of a jubilee, when he became fifty years of age, in 1362, but never before or after. This he did by releaſing priſoners, pardoning all offences except treaſon, making good laws, and granting many privileges to the people.

There are particular jubilees in certain cities, when ſeveral of their feaſts fall on the ſame day; at Puey en Velay, for inſtance, when the feaſt of the Annunciation happens on Good-Friday; and at Lyons when the feaſt of St John Baptiſt concurs with the feaſt of Corpus Chriſti.

In 1640, the Jeſuits celebrated a ſolemn jubilee at Rome; that being the centennary or hundredth year from their inſtitution, and the ſame ceremony was obſerved in all their houſes throughout the world.

JUCATAN, or YUCATAN, a large province of North-America in New Spain, which is a peninſula. It is over-againſt the iſland of Cuba, and contains a large quantity of timber, proper for building ſhips; as alſo ſugar, caſſia, and Indian corn. The original inhabitants are few, they having been very ill uſed by the Spaniards. Merida is the capital town. It is a flat level country; and is very unhealthy, which may be owing to the frequent inundations.

JUDAH, the fourth ſon of Jacob, and father of the chief of the tribes of the Jews, diſtinguiſhed by his name, and honoured by giving birth to the Meſſiah, died 1636 B. C.

Judah Hakkadoſh, or the Saint, a rabbi celebrated for his learning and riches, lived in the time of the emperor Antoninus, and was the friend and preceptor of that prince. Leo of Modena, a rabbi of Venice, tells us, that rabbi Judah, who was very rich, collected about 26 years after the deſtruction of the temple, in a book which he called the *Miſnia*, the conſtitutions and traditions of the Jewiſh magiſtrates who preceded him. But as this book was ſhort and obſcure, two Babyloniſh rabbis, Rabbina and Aſe, collected all the interpretations, diſputes, and additions, that had been made until their time upon the Miſnia, and formed the book called the *Babyloniſh Talmud* or *Gemara;* which is preferable to the Jeruſalem Talmud, compoſed ſome years before by rabbi Jochanan of Jeruſalem. The Miſnia is the text of the Talmud; of which we have a good edition in Hebrew and Latin by Surenhuſius, with notes, in 3 vols folio. It were to be wiſhed the ſame had been done to the Gemara.

The Kingdom of Judah was of ſmall extent compared with that of the kingdom of Iſrael; conſiſting only of two tribes, Benjamin and Judah: its eaſt boundary, the Jordan; the Mediterranean its weſt, in common with the Danites, if we except ſome places recovered by the Philiſtines, and others taken by the kings of Iſrael; on the ſouth, its limits ſeem to have been contracted under Hadad of the royal progeny of Edom, (1 Kings xi. 14.)

Tribe of Judah, one of the 12 diviſions of Paleſtine by tribes (Joſh. xv.), having Idumea on the ſouth, from the extremity of the Lacus Aſphaltites, alſo the Wilderneſs of Zin, Cadeſbarnea, and the brook or river of Egypt; on the eaſt, the ſaid lake; on the weſt, the Mediterranean; and on the north, the mouth of the ſaid lake; where it receives the Jordan, Bethſemes, Thimna, quite to Ekron on the ſea.

JUDAISM, the religious doctrines and rites of the Jews. Judaiſm was but a temporary diſpenſation, and was to give way, at leaſt the ceremonial part of it, at the coming of the Meſſias. For a complete ſyſtem of Judaiſm, ſee the books of Moſes. Judaiſm was anciently divided into ſeveral ſects; the principal whereof were the Phariſees, Sadducees, and Eſſenians.

At preſent there are two ſects among the Jews, viz. the Caraites, who admit of no rule of religion but the law written by Moſes; and the Rabbiniſts, who add to the law the traditions of the Talmud.

JUDAS Maccabeus, a celebrated general of the Jews, renowned for his many victories over his enemies, at laſt ſlain in battle, 261 B. C. See (*Hiſtory* of the) Jews, n° 13.

Judas-Tree. See Cercis.

JUDE (St), brother of St James the younger, and ſon of Joſeph (Mat. xiii. 55.). He preached in Meſopotamia, Arabia, Syria, Idumea; and died in Berytus for the confeſſion of Chriſt. He wrote that epiſtle which goes under his name, and after the death of moſt of the apoſtles. He was cruelly put to death for reproving the ſuperſtition of the Magi.

Jude, or *the General Epiſtle of Jude*, a canonical book of the New Teſtament, written againſt the heretics, who, by their diſorderly lives and impious doctrines, corrupted the faith and good morals of the Chriſtians. St Jude draws them in lively colours, as men given up to their paſſions, full of vanity, conducting themſelves by worldly wiſdom, and not by the ſpirit of God.

JUDEA (anc. geog.), taken largely, either denotes all Paleſtine, or the greater part of it; and thus it is generally taken in the Roman hiſtory: Ptolemy, Rutilinus, Jerome, Origen, and Euſebius, take it for the whole of Paleſtine. Here we conſider it as the third part of it on this ſide the Jordan, and that the ſouthern part is diſtinct from Samaria and Galilee; under which notion it is often taken, not only in Joſephus, but alſo in the New Teſtament. It contained four tribes; Judah, Benjamin, Dan, and Simeon, together with Philiſtia and Idumea, ſo as to be compriſed between Samaria on the north, Arabia Petræa on the ſouth, and to be bounded by the Mediterranean on the weſt, and by the Lacus Aſphaltites, with part of Jordan, on the eaſt. Joſephus divides it into 11 toparchies; Pliny into 10; by which it has a greater extent than that juſt mentioned. See Palestine.

JUDENBURG, a handſome and conſiderable town of Germany, in the circle of Auſtria, and capital of Upper Styria, with a handſome caſtle; the public buildings with the ſquare are very magnificent. It is ſeated on the river Meur. E. Long. 15. 20. N. Lat. 47. 20.

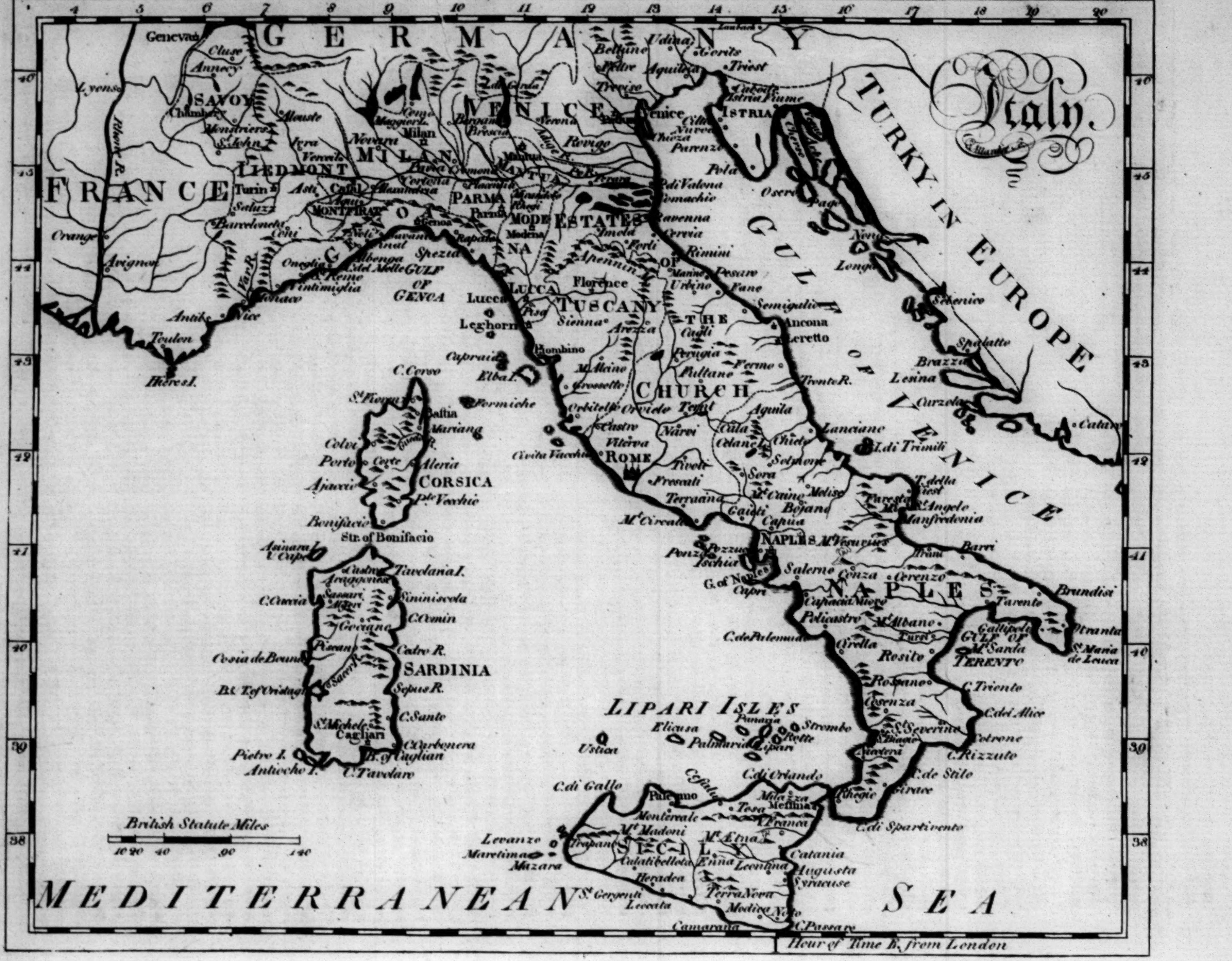
JUDEX (Matthew), one of the principal writers of the Centuries of Magdeburg, was born at Tippleſwolde in Miſnia, in 1528. He taught theology with great reputation; but met with many diſquiets in the exerciſe of his miniſtry from party feuds. He wrote ſeveral works, and died in 1564.

JUDGE, a chief magiſtrate of the law, appointed to hear cauſes, to explain the laws, and to paſs ſentence.

Judges, in Jewiſh antiquity, certain ſupreme magiſtrates who governed the Iſraelites from the time of Joſhua till the reign of Saul. Theſe judges reſembled the Athenian archons or Roman dictators. The dignity of judge was for life, but not always in uninterrupted ſucceſſion. God himſelf, by ſome expreſs declaration of his will, regularly appointed the judges: But the Iſraelites did not always wait for his appointment, but ſometimes choſe themſelves a judge in times of danger. The power of the judges extended to affairs of peace and war. They were protectors of the laws, defenders of religion, avengers of all crimes; but they could make no laws, nor impoſe any new burdens upon the people. They lived without pomp or retinue, unleſs their own fortunes enabled them to do it; for the revenues of their office conſiſted in voluntary preſents from the people. They continued from the death of Joſhua till the beginning of the reign of Saul, being a ſpace of about 339 years.

Judges, for ordinary affairs, civil and religious, were appointed by Moſes in every city to terminate differences; in affairs of greater conſequence, the dif-

Plate CCLVII



Italy.

GERMANY
FRANCE
SAVOY
PIEDMONT
MILAN
VENICE
PARMA
MANTUA
MODENA
ESTATES OF THE CHURCH
GENOA
LUCCA
TUSCANY
CHURCH
NAPLES
ISTRIA
TURKY IN EUROPE
GULF OF VENICE
GULF OF GENOA
GULF OF TERENTO
CORSICA
SARDINIA
SICILY
LIPARI ISLES
MEDITERRANEAN SEA
Str. of Bonifacio
Geneva
Lyons
Chamberry
Turin
Milan
Genoa
Nice
Toulon
Hieres I.
Avignon
Orange
Rhone R.
Var R.
Venice
Trevise
Udina
Triest
Verona
Brescia
Bergamo
Mantua
Parma
Modena
Bologna
Ravenna
Rimini
Pesaro
Ancona
Loretto
Florence
Pisa
Leghorn
Lucca
Sienna
Arezzo
Piombino
Elba I.
Capraia
Civita Vecchia
Viterba
Rome
Tivoli
Frescati
Terracina
Gaieta
Capua
Naples
M.t Vesuvius
Ischia
Capri
Salerno
Barri
Brundisi
Otranto
Tarento
Gallipoli
S.t Maria de Leuca
Cosenza
Rossano
C. Rizzuto
Reggio
C. di Spartivento
Messina
Palermo
Trapani
Mazara
Marsala
Catania
Augusta
Syracuse
M.t Etna
C. Passaro
Stromboli
Lipari
Ustica
Bastia
Ajaccio
Bonifacio
Cagliari
Sassari
Oristagni
Spalatto
Sebenico
Zara
Lesina
Brazza
Curzola
Catarro
Pola
British Statute Miles
10 20 40 90 140
Hour of Time E. from London
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
46 45 44 43 42 41 40 39 38

BRITISH MUSEUM

ferences were referred to the prieſts of Aaron's family, and the judge of the people or prince at that time eſtabliſhed. Moſes likewiſe ſet up two courts in all the cities, one conſiſting of prieſts and Levites, to determine points concerning the law and religion; the others conſiſting of heads of families, to decide in civil matters.

Book of **JUDGES**, a canonical book of the Old Teſtament, ſo called from its relating the ſtate of the Iſraelites under the adminiſtration of many illuſtrious perſons who were called *judges*, from being both the civil and military governors of the people, and who were raiſed up by God upon ſpecial occaſions, after the death of Joſhua, till the time of their making a king. In the time of this peculiar polity, there were ſeveral remarkable occurrences, which are recorded in this book. It acquaints us with the groſs impiety of a new generation which ſprung up after the death of Joſhua; and gives us a ſhort view of the diſpenſations of heaven towards this people, ſometimes relieving and delivering them, and at others ſeverely chaſtiſing them by the hands of their enemies.

Select **JUDGES**, (*Judices ſelecti*), in antiquity, were perſons ſummoned by the prætor to give their verdict in criminal matters in the Roman courts, as juries do in ours. No perſon could be regularly admitted into this number till he was 25 years of age. The *Sortitio Judicum*, or impannelling the jury, was the office of the *Judex Quæſtionis*, and was performed after both parties were come into court, for each had a right to reject or challenge whom they pleaſed, others being ſubſtituted in their room. The number of the *Judices ſelecti* varied, according to the nature of the charge. When the proper number appeared, they were ſworn, took their places in the *ſubſellia*, and heard the trial.

JUDGMENT, among logicians, a faculty or rather act of the human ſoul, whereby it compares its ideas, and perceives their agreement or diſagreement. See METAPHYSICS; and LOGIC, Part II.

JUDGMENT, in law, is the ſentence pronounced by the court upon the matter contained in the record. Judgments are of four ſorts. Firſt, where the facts are confeſſed by the parties, and the law determined by the court; as in caſe of judgment upon *demurrer*: ſecondly, where the law is admitted by the parties, and the facts diſputed; as in the caſe of judgment on *verdict*: thirdly, where both the fact and the law ariſing thereon are admitted by the defendant; which is the caſe of judgment by *confeſſion* or *default*: or, laſtly where the plaintiff is convinced that either fact, or law, or both, are inſufficient to ſupport his action, and therefore abandons or withdraws his proſecution; which is the caſe in judgments upon a *nonſuit* or *retraxit*.

The judgment, though pronounced or awarded by the judges, is not their determination or ſentence, but the determination and ſentence of the *law*. It is the concluſion that naturally and regularly follows from the premiſſes of law and fact, which ſtands thus: Againſt him who hath rode over my corn, I may recover damages by law; but A hath rode over my corn; therefore I ſhall recover damages againſt A. If the major propoſition be denied, this is a demurrer in law: if the minor, it is then an iſſue of fact: but if both be confeſſed or determined to be right, the concluſion or judgment of the court cannot but follow. Which judgment or concluſion depends not therefore on the arbitrary caprice of the judge, but on the ſettled and invariable principles of juſtice. The judgment, in ſhort, is the remedy preſcribed by law for the redreſs of injuries; and the ſuit or action is the vehicle or means of adminiſtering it. What that remedy may be, is indeed the reſult of deliberation and ſtudy to point out; and therefore the ſtyle of the judgment is, not that it is decreed or reſolved by the court, for then the judgment might appear to be their own; but, "it is conſidered," *conſideratum eſt per curiam*, that the plaintiff do recover his damages, his debt, his poſſeſſion, and the like: which implies that the judgment is none of their own; but the act of law, pronounced and declared by the court, after due deliberation and inquiry. See *Blackſt. Comment.* iii. 396.

JUDGMENT, in criminal caſes, is the next ſtage of proſecution, after TRIAL and CONVICTION are paſt, in ſuch crimes and miſdemeanors as are either too high or too low to be included within the benefit of clergy. For when, upon a capital charge, the JURY have brought in their VERDICT guilty in the preſence of the priſoner; he is either immediately, or at a convenient time ſoon after, aſked by the court, if he has any thing to offer why judgment ſhould not be awarded againſt him. And in caſe the defendent be found guilty of a miſdemeanor (the trial of which may, and does uſually happen in his abſence, after he has once appeared), a *capias* is awarded and iſſued, to bring him to receive his judgment; and if he abſconds, he may be proſecuted even to outlawry. But whenever he appears in perſon, upon either a capital or inferior conviction, he may at this period, as well as at his arraignment, offer any exceptions to the indictment, in *arreſt* or ſtay of judgment: as for want of ſufficient certainty in ſetting forth either the perſon, the time, the place, or the offence. And if the objections be valid, the whole proceedings ſhall be ſet aſide; but the party may be indicted again. And we may take notice, 1. That none of the ſtatutes of *jeofails*, for amendment of errors, extend to indictments or proceedings in criminal caſes; and therefore a defective indictment is not aided by a verdict, as defective pleadings in civil caſes are. 2. That, in favour of life, great ſtrictneſs has at all times been obſerved, in every point of an indictment. Sir Matthew Hale indeed complains, "that this ſtrictneſs is grown to be a blemiſh and inconvenience in the law, and the adminiſtration thereof: for that more offenders eſcape by the over eaſy ear given to exceptions in indictments, than by their own innocence; and many times groſs murders, burglaries, roberies, and other heinous and crying offences, remain unpuniſhed by theſe unſeemly niceties: to the reproach of the law, to the ſhame of the government, to the encouragement of villainy, and to the diſhonour of God." And yet, notwithſtanding this laudable zeal, no man was more tender of life than this truly excellent judge.

Blackſt. Comment.

A pardon alſo may be pleaded in arreſt of judgment: and it has the ſame advantage when pleaded here as when pleaded upon ARRAIGNMENT; viz. the ſaving the ATTAINDER, and, of courſe, the CORRUPTION of blood: which nothing can reſtore but parliament, when a pardon is not pleaded till after ſentence. And certainly, upon all accounts, when a man hath obtained a pardon, he is in the right to plead it as ſoon as poſſible. See Pardon.

Praying the benefit of clergy may alſo be ranked among the motions in arreſt of judgment. See *Benefit of Clergy.*

If all theſe reſources fail, the court muſt pronounce that judgment which the law hath annexed to the crime. Of theſe ſome are capital, which extend to the life of the offender, and conſiſt generally in being hanged by the neck till dead; though in very atrocious crimes other circumſtances of terror, pain, or diſgrace, are ſuperadded: as, in treaſons of all kinds, being drawn or dragged to the place of execution; in high treaſon affecting the king's perſon or government, embowelling alive, beheading, and quartering; and in murder, a public diſſection. And in caſe of any treaſon committed by a female, the judgment is to be burned alive. But the humanity of the Engliſh nation has authoriſed, by a tacit conſent, an almoſt general mitigation of ſuch parts of theſe judgments as favour of torture or cruelty: a ſledge or hurdle being uſually allowed to ſuch traitors as are condemned to be drawn; and there being very few inſtances (and thoſe accidental or by negligence) of any perſon being embowelled or burned, till previouſly deprived of ſenſation by ſtrangling. Some puniſhments conſiſt in exile or baniſhment, by abjuration of the realm, or tranſportation to the American colonies: others, in loſs of liberty, by perpetual or temporary impriſonment. Some extend to confiſcation, by forfeiture of lands, or moveables, or both, or of the profits of lands, for life: others induce a diſability of holding offices or employments, being heirs, executors, and the like. Some, though rarely, occaſion a mutilation or diſmembering, by cutting off the hand or ears: others fix a laſting ſtigma on the offender, by ſlitting the noſtrils or branding in the hand or face. Some are merely pecuniary, by ſtated or diſcretionary fines; and, laſtly, there are others that conſiſt principally in their ignominy, though moſt of them are mixed with ſome degree of corporal pain; and theſe are inflicted chiefly for ſuch crimes as either ariſe from indigence, or render even opulence diſgraceful. Such as whipping, hard labour in the houſe of correction, the pillory, the ſtocks, and the ducking-ſtool.

Diſguſting as this catalogue may ſeem, it will afford pleaſure to a Britiſh reader, and do honour to the Britiſh laws, to compare it with that ſhocking apparatus of death and torment to be met with in the criminal codes of almoſt every other nation in Europe. And it is moreover one of the glories of our law, that the nature, though not always the quantity or degree, of puniſhment is aſcertained for every offence; and that it is not left in the breaſt of any judge, nor even of a jury, to alter the judgment which the law has beforehand ordained for every ſubject alike, without reſpect of perſons. For, if judgments were to be the private opinions of the judge, men would then be ſlaves to their magiſtrates; and would live in ſociety, without knowing exactly the conditions and obligations which it lays them under. And, beſides, as this prevents oppreſſion on the one hand; ſo, on the other, it ſtifles all hopes of impunity or mitigation, with which an offender might flatter himſelf if his puniſhment depended on the humour or diſcretion of the court. Whereas, where an eſtabliſhed penalty is annexed to crimes, the criminal may read their certain conſequence in that law, which ought to be the unvaried rule, as it is the inflexible judge, of his actions.

Judgment of God. See *Judicium Dei.*

JUDICATURE, the quality or profeſſion of thoſe who adminiſter juſtice.

Judicature is alſo uſed to ſignify the extent of the juriſdiction of the judge, and the court wherein he ſits to render juſtice.

JUDICIA centumviralia, in Roman antiquity, were trials before the *Centumviri*, to whom the *prætor* committed the deciſion of certain matters of inferior nature, like our juſtices of peace at the quarter ſeſſions. During the *judicia centumviralia*, a ſpear was ſtuck up in the forum to ſignify that the court was ſitting.

JUDICIUM calumniæ, was an action brought againſt the plaintiff for falſe accuſation. The puniſhment, upon conviction, was *inuſtio frontis*, or branding in the forehead. See Inustio.

Judicium Dei, Judgment of God, was a term anciently applied to all extraordinary trials of ſecret crimes: as thoſe by arms, and ſingle combat, and the ordeals; or thoſe by fire, or red-hot plough-ſhares; by plunging the arm in boiling water, or the whole body in cold water; in hopes God would work a miracle, rather than ſuffer truth and innocence to periſh. *Si ſuper defendere non poſſit, judicio Dei, ſcil. aqua vel ferro, fieret de eo juſtitia.*—Theſe cuſtoms were a long time kept up even among Chriſtians; and they are ſtill in uſe in ſome nations. See Battel, Ordeal, &c.—Trials of this ſort were uſually held in churches in preſence of the biſhops, prieſts, and ſecular judges; after three days faſting, confeſſion, communion, and many adjurations and ceremonies deſcribed at large by Du Cange.

Judicium Parium denotes a trial by a man's equals, i. e. of peers by peers, and of commoners by commoners. In *magna charta* it is more than once inſiſted on as the principal bulwark of our liberties, but eſpecially by chap. 29. that no freeman ſhall be hurt in either his perſon or property, *niſi per legale judicium parium ſuorum vel per legem terræ.* And this was ever eſteemed in all countries a privilege of the higheſt and moſt beneficial nature.

Judicium Falſi, was an action which lay againſt the judges for corruption or unjuſt proceedings.

Judicium Prævaricationis, was an action brought againſt the proſecutor, after the criminal was acquitted for ſuppreſſing the evidence of, or extenuating his guilt, rather than urging it home, and bringing it to light.

JUDOIGNE, a town of the Auſtrian Netherlands, in Brabant. Near this town the duke of Marlborough gained that ſignal victory over the French in 1706, called the *battle of Ramillies.* It is ſeated on the river Gete, 13 miles ſouth-eaſt of Louvain, and 16 north of Namur.

IVEACH, the name of two baronies of Ireland, in the county of Down, and province of Ulſter. They are diſtinguiſhed into Upper and Lower Iveach, and the former is by much the largeſt barony in that county. The name of *Iveach*, or *Hy Veach*, is ſaid to be taken from *Achaius*, in Iriſh called *Eachach*, grandfather to king *Coalbpaig*, as much as to ſay "the territory of Eachach;" for *hy*, in the Iriſh language, is a common adjective, denoting not only the heads and fountains of families, but alſo the territories poſſeſſed by them. Iveach (including both baronies) was otherwiſe called the *Magenniſes country*, and in queen Elizabeth's time was governed by Sir Hugh Magennis, eſteemed to have been one of the moſt polite of all the natives in thoſe parts. Through part of this barony runs a chain of mountains conſiderably high, known by the name of *Iveach mountains*.

IUERNUS (anc. geog.), a town in the ſouth weſt of Ireland. Now *Dunkeram*, (Camden); called *Donekyne* by the natives, ſituated on the river Maire, in the province of Munſter.

Iuernus, or *Iernus;* Ptolemy; a river in the ſouthweſt of Ireland. Now called the *Maire*, or *Kenmare*, running from eaſt to weſt, in the province of Munſter.

IVES or Yves (St), a celebrated biſhop of Chartres, born in the territory of Beauvais in the 11th century. His merit procured his election to the ſee of Chartres in 1092, or 1093, under the pontificate of Urban II. who had depoſed Geoffroy his predeceſſor for ſundry accuſations againſt him. Ives particularly ſignalized himſelf by his zeal againſt Philip I. who had put away his wife Bertha of Holland, and had taken Bertrade of Montford, wife of Fouques count of Anjou. Afterward he devoted himſelf wholly to the functions of his miniſtry; made ſeveral religious foundations; and died in 1115. Pope Pius V. permitted the monks of the congregation of Lateran to celebrate the feſtival of St Ives on the 20th of May. We have a collection of decrees of his compiling, *Exceptiones eccleſiaſticarum regularum*, a *Chronicon*, and 22 ſermons; all very valuable pieces, which were collected and publiſhed in one volume folio in 1647, by John Baptiſt Souciet, canon of Chartres.

Ives (St), a ſeaport town of Cornwall, in England, ſeated on a bay of the ſame name; which being unſafe, it is chiefly frequented by fiſhermen, for the taking of pilchards. By this trade, however, and that of Corniſh ſlates, it has thriven greatly, and 20 or 30 ſail of ſhips belong to its harbour. It is a corporation, governed by a mayor, 12 capital and 24 inferior burgeſſes, with a recorder, town clerk, &c. and it ſends two members to parliament. Here is a handſome ſpacious church, which is often buffeted by the waves of the ſea; but the mother church is at Unilalant. There is a grammar-ſchool here, which was founded by Charles I. It has two markets in the week, and an annual fair.

Ives (St), is alſo the name of a town in Huntingdonſhire, 64 miles from London. It has a fine ſtone bridge over the Ouſe, had in the ninth century a mint, and was noted for its medicinal waters. Great part of it was burnt down ſome years ago, but it was rebuilt. Here is a very good market on Monday for fatted cattle brought from the north; and there are two fairs in the year. Here Oliver Cromwell rented a farm before he was choſen a burgeſs for Cambridge.

JUGERUM, in Roman antiquity, a ſquare of 120 Roman feet; its proportion to the Engliſh acre being as 10.000 to 16.097.

JUGLANS, in botany: A genus of the monœcia order, belonging to the polyandria claſs of plants; and in the natural method ranking under the 50th order, *Amentaceæ* The male calyx is monophyllous, and ſquamiform; the corolla divided into ſix parts; there are 18 filaments: the female calyx is quadrifid, ſuperior; the corolla quadripartite; there are two ſtyles, and the fruit a plumb with a furrowed kernel. There are five ſpecies, the moſt remarkable of which is the regia or common walnut. This riſes 50 feet high or more, with a large upright trunk, branching into a very large ſpreading head, with large pinnated leaves, of two or three pair of oval, ſmooth, ſomewhat ſerrated lobes, terminated by an odd one; and monœcious flowers, ſucceeded by cluſters of large green fruit, incloſing furrowed nuts of different ſhapes and ſizes in the varieties, ripening in September and October. Other two ſpecies, called the *nigra* and *alba*, or black and white Virginian walnut, are alſo cultivated in Britain, though they are leſs proper for fruit, having very ſmall kernels.

Culture. All the ſorts are propagated by planting their nuts, which will grow in any common ſoil. The nuts being procured in the proper ſeaſon, in their outer covers or huſks if poſſible, they ſhould be preſerved in dry ſand until February, and then planted. After two years growth in the ſeed bed, they are to be taken out, and planted in the nurſery, where they muſt remain till grown five or ſix feet high, when they muſt be tranſplanted where they are finally to remain; but if intended for timber as well as fruit trees, they ought to be finally tranſplanted when they have attained the height of three or four feet.

Uſes. The fruit is uſed at two different ſtages of growth: when green to pickle, and when ripe to eat raw. As a pickle, the nuts may be uſed when about half or three-fourths grown, before the outer coat or ſhell becomes hard; ſuch nuts ſhould be choſen as are moſt free from ſpecks, and for this purpoſe they muſt be gathered by hand. Walnuts are ready for pickling in July and Auguſt. They are fully ripe in September and October; and are then commonly beat down with long poles, eſpecially on large trees; for as the walnuts grow moſtly at the extremities of the branches, it would be troubleſome and tedious to gather them by hand. As ſoon as gathered, lay them in heaps a few days to heat and ſweat, to cauſe their outer huſks, which adhere cloſely, to ſeparate from the ſhell of the nuts; then clean them from the rubbiſh, and depoſit them in ſome dry room for uſe, covering them over cloſe with dry ſtraw half a foot thick, and they will keep three or four months. They are always readily ſold at market, eſpecially in London; where, at their firſt coming in, they are ſold with the huſks on, by the ſack or buſhel; but afterwards are bought clean, and ſold both by meaſure and by the thouſand. The wood of the walnut-tree is alſo very valuable; not indeed where ſtrength is neceſſary, it being of a very brittle nature; but the cabinet-makers and joiners eſteem it highly for ſeveral ſorts of houſehold furniture and other light works; for being beautifully veined, it takes a fine poliſh, and the more knotty it is, the more it is valued for particular purpoſes. Walnut-trees are alſo well adapted for planting round the borders of orchards, where, by their large ſpreading heads, they will alſo guard the leſſer fruit-trees from boiſterous winds. The kernels of the nuts are ſimilar in quality to almonds; but are not like them uſed in medicine.

JUGORA, a conſiderable province of Muſcovy, depending on the government of Archangel. It has the title of a duchy; and is inhabited by a kind of Tartars, who are very ſavage, and much of the ſame diſpoſition with the Samoiedes.

JUGULAR, among anatomiſts, is applied to certain veins and glands of the neck. See ANATOMY.

JUGULARES, in the Linnæan ſyſtem, is the name of an order or diviſion of fiſh, the general character of which is, that they have ventral fins before the pectoral fins. See ZOOLOGY.

JUGUM, an humiliating mode of puniſhment inflicted by the victorious Romans upon their vanquiſhed enemies. It was thus: They ſet up two ſpears, and laying a third acroſs, in the form of a gallows, they ordered thoſe who had ſurrendered themſelves to paſs under this ignominious erection, without arms or belts. None ſuffered the diſgrace of paſſing *ſub jugo* but ſuch as had been obliged to ſurrender.

JUGURTHA, the illegitimate ſon of Manaſtabal the brother of Micipſa. Micipſa and Manaſtabal were the ſons of Maſiniſſa, king of Numidia. Micipſa, who had inherited his father's kingdom, educated his nephew with his two ſons Adherbal and Hiempſal; but as he ſaw that the former was of an aſpiring diſpoſition, he ſent him with a body of troops to the aſſiſtance of Scipio, who was beſieging Numantia, hoping to loſe a youth whoſe ambition ſeemed to threaten the tranquillity of his children. His hopes were fruſtrated; Jugurtha ſhowed himſelf brave and active, and he endeared himſelf to the Roman general. Micipſa appointed him ſucceſſor to his kingdom with his two ſons, but the kindneſs of the father proved fatal to the children. Jugurtha deſtroyed Hiempſal, and ſtripped Adherbal of his poſſeſſions, and obliged him to fly to Rome for ſafety. The Romans liſtened to the well-grounded complaints of Adherbal; but Jugurtha's gold prevailed among the ſenators, and the ſuppliant monarch, forſaken in his diſtreſs, periſhed by the ſnares of his enemy. Cæcilius Metellus was at laſt ſent againſt Jugurtha; and his firmneſs and ſucceſs ſoon reduced the crafty Numidian, obliging him to fly among his ſavage neighbours for ſupport. Marius and Sylla ſucceeded Metellus, and fought with equal ſucceſs. Jugurtha was at laſt betrayed by his father-in-law Bocchus, from whom he claimed aſſiſtance; and he was delivered into the hands of Sylla 106 years before the Chriſtian era. He was expoſed to the view of the Roman people, and dragged in chains to adorn the triumph of Marius. He was afterwards put in a priſon, where he died ſix days after of hunger.

IVICA, or YVICA, the name of an iſland in the Mediterranean. See YVICA.

JUICE, denotes the ſap of vegetables, or the liquors of animals. See ANATOMY, BLOOD, PLANTS, SAP, &c.

The juices of ſeveral plants are expreſſed to obtain their eſſential ſalts, and for ſeveral medicinal purpoſes, with intention either to be uſed without further preparation, or to be made into ſyrups and extracts. The general method of extracting theſe juices is, by pounding the plant in a marble mortar, and then by putting it into a preſs. Thus is obtained a muddy and green liquor, which generally requires to be clarified, as we ſhall ſoon obſerve. The juices of all plants are not extracted with equal eaſe. Some plants, even when freſh, contain ſo little juice, that water muſt be added while they are pounded, otherwiſe ſcarcely any juice would be obtained by expreſſion. Other plants which contain a conſiderable quantity of juice, furniſh by expreſſion but a ſmall quantity of it, becauſe they contain alſo much mucilage, which renders the juice ſo viſcid that it cannot flow. Water muſt alſo be added to theſe plants to obtain their juice. The juices thus obtained from vegetables by a mechanical method, are not, properly ſpeaking, one of their principles, but rather a collection of all the proximate principles of plants which are ſoluble in water; ſuch as the ſaponaceous extractive matter, the mucilage, the odoriferous principle, all the ſaline and ſaccharine ſubſtances; all which are diſſolved in the water of the vegetation of the plants. Beſides all theſe matters, the juice contains ſome part of the reſinous ſubſtance, and the green colouring matter, which in almoſt all vegetables is of a reſinous nature. Theſe two latter ſubſtances, not being ſoluble in water, are only interpoſed between the parts of the other principles which are diſſolved in the juice, and conſequently diſturbs its tranſparency. They nevertheleſs adhere together in a certain degree, and ſo ſtrongly in moſt juices, that they cannot be ſeparated by filtration alone. When therefore theſe juices are to be clarified, ſome previous preparations muſt be uſed by which the filtration may be facilitated. Juices which are acid, and not very mucilaginous, are ſpontaneouſly clarified by reſt and gentle heat. The juices of moſt antiſcorbutic plants abounding in ſaline volatile principles, may be diſpoſed to filtration merely by immerſion in boiling water; and as they may be contained in cloſed bottles, while they are thus heated in a water-bath, their ſaline volatile part, in which their medicinal qualities chiefly conſiſt, may thus be preſerved. Fermentation is alſo an effectual method of clarifying juices which are ſuſceptible of it; for all liquors which have fermented, clarify ſpontaneouſly after fermentation. But this method is not uſed to clarify juices, becauſe many of them are ſuſceptible of only an imperfect fermentation, and becauſe the qualities of moſt of them are injured by that proceſs. The method of clarification moſt generally uſed, and indiſpenſably neceſſary for thoſe juices which contain much mucilage, is boiling with the white of an egg. This matter, which has the property of coagulating in boiling water, and of uniting with mucilage, does accordingly, when added to the juice of plants, unite with, and coagulate their mucilage, and ſeparates it from the juice in form of ſcum, together with the greateſt part of the reſinous and earthy matters which diſturb its tranſparency. And as any of theſe reſinous matters which may remain in the liquor, after this boiling with the whites of eggs, are no longer retained by the mucilage, they may eaſily be ſeparated by filtration. See FILTRATION.

The juices, eſpecially before they are clarified, contain almoſt all the ſame principles as the plant itſelf; becauſe in the operation by which they are extracted, no decompoſition happens, but every thing remains, as to its nature, in the ſame ſtate as in the plant. The principles contained in the juice are only ſeparated from the groſſer oily, earthy, and reſinous parts, which compoſe the ſolid matter that remains under the preſs. Theſe juices, when well prepared, have therefore the ſame medicinal qualities as the plants from which they are obtained. They muſt evidently differ from each other as to the nature and proportions of the principles with which they are impregnated, as much as the plants from which they are extracted differ from each other in thoſe reſpects.

Moſt vegetable juices coagulate when they are expoſed to the air, whether they are drawn out of the plant by wounds, or naturally run out; though what is called *naturally running out*, is generally the effect of a wound in the plant, from a ſort of canker, or ſome other internal cauſe. Different parts of the ſame plant yield different juices. The ſame veins in their courſe through the different parts of the plant yield juices of a different appearance. Thus the juice in the root of the cow parſnip is of a brimſtone colour; but in the ſtalk it is white.

Among thoſe juices of vegetables which are clammy and readily coagulate, there are ſome which readily break with a whey. The great wild lettuce, with the ſmell of opium, yields the greateſt plenty of milky juice of any known Britiſh plant. When the ſtalk is wounded with a knife, the juice flows readily out like a thick cream, and is white and ropy; but if theſe wounds are made at the top of the ſtalks, the juice that flows out of them is daſhed with a purple tinge, as if cream had been ſprinkled over it with a few drops of red wine. Some little time after letting this out, it becomes much more purple, and thickens; and finally, the thicker part of it ſeparates, and the thin whey ſwims at top. The whey or thin part of this ſeparated matter is eaſily preſſed out from the curd by ſqueezing between the fingers, and the curd will then remain white; and on waſhing with water, it becomes like rags. The purple whey (for in this is contained all the colour) ſoon dries into a purple cake, and may be crumbled between the fingers into a powder of the ſame colour. The white curd being dried and kept for ſome time, becomes hard and brittle. It breaks with a ſhining ſurface like reſin, and is inflammable; taking fire at a candle, and burning all away with a ſtrong flame. The ſame thick part being held over a gentle heat, will draw out into tough long threads, melting like wax. The purple cake made from the whey is quite different from this; and when held to a candle ſcarce flames at all, but burns to a black coal. The whole virtue of the plant ſeems alſo to conſiſt in this thin part of its juice: for the coagulum or curd, though looking like wax or reſin, has no taſte at all; whereas the purple cake made from the ſerum is extremely bitter, and of a taſte ſomewhat reſembling that of opium.

Of the ſame kind with the wild lettuce are the throatwort, ſpurge, and many other plants. Theſe are all replete with a milky juice which ſeparates into curds and whey like that already deſcribed. But this, though a common law of nature, is not univerſal: for there are many plants which yield the like milky juices without any ſeparation enſuing upon their extravaſation. The white juice of the ſonchus never ſeparates, but dries into an uniform cake: the common red wild poppy bleeds freely with a milky juice; and the heads or capſules of ſeed bleed not leſs freely than the reſt of the plant, even after the flower is fallen. This juice, on being received into a ſhell or other ſmall veſſel ſoon changes its white to a deep yellow colour, and dries it into a cake which ſeems reſinous and oily, but no whey ſeparates from it. The tragopogon, or goat's beard, when wounded, bleeds freely a milky juice; it is at firſt white, but becomes immediately yellow, and then more and more red, till at length it is wholly of a duſky red. It never ſeparates, but dries together into one cake: and is oily and reſinous, but of an inſipid taſte. The great bindweed alſo bleeds freely a white juice; the flowers, as well as the ſtalks and leaves, affording this liquor. It is of a ſharp taſte; and as many of the purging plants are of this claſs, it would be worth trying whether this milk is not purgative.

Theſe juices, as well as the generality of others which bleed from plants, are white like milk; but there are ſome of other colours. The juice of the great celandine is of a fine yellow colour; it flows from the plant of the thickneſs of cream and ſoon dries into a hard cake, without any whey ſeparating from it. Another yellow juice is yielded by the ſeed-veſſels of the yellow centaury in the month of July, when the ſeeds are full grown. This is very clammy; it ſoon hardens altogether into a cake without any whey ſeparating from it. It ſticks to the fingers like birdlime, is of the colour of pale amber, and will never become harder than ſoft wax if dried in the ſhade; but if laid in the ſun, it immediately becomes hard like reſin. Theſe cakes burn like wax, and emit a very pleaſant ſmell. The great angelica alſo yields a yellowiſh juice on being wounded; and this will not harden at all, but if kept ſeveral years will ſtill be ſoft and clammy, drawing out into threads or half melted reſin.

Another kind of juices very different from all theſe, are thoſe of a gummy nature. Some of theſe remain liquid a long time, and are not to be dried without the aſſiſtance of heat; the others very quickly harden of themſelves, and are not inflammable. The gum of the juice of rhubarb-leaves ſoon hardens; and is afterwards ſoluble in common water, and ſparkles when put into the flame of a candle. The cluſters of the common honeyſuckle are full of a liquid gum. This they frequently throw out, and it falls upon the leaves, where it retains its own form. The red hairs of the ros ſolis are all terminated by large bladders of a thin watery fluid. This is alſo a liquid gum; it ſticks to the fingers, draws out into long threads, and ſtands the force of the ſun all day. In the centre of each of theſe dew-drops there is a ſmall red bladder, which ſtands immediately on the ſummit of the red hair, and contains a purple juice which may be ſqueezed out of it. The pinguicula, or butter-wort, has alſo a gummy matter on its leaves in much greater quantity than the ros ſolis.

Some plants yield juices which are manifeſtly of an oily nature. Theſe, when rubbed, are not at all of a clammy nature, but make the fingers glib and ſlippery, and do not at all harden on being expoſed to the air. If the ſtalk of elecampane be wounded, there flows out an oily juice ſwimming upon a watery one. The ſtalks of the hemlock alſo afford a ſimilar oily liquor ſwimming upon the other; and in like manner the white mullein, the berries of ivy, the bay, juniper, dog berry tree, and the fruit of the olive, when wounded, ſhow their oil floating on the watery juice. Some of theſe oily juices, however, harden into a kind of reſin. Our ivy yields ſuch a juice very abundantly; and the juice of the ſmall purple-berried juniper is of the ſame kind, being hard and fat, and not very gummy. If the bark of the common ivy is wounded in March, there will ooze out a tough and greaſy matter of a yellowiſh colour, which, taken up between the fingers, feels not at all gummy or ſticking, but melts in handling into a ſort of oil, which in proceſs of time hardens and cruſts upon the wounds, and looks like brown ſugar. It burns with a laſting flame, and ſmells very ſtrong. The tops of the wild lettuce, and the leaves growing near the tops, if examined with a magnifying glaſs, ſhow a great number of ſmall bladders or drops of an oily juice of a browniſh colour, hardening into a kind of reſin; they are eaſily wiped off when of any ſize, and are truly an oily juice a little hardened. It is probable alſo, that the fine blue flour or powder, called the *bloom*, upon the ſurface of our common plums, is no other than ſuch an oily juice exſudating from their pores in ſmall particles, and hardening into a ſort of reſin.

JUJUBES, in the materia medica, the name of a fruit of the pulpy kind, produced on a tree which Linnæus makes a ſpecies of rhamnus. See RHAMNUS.

The jujubes have been made a general ingredient in pectoral decoctions; but they are now ſeldom uſed on theſe occaſions, and are ſcarce at all heard of in preſcription, or to be met with in our ſhops.

JUL, or JOL, a Gothic word ſignifying a "ſumptuous treat;" and particularly applied to a religious feſtival firſt among the heathens and afterwards among Chriſtians. By the latter it was given to CHRISTMAS; which is ſtill known under the name of *Iul* or *Yool*, in Denmark, Norway, Iceland, and Sweden; nay, even in the north of Britain, and whence the month of Januarius by the Saxons was ſtyled *Giuli*, i. e. "the Feſtival." As this feaſt had originally been dedicated by our heathen anceſtors to the ſun, their ſupreme deity; ſo the Chriſtians, for the purpoſe of engaging the minds of their Ethnic (gentile) brethren, ordered it ſhould be celebrated in memory of the birth of Chriſt: and thus it has been through ages a feaſt of joy and entertainment. We are indebted to Procopius for the firſt account of this feaſt.

JULEP, in pharmacy, a medicine compoſed of ſome proper liquor and a ſyrup of ſugar, of extemporaneous preparation, without decoction, See PHARMACY.

JULIAN, the famous Roman emperor, ſtyled *the Apoſtate*, becauſe he profeſſed the Chriſtian religion before he aſcended the throne, but afterwards openly embraced Paganiſm, and endeavoured to aboliſh Chriſtianity. He made no uſe of violence, however, for this purpoſe; for he knew that violent meaſures had always rendered it more flouriſhing: he therefore behaved with a politic mildneſs to the Chriſtians; recalled all who had been baniſhed on account of religion under the reign of Conſtantius; and undertook to pervert them by his careſſes, and by temporal advantages and mortifications covered over by artful pretences: but he forbad Chriſtians to plead before courts of juſtice, or to enjoy any public employments. He even prohibited their teaching polite literature; well knowing the great advantages they drew from profane authors in their attacks upon Paganiſm and irreligion. Though he on all occaſions ſhowed a ſoverign contempt for the Chriſtians, whom he always called *Galileans*, yet he was ſenſible of the advantage they obtained by their virtue and the purity of their manners; and therefore inceſſantly propoſed their example to the Pagan Prieſts. At laſt, however, when he found that all other methods failed, he gave public employments to the moſt cruel enemies of the Chriſtians, when the cities in moſt of the provinces were filled with tumults and ſeditions, and many of them were put to death: Though it has been pleaded by Julian's apologiſts, that the behaviour of the Chriſtians furniſhed ſufficient pretence for moſt of his proceedings againſt them, and the animoſities among themſelves furniſhed him with the means; that they were continually prone to ſedition, and made a merit of inſulting the public worſhip; and, finally, that they made no ſcruple of declaring, that want of numbers alone prevented them from engaging in an open rebellion. Hiſtorians mention, that Julian attempted to prove the falſehood of our Lord's prediction with reſpect to the temple of Jeruſalem, and reſolved to have that edifice rebuilt by the Jews, about 300 years after its deſtruction by Titus: but all their endeavours ſerved only the more perfectly to verify what had been foretold by Jeſus Chriſt; for the Jews, who had aſſembled from all parts to Jeruſalem, digging the foundations, flames of fire burſt forth and conſumed the workmen*. However, the Jews, who were obſtinately bent on accompliſhing that work, made ſeveral attempts; but it is ſaid, that all who endeavoured to lay the foundation periſhed by theſe flames, which at laſt obliged them entirely to abandon the work. Julian being mortally wounded in a battle with the Perſians, it is ſaid, that he then catched in his hand ſome of the blood which flowed from his wound; and throwing it towards heaven, cried, "Thou Galilean haſt conquered." But notwithſtanding this popular report, Theodoret relates, that Julian diſcovered a different diſpoſition; and employed his laſt moments in converſing with Maximus the philoſopher, on the dignity of the ſoul. He died the following night, aged 32. For a particular account of his reign and exploits, ſee *(Hiſtory of)* CONSTANTINOPLE, n° 7. 33—66.

* See *Jeruſalem.*

No prince was ever more differently repreſented by different authors; on which account it is difficult to form a true judgment of his real character. It muſt, however, be acknowledged, that he was learned, liberal, temperate, brave, vigilant, and a lover of juſtice: but, on the other hand, he had apoſtatiſed to Paganiſm; was an enemy to the Chriſtian religion; and was, in fact, a perſecutor, though not of the moſt ſanguinary claſs. We have ſeveral of his diſcourſes or orations; ſome of his letters: a treatiſe intitled *Miſopogon*, which is a ſatire on the inhabitants of Antioch; and ſome other pieces, all written in an elegant ſtyle. They were publiſhed in Greek and Latin by father Petau in 1630 in quarto; and of which

Spanheimius gave a fine edition in folio in 1696. His moſt famous work was that compoſed againſt the Chriſtians, of which there are ſome fragments in Cyril's refutation of it.

Julian Period, in chronology, a period ſo called, as being adapted to the Julian year.

It is made to commence before the creation of the world. Its principal advantage lies here, that the ſame years of the cycles of the ſun, moon, and indiction, of which three cycles it was made to conſiſt by Joſeph Scaliger in 1580, belonging to any year of this period, will never fall together again till after the expiration of 7980 years. There is taken for the firſt year of this period that which hath the firſt of the cycle of the ſun, the firſt of the cycle of the moon, and the firſt of the indiction cycle, and ſo reckoning on.

The firſt year of the Chriſtian era is always, in our ſyſtems of chronology, the 4714th of the Julian period.

To find what year of the Julian period any given year of Chriſt anſwers to: To the given year of Chriſt add 4713, becauſe ſo many years of the Julian period were expired A. D. 1; and the ſum gives the year of the Julian period ſought.

On the contrary, having the year of the Julian period given, to find what year of Chriſt anſwers thereto: From the year of the Julian period given ſubtract 4713, and the remainder will be the year ſought.

Julian (St), a harbour on the ſouth of Patagonia, in South America, where ſhips uſually touch that are bound to the ſouth ſeas. S. Lat. 48. 15.

JULIERS, a duchy in the circle of Weſtphalia, in Germany, ſeated between the rivers Meaſe and Rhine, and bounded by Pruſſian Guelderland on the north, by the electorate of Triers on the ſouth, by the electorate of Cologne on the eaſt, and by the Netherlands on the weſt. It is about 60 miles long, and 30 broad; and is a very plentiful country, abounding in cattle, corn, and fine meadows, and is well ſupplied with wood; but it is moſt remarkable for a fine breed of horſes, and woad for dying, which is gathered here in abundance. The chief towns are Juliers, Aix-la-Chapelle, Duren, Munſter-Eifel, Bedbur, Weſinburgh, and Laſteren. It is ſubject to the elector Palatine, with the conſent of the kings of Pruſſia and Poland.

Juliers, a city, capital of the duchy of Juliers in Weſtphalia; ſome think this city was founded by Julius Cæſar or Julia Agrippina; but this is much queſtioned by others, becauſe it is not mentioned before Antoninus's Itinerary and Theodoſius Tables. The town is ſmall but well fortified, and neatly built; the houſes are of brick, and the ſtreets broad and regular. The citadel is large and very ſtrong, containing a palace of the ancient dukes, and a ſpacious piazza. In the ſuburbs there is a monaſtery of Carthuſians, nobly endowed by ſeveral dukes of Juliers. The town is but poorly inhabited, though they have a fine woollen manufactory in this country, and likewiſe another of linen. It was taken by prince Maurice of Naſſau in 1610, and by the Spaniards in 1622. It is ſeated on the river Roer in E. Long. 6. 35. N. Lat. 50. 55.

JULIO Romano. See Romano.

JULIUS Cæsar. See Cæsar.

Julius II. (Julian de la Rovere), pope, remarkable for his warlike diſpoſition, and his political negociations: by the latter, he engaged the principal powers of Europe to league with him againſt the republic of Venice, called *the league of Cambray*, ſigned in 1508. The Venetians having purchaſed peace by the ceſſion of part of Romania, Julius turned his arms againſt Louis XII. king of France, and appeared in perſon, armed cap-a-pee, at the ſiege of Mirandola; which place he took by aſſault in 1511. But proceeding to excommunicate Louis, the king wiſely turned his own weapons againſt him, by calling a general council at Piſa: at which the pope refuſing to appear, was declared to be ſuſpended from the holy ſee; and Louis, in his turn, excommunicated the pope, who died ſoon after in 1512. He built the famous church of St. Peter at Rome, and was a patron of the polite arts.

Julius Vicus (anc. geog.), a town of the Nemetes in Gallia Belgica; ſituated between the Tres Tabernae and Noviomagus. Now *Germerſheim*, a town of the Lower Palatinate, on the weſt ſide of the Rhine. E. Long. 8. 15. N. Lat. 49. 12.

Julius Pollux. See Pollux.

IULUS, a ſon of Aſcanius, born in Lavinium. In the ſucceſſion of the kingdom of Alba, Æneas Sylvius, the ſon of Æneas and Lavinia, was preferred to him. He was, however, made chief prieſt.

Plate CCLIII.

Iulus, in zoology; a genus of inſects of the order aptera. The feet are very numerous, being on each ſide twice as many as the ſegments of the body; the antennæ are moniliform; there are two articulated palpi; and the body is of a ſemicylindrical form. 1. The tereſtris is a ſmall ſpecies, having on each ſide 100 very ſhort cloſely ſet feet. The body is cylindrically round, conſiſting of fifty ſegments, each of which gives riſe to two pair of feet; by which means the feet ſtand two and two by the ſide of each other, ſo that between every two there is a little more ſpace. Its colour is blackiſh, and the animal is very ſmooth. It is met with under ſtones, and in the earth. 2. The ſabuloſus is of an aſhen colour, ſmooth, and ſometimes has two longitudinal bands of a dun-colour upon its back. The body is compoſed of about ſixty ſegments, which appear double; one part of the ſegment being quite ſmooth, the other charged with longitudinal ſtriæ very cloſe-ſet together, which cauſes the cylindric body of the inſect to appear interſected alternately with ſmooth and ſtriated ſegments. Each ſegment gives riſe to two pair of feet, which makes 240, or 120 feet on each ſide. Theſe feet are ſlender, ſhort, and white. The antennæ are very ſhort, and conſiſt of five rings. The inſect, when touched, rolls itſelf up into a ſpiral; ſo that its feet are inwards, but yet turned towards the ground. It is found together with the preceding one, to which it bears a reſemblance, though it is much larger. There are 10 other ſpecies.

JULY, the ſeventh month of the year; during which the ſun enters the ſign Leo. The word is derived from the Latin *Julius*, the ſurname of C. Cæſar the dictator, who was born in it. Mark Antony firſt gave this month the name *July*, which before was called *Quintilius*, as being the fifth month of the year in the old Roman kalendar eſtabliſhed by Romulus, which began in the month of March. For the ſame reaſon, Auguſt was called *Sextilis*; and September, October, November, and December, ſtill retain the name of their firſt rank.

Quæ ſequitur, numero turba notata ſuo. Ovid. Faſt.

On the 19th day of this month the dog-days are commonly ſuppoſed to begin; when, according to Hippocrates and Pliny, the ſea boils, wine turns ſour, dogs go mad, the bile is increaſed and irritated, and all animals decline and languiſh.

July-Flowers. See Dianthus.

JUMIEGE, a town of Normandy in France, and in the territory of Caux, with a celebrated Benedictine abbey. It is ſeated on the river Seine, in E. Long. 0. 55. N. Lat. 49. 25.

JUNCI lapidei, in natural hiſtory, the name given by authors to a ſpecies of foſſile coral, of the tubularia kind, and compoſed of a congeries of ſmall tubules, which are uſually round and ſtriated within. See Plate CC.

JUNCTURE, any joint or cloſing of two bodies. See Joint.

Juncture, in oratory, is a part of compoſition, particularly recommended by Quintilian, and denotes ſuch an attention to the nature of the vowels, conſonants, and ſyllables, in the connection of words, with regard to their ſound, as will render the pronunciation moſt eaſy and pleaſant, and beſt promote the harmony of the ſentence. Thus the coalition of two vowels, occaſioning an hollow and obſcure ſound, and likewiſe of ſome conſonants, rendering it harſh and rough, ſhould be avoided: nor ſhould the ſame ſyllable be repeated at the beginning and end of words, becauſe the ſound becomes hereby harſh and unpleaſant. The following verſe in Virgil's Æneid is an example of juncture.

Arma virumque cano, Troja qui primus ab oris.

JUNCUS, the rush, in botany: A genus of the monogynia order, belonging to the hexandria claſs of plants; and in the natural method ranking under the 5th order, *Tripetaloideæ*. The calyx is hexaphyllous; there is no corolla; the capſule is unilocular. There are many ſpecies which are univerſally known, being very troubleſome weeds, and difficult to be eradicated. The pith of two kinds, called the *conglomeratus* and *effuſus*, or round-headed and ſoft ruſhes are uſed for wicks to lamps and ruſh-lights*. The *conglomeratus* and *aculus* or marine ruſh, are planted with great care on the banks of the ſea in Holland in order to prevent the water from waſhing away the earth; which would otherwiſe be removed every tide, if it were not for the roots of thoſe ruſhes, which faſten very deep in the ground, and mat themſelves near the ſurface in ſuch a manner as to hold the earth cloſely together. Therefore, whenever the inhabitants perceive that the roots of theſe ruſhes are deſtroyed, they are very aſſiduous in repairing them. In the ſummer-time when the ruſhes are fully grown, they are cut and tied up in bundles, which are dried, and afterwards carried into the larger towns and cities, where they are wrought into baſkets, and ſeveral other uſeful things, which are frequently ſent into England. Theſe ſorts do not grow ſo ſtrong in England as on the Maeſe, where they ſometimes arrive at the height of four feet and upwards.

* See *Ruſh Lights*.

A ſpecies of ruſh termed *juncus odoratus*, "ſweet ruſh, or camel's hay," is ſometimes brought to England from Turkey and Arabia, tied up in bundles about a foot long. The ſtalk, in ſhape and colour, ſomewhat reſembles a barley-ſtraw; it is full of fungous pith like that of our common ruſhes: the leaves are like thoſe of wheat, and ſurround the ſtalk with ſeveral coats, as in the reed. The flowers are of a carnation colour, ſtriped with a lighter purple. The whole plant, when in perfection, has a hot, bitteriſh, not unpleaſant, aromatic taſte, and a very fragrant ſmell: by long keeping it loſes greatly its aromatic flavour. Diſtilled with water, it yields a conſiderable quantity of an eſſential oil. It was formerly often uſed in medicine as an aromatic, and in obſtructions of the viſcera, &c. but is very little employed at preſent.

JUNE, the ſixth month of the year, during which the ſun enters the ſign of Cancer. The word comes from the Latin *Junius*, which ſome derive *à Junone*. Ovid, in the ſixth of his *Faſti*, makes the goddeſs ſay,

Junius à noſtro nomine nomen habet.

Others rather derive it *à junioribus*, this being for young people as the month of May was for old ones.

Junius eſt juvenum; qui fuit antè ſenum.

In this month is the ſummer ſolſtice.

JUNGERMANNIA, in botany: A genus of the natural order of algæ, belonging to the cryptogamia claſs of plants. The male flower is pedunculated, and naked; the anthera quadrivalved: the female flower is ſeſſile, naked, with roundiſh ſeeds. There are 29 ſpecies, all natives of Britain, growing in woods, ſhady places, by the ſides of ditches, &c. Many of them are beautiful objects for the microſcope.

JUNGIA, in botany: A genus of the polygamia ſegregatæ order, belonging to the ſyngeneſia claſs of plants; the common receptacle is chaffy: the perianthium three-flowered; the florets tubular, two lipped; the exterior lip ligulate; the interior one bipartite.

JUNIPERUS, the Juniper tree: A genus of the monodelphia order, belonging to the monœcia claſs of plants; and in the natural method ranking under the 51ſt order, *Coniferæ*. The male amentum is a calyx of ſcales; there is no corolla; three ſtamina: the female calyx tripartite; there are three petals; and as many ſtyles; the berry is triſpermous, and equal by means of three tubercles of the indurated calyx adhering to it.

Species. 1. The *communis*, or common juniper, grows naturally in many parts of Britain upon dry barren commons, where it ſeldom riſes above the height of a low ſhrub. Mr Evelyn aſſures us, that "the juniper, though naturally of the growth of England, is very little known in many parts of the country: for it grows naturally only in dry, chalky, or ſandy land; and where the ſoil is oppoſite to this, the plant is rarely found. Thoſe who have been uſed to ſee it in its wild ſtate, on ſandy barren commons, &c. will have little inducement to plant it; as there they will ſee it procumbent, ſeldom ſhowing a tendency to aſpire: but when planted in a good ſoil, it will riſe to the height of 15 or 16 feet, and produce numerous branches from the bottom to the top, forming a well-looking buſhy plant. Theſe branches are exceedingly tough, and covered with a ſmooth bark of a reddiſh colour, having a tinge of purple. The leaves are narrow and ſharp-pointed, growing by threes on the branches: their upper ſurface has a greyiſh ſtreak down the middle; but their under ſurface is of a fine green colour, and they garniſh the ſhrub in great plenty. The flowers are ſmall, and of a yellowiſh colour. They are ſucceeded by the berries, which are of a bluiſh colour when ripe." Of this ſpecies there is a variety called *Swediſh juniper*, which grows 10 or 12 feet high, very branchy the whole length, with the branches growing more erect, and leaves, flowers, and fruit, like the former. But Mr Miller affirms the Swediſh juniper to be a diſtinct ſpecies. A proſtrate and very dwarfiſh variety is mentioned by Mr Lightfoot, under the name of *dwarf Alpine juniper*. It is frequently found in the mountains in the Highlands of Scotland, and has broader and thicker leaves than the former; the berries are alſo larger, or more oval than ſpherical. 2. The *oxycedrus*, or Spaniſh juniper, riſes from 10 to 15 feet high, cloſely branched from bottom to top; having ſhort, awl-ſhaped, ſpreading leaves by threes, and ſmall diœcious flowers, ſucceeded by large reddiſh-brown berries. 3. The *thurifera*, or blue-berried Spaniſh juniper, grows 20 feet high or more, branching in a conic form, with acute imbricated leaves growing by fours, and ſmall diœcious flowers, ſucceeded by large blue flowers. 4. The *Virginiana*, or Virginian cedar, grows 30 or 40 feet high, branching from bottom to top in a conic manner, ſmall leaves by threes adhering at their baſe; the younger ones imbricated, and the old ones ſpreading; with diœcious flowers, ſucceeded by ſmall blue berries. 5. The *Lycia*, Lycian cedar, or olibanum tree, grows 20 feet high, branching erect; garniſhed with ſmall obtuſe oval leaves, every-where imbricated; having diœcious flowers, ſucceeded by large oval brown berries. It is a native of Spain and Italy. 6. The *Phœnicia*, or Phenician cedar, grows about 20 feet high, branching pyramidically; adorned with ternate and imbricated obtuſe leaves; and diœcious flowers, ſucceeded by ſmall yellowiſh berries. It is a native of Portugal. 7. The *Bermudiana*, or Bermudian cedar, grows 20 or 30 feet high, has ſmall acute leaves by threes below, the upper ones awl-ſhaped, acute, and decurrent, by pairs or fours, ſpreading outward, and diœcious flowers, ſucceeded by purpliſh berries. It is a native of Bermudas. 8. The *Sabina*, or ſavin tree; of which there are the following varieties, viz. ſpreading, upright, and variegated ſavin. The firſt grows three or four feet high, with horizontal and very ſpreading branches; with ſhort, pointed, decurrent, erect, oppoſite leaves; and diœcious flowers, ſucceeded by bluiſh berries, but very rarely producing either flowers or fruit. The ſecond grows eight or ten feet high, with upright branches, dark-green leaves like the former, and diœcious flowers, ſucceeded by plenty of berries. The third has the ends of many of the ſhoots and young branches variegated with white, and the leaves finely ſtriped; ſo that it makes a beautiful appearance. There are two other ſpecies; the *Barbadenſis*, with leaves all imbricated four-ways, the younger ones ovate, the elder acute; and the *Chinenſis*, with leaves decurrent imbricate-expanding crowded, the ſtem-leaves threefold, the branch-leaves fourfold.

Culture. The propagation of all the junipers is by ſeed, and of the ſavins by layers and cuttings; but theſe laſt may alſo be raiſed from the berries, if they can be procured. They may all be ſowed in beds of common light earth; except the cedar of Bermudas, which muſt be ſowed in pots, to have ſhelter in winter. When the hardy kinds have had two or three years growth in the ſeed-bed, they may be planted out in autumn or in ſpring, in nurſery-rows two feet aſunder, there to remain till of due ſize for final tranſplantation into the ſhrubbery. The Bermudas cedar muſt be ſheltered under a frame for the firſt year or two; when they muſt be ſeparated into ſmall pots, to be ſheltered alſo in winter for three or four years, till they have acquired ſome ſize and ſtrength; then turned out into pots in the full ground, where they are to remain in a warm ſituation; though a ſhelter of mats for the firſt winter or two during hard froſts will be of great ſervice. The ſeaſon for tranſplanting all the ſorts is either in autumn, October, or November, or in March, and early in April.

Uſes, &c. Juniper-berries have a ſtrong, not diſagreeable ſmell; and a warm, pungent, ſweet taſte; which, if they are long chewed, or previouſly well bruiſed, is followed by a bitteriſh one. The pungency ſeems to reſide in the bark; the ſweet in the juice; the aromatic flavour in oily veſicles ſpread through the ſubſtance of the pulp, and diſtinguiſhable even by the eye; and the bitter in the ſeeds. The freſh berries yield, on expreſſion, a rich, ſweet, honey-like aromatic juice; if previouſly pounded ſo as to break the ſeeds, the juice proves tart and bitter.—Theſe berries are uſeful carminatives and ſtomachics: for theſe purpoſes a ſpirituous water and eſſential oil are prepared from them, and they are alſo ingredients in various medicines. The liquor remaining after the diſtillation of the oil paſſed through a ſtrainer, and gently exhaled to the conſiſtence of a rob, proves likewiſe a medicine of great utility, and in many caſes is perhaps preferable to the oil or the berry itſelf. Hoffman is expreſsly of this opinion, and recommends the rob of juniper in debility of the ſtomach and inteſtines; and ſays it is particularly ſerviceable to old people who are ſubject to theſe diſorders, or labour under a difficulty with regard to the urinary ſecretion. This rob is of a dark browniſh-yellow colour, a balſamic ſweet taſte, with a little of the bitter, more or leſs according as the ſeeds in the berry have been more or leſs bruiſed. But perhaps one of the beſt forms under which they can be uſed is that of a ſimple watery infuſion. This, either by itſelf or with the addition of a ſmall quantity of gin, is a very uſeful drink for hydropic patients. An infuſion of the tops has alſo been advantageouſly employed in the ſame manner. The Swedes prepare an extract from the berries, probably of the nature of the rob abovementioned, which ſome eat for breakfaſt. In Germany the berries are bruiſed and put into the ſauce make uſe of for a wild boar; and are frequently alſo eaten with other pork, to give it a wild-boar flavour. In Carniola, and ſome other diſtricts, the inhabitants make a kind of wine of them ſteeped in water; but it is difficult to prevent this liquor from growing ſour. The Laplanders, as we are told by Linnæus, drink infuſions of the juniper berries as we do tea and coffee. Thruſhes and grous feed on the berries, and diſſeminate the ſeed in their dung. It is remarkable that the berries of the juniper are two years in ripening. They ſometimes appear in an uncommon form; the leaves of the cup grow double the uſual ſize, approaching, but not cloſing; and the three petals fit exactly cloſe, ſo as to keep the air from the *tipulæ juniperi* which inhabit them.—The whole plant has a ſtrong aromatic ſmell. The wood when burnt emits a fragrant odour like incenſe. It is of a reddiſh colour, very hard and durable; and when large enough, is uſed in marquetry and veneering, and in making cups, cabinets, &c. Graſs will not grow beneath juniper, but this tree itſelf is ſaid to be deſtroyed by the meadow-oat. The oil of juniper mixed with that of nuts makes an excellent varniſh for pictures, wood-work, and preſerving iron from ruſting. The reſin powdered and rubbed into paper prevents the ink from ſinking through it, for which it is frequently uſed under the name of **Pounce**.—The charcoal made from this wood endures longer than any other, inſomuch that live embers are ſaid to have been found in the aſhes after being a year covered.—For the properties of ſome other ſpecies, ſee the articles **Sandarach** *(Gum)*, and **Olibanum**.

JUNIUS (Adrian), one of the moſt learned men of the age in which he lived, was born at Horn in Holland in 1511. He travelled into all parts of Europe, and practiſed phyſic with reputation in England; where, among other works, he compoſed a Greek and Latin Lexicon, to which he added above 6500 words; an Epithalamium on the marriage of queen Mary with king Philip of Spain; and *Animadverſa & de Coma Commentarius*, which is the moſt applauded of all his works. He died in 1575.

Junius (Francis), profeſſor of divinity at Leyden, was born at Bourges in 1545, of a noble family, and ſtudied ſome time at Lyons. Bartholomew Aneau, who was principal of the college in that city, gave him excellent inſtructions with regard to the right method of ſtudying. He was remarkable for being proof againſt all temptations to lewdneſs; but a libertine ſo far overpowered him by his ſophiſtry, that he made him an atheiſt: however, he ſoon returned to his firſt faith; and, averſe as he was to unlawful love, he had no averſion to matrimony, but was married no leſs than four times. He was employed in public affairs by Henry IV.; and at laſt was invited to Leyden to be profeſſor of divinity, which employment he diſcharged with honour, till he was ſnatched away by the plague in 1602. Du Pin ſays, he was a learned and judicious critic. He wrote, in conjunction with Emmanuel Tremellius, a Latin verſion of the Hebrew text of the Bible. He alſo publiſhed Commentaries on a great part of the Holy Scriptures; and many other works, all in Latin.

Junius (Francis), or *Francis Du Jon*, the ſon of the preceding, was born at Heidelberg in 1589. He at firſt deſigned to devote himſelf to a military life; but after the truce concluded in 1609, he applied himſelf entirely to ſtudy. He came to England in 1620, and lived 30 years in the earl of Arundel's family. He was greatly eſteemed not only for his profound erudition, but alſo for the purity of his manners; and was ſo paſſionately fond of the ſtudy of the northern languages, that, being informed there were ſome villages in Frieſland where the ancient language of the Saxons was preſerved, he went and lived two years in that country. He returned to England in 1675; and after ſpending a year at Oxford, retired to Windſor, in order to viſit Voſſius, at whoſe houſe he died in 1677. The univerſity of Oxford, to which he bequeathed his manuſcripts, erected a very handſome monument to his memory. He wrote, 1. *De Pictura Veterum*, which is admired by all the learned: the beſt edition of it is that of Rotterdam in 1694. He publiſhed the ſame work at London in Engliſh. 2. An explication of the old Gothic manuſcript, called the *Silver* one, becauſe the four Goſpels are there written in ſilver Gothic letters; this was publiſhed with notes by Thomas Mareſchal, or Marſhall. 3. A large Commentary on the Harmony of the four Goſpels by Tatian, which is ſtill in manuſcript. 4. A Gloſſary in five languages, in which he explains the origin of the Northern languages; publiſhed at Oxford in 1745, in folio, by Mr Edward Lee.

JUNK, in ſea-language, a name given to any remnants or pieces of old cable, which is uſually cut into ſmall portions, for the purpoſe of making points, matts, gaſkets, ſennit, &c.

JUNO, in pagan worſhip, was the ſiſter and wife of Jupiter, and the goddeſs of kingdoms and riches; and alſo ſtyled the *queen of heaven*: ſhe preſided over marriage and child-birth, and was repreſented as the daughter of Saturn and Rhea. She married Jupiter; but was not the moſt complaiſant wife: for, according to Homer, that god was ſometimes obliged to make uſe of all his authority to keep her in due ſubjection; and the ſame author obſerves, that on her entering into a conſpiracy againſt him, he puniſhed her by ſuſpending her in the air with two anvils faſtened to her feet, and golden manacles on her hands, which all the other deities looked on without a poſſibility of helping her. However, her jealouſy made her frequently find opportunities of interrupting her huſband in the courſe of his amours; and prompted her to puniſh with unrelenting fury Europa, Semele, Io, Latona, and the reſt of his miſtreſſes. Jupiter himſelf having conceived without any commerce with a female, Juno, in revenge, conceived Vulcan by the wind, Mars by touching a flower pointed out to her by the goddeſs Flora, and Hebe by eating greedily of lettuces.

Juno, as the queen of heaven, preſerved great ſtate: her uſual attendants were Terror and Boldneſs, Caſtor, Pollux, and 14 nymphs; but her moſt faithful attendant was the beautiful Iris, or the rainbow. Homer deſcribes her in a chariot adorned with precious ſtones, the wheels of which were of ebony, and which was drawn by horſes with reins of gold. But ſhe is more commonly painted drawn by peacocks. She was repreſented in her temple at Corinth, ſeated on a throne, with a crown on her head, a pomegranate in one hand, and in the other a ſceptre with a cuckoo on its top. This ſtatue was of gold and ivory.

Some mythologiſts ſuppoſe that Juno ſignifies the air: others, that ſhe was the Egyptian Iſis; who being repreſented under various figures, was by the Greeks and Romans repreſented as ſo many diſtinct deities.

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JUNONALIA, a feſtival obſerved by the Romans in honour of Juno. It was inſtituted on account of certain prodigies that happened in Italy, and was celebrated by matrons. In the ſolemnity two white cows were led from the temple of Apollo into the city through the gate called *Carmentalis*, and two images of Juno, made of cypreſs, were born in proceſſion. Then marched 27 girls, habited in long robes, ſinging an hymn to the goddeſs; then came the Decemviri, crowned with laurel, in veſtments edged with purple. This pompous company, going through the *Vicus Jugarius*, had a dance in the great field of Rome; from thence they proceeded through the *Forum Boarium* to the temple of Juno, where the victims were ſacrificed by the Decemviri, and the cypreſs images were left ſtanding. This feſtival is not mentioned in the *faſti* of Ovid, but is fully deſcribed by Livy, lib. 7. dec. 3. The hymn uſed upon the occaſion was compoſed by Livius the poet.

JUNTO, in matters of government, denotes a ſelect council for taking cognizance of affairs of great conſequence, which require ſecrecy.

In Spain and Portugal, it ſignifies much the ſame with convention, aſſembly, or board among us: thus we meet with the junto of the three eſtates, of commerce, of tobacco, &c. See BOARD, &c.

IVORY, in natural hiſtory, &c. a hard, ſolid, and firm ſubſtance, of a white colour, and capable of a very good poliſh. It is the tuſk of the elephant*; and is hollow from the baſe to a certain height, the cavity being filled up with a compact medullary ſubſtance, ſeeming to have a great number of glands in it. It is obſerved, that the Ceylon ivory, and that of the iſland of Achem, do not become yellow in the wearing, as all other ivory does; for this reaſon the teeth of theſe places bear a larger price than thoſe of the coaſt of Guinea.

* See *Ele- as.*

Hardening, Softening, and ſtaining of Ivory. See Bones, and HORNS.

JUPITER, the ſupreme god of the ancient pagans. The theologiſts, according to Cicero, reckoned up three Jupiters; the firſt and ſecond of whom were born in Arcadia; of theſe two, the one ſprang from Æther, the other from Cœlus. The third Jupiter, was the ſon of Saturn, and born in Crete, where they pretended to ſhow his ſepulchre. Cicero in other places ſpeaks of ſeveral Jupiters who reigned in different countries. The Jupiter, by whom the poets and divines underſtand the ſupreme god, was the ſon of Saturn king of Crete. He would have been devoured by his father as ſoon as born, had not his mother Rhea ſubſtituted a ſtone inſtead of the child, which Saturn immediately ſwallowed. Saturn took this method to deſtroy all his male children, becauſe it had been foretold by Cœlus and Terra, that one of his ſons ſhould deprive him of his kingdom. Jupiter, being thus ſaved from his father's jaws, was brought up by the Curetes in a den on mount Ida. Virgil tells us, that he was fed by the bees; out of gratitude for which, he changed them from an iron to a golden colour. Some ſay, that his nurſes were Amalthæa and Meliſſa, who gave him goats milk and honey; and others, that Amalthæa was the name of the goat which nouriſhed him, and which, as a reward for her great ſervices, was changed into a conſtellation. According to others, he was fed by wild pigeons, who brought him ambroſia from Oceanus; and by an eagle, who carried nectar in his beak from a ſteep rock: for which he rewarded the former, by making them the foretellers of winter and ſummer; and the laſt by giving him immortality, and making him his thunder-bearer. When grown up, he drove his father out of heaven, and divided the empire of the world with his brothers. For himſelf, he had heaven and earth. Neptune had the ſea and waters; and Pluto hell. The Titans undertook to deſtroy Jupiter, as he had done his father. Theſe Titans were giants, the ſons of Titan and the Earth. They declared war againſt Jupiter, and heaped mountains upon mountains, in order to ſcale heaven: but their efforts were unſucceſsful. Jupiter overthrew them with his thunder, and ſhut them up under the waters and mountains, from which they were not able to get out.

Jupiter had ſeveral wives: the firſt of whom, named *Metis*, he is ſaid to have devoured when big with child, by which he himſelf became pregnant; and Minerva iſſued out of his head, completely armed and fully grown. His ſecond was Themis; the name of his third is not known; his fourth was the celebrated Juno, whom he deceived under the form of a cuckoo, which to ſhun the violence of a ſtorm fled for ſhelter to her lap. He was the father of the Muſes and Graces; and had a prodigious number of children by his miſtreſſes. He metamorphoſed himſelf into a ſatyr to enjoy Antiope; into a bull, to carry off Europa; into a ſwan, to abuſe Leda; into a ſhower of gold, to corrupt Danäe; and into ſeveral other forms to gratify his paſſions. He had Bacchus by Semele, Diana and Apollo by Latona, and was the father of Mercury and the other gods.

The heathens in general believed that there was but one ſupreme God; but when they conſidered this one great being as influencing the affairs of the world, they gave him as many different names; and hence proceeded their variety of nominal gods. When he thundered or lightened, they called him *Jupiter;* when he calmed the ſea, *Neptune;* when he guided their councils, *Minerva;* and when he gave them ſtrength in battle, *Mars.* In proceſs of time they uſed different repreſentations of this Jupiter, &c. and conſidered them, vulgarly, at leaſt, as ſo many different perſons. They afterwards regarded each of them in different views: *i. e.* The Jupiter that ſhowered down bleſſings, was called the *Kind Jupiter;* and when puniſhing, the *Terrible Jupiter.* There was alſo one Jupiter for Europe, and another for Africa: and in Europe, there was one great Jupiter who was the particular friend of the Athenians, and another who was the ſpecial protector of the Romans: nay, there was ſcarce a town or hamlet perhaps, in Italy, that had not a Jupiter of its own; and the Jupiter of Terracina or Jupiter Anxur, repreſented in medals as young and beardleſs, with rays round his head, more reſembled Apollo than the great Jupiter at the Capitol. In this way Jupiter at length had temples and different characters almoſt every where: at Carthage, he was called *Ammon;* in Egypt, *Serapis;* at Athens, the great Jupiter was the Olympian Jupiter; and at Rome the greateſt Jupiter was the Capitoline Jupiter, who was the guardian and benefactor of the Romans, and whom they called the "beſt and greateſt Jupiter;" *Jupiter optimus maximus.*

Jupiter.

maximus. The figure of this Jupiter was repreſented in his chief temple on the Capitoline hill, as ſitting on a curule chair, with the fulmen or thunder, or rather lightning, in one hand, and a ſceptre in the other. This fulmen in the figures of the old artiſts was always adapted to the character under which they were to repreſent Jupiter. If his appearance was to be mild and calm, they gave him the conic fulmen or bundle of flames wreathed cloſe together, held down in his hand: When puniſhing, he holds up the ſame figure, with two tranſverſe darts of lightning, ſometimes with wings added to each ſide of it, to denote its ſwiftneſs; this was called by the poets the three-forked bolt of Jove: and when he was going to do ſome exemplary execution, they put in his hand a handful of flames, all let looſe in their utmoſt fury: and ſometimes filled both his hands with flames. The ſuperiority of Jupiter was principally manifeſted in that air of majeſty which the ancient artiſts endeavoured to expreſs in his countenance: particular attention was paid to the head of hair, the eye-brows, and beard. There are ſeveral heads of the mild Jupiter on ancient ſeals; where his face has a mixture of dignity and eaſe in it, admirably deſcribed by Virgil, Æn. i. v. 256. The ſtatues of the Terrible Jupiter were generally of black marble, as thoſe of the former were of white: the one ſitting with an air of tranquillity; the other ſtanding, more or leſs diſturbed. The face of the one is pacific and ſerene; of the other angry or clouded. On the head of the one the hair is regular and compoſed; on the other it is ſo diſcompoſed, that it falls half-way down the forehead. The face of the Jupiter Tonans reſembles that of the Terrible Jupiter; he is repreſented on gems and medals as holding up the triple bolt in his right hand, and ſtanding in a chariot, which ſeems to be whirled on impetuouſly by four horſes. Thus he is alſo deſcribed by the poets. Ovid. Deian. Herc. v. 28. Horace lib. i. od. 4. v. 8. Jupiter, as the intelligence preſiding over a ſingle planet, is repreſented only in a chariot and pair: on all other occaſions, if repreſented in a chariot, he is always drawn by four horſes. Jupiter is well known as the chief ruler of the air, whoſe particular province was to direct the rains, the thunders, and the lightnings. As the diſpenſer of rain, he was called *Jupiter Pluvius:* under which character he is exhibited ſeated in the clouds, holding up his right hand, or extending his arms almoſt in a ſtraight line each way, and pouring a ſtream of hail and rain from his right hand upon the earth; whilſt the fulmen is held down in his left. The wings that are given him relate to his character of preſiding over the air: his hair and beard on the Antonine pillar are all ſpread down by the rain, which deſcends in a ſheet from him, and falls for the refreſhment of the Romans; whilſt their enemies are repreſented as ſtruck with the lightnings, and lying dead at their feet.

Some conſider a great part of the fable of Jupiter to include the hiſtory of Noah, and his three ſons; and that Saturn is Noah, who ſaw all mankind periſh in the waters of the deluge; and who, in ſome ſort, ſwallowed them up, by not receiving them into the ark. Jupiter is Ham; Neptune Japheth; and Shem, Pluto.

The Titans, it is thought, repreſent the old giants, who built the tower of Babel, and whoſe pride and preſumption God had confounded, by changing their language, and pouring out the ſpirit of diſcord and diviſion among them. The name of *Jupiter*, or *Jovis Pater*, is thought to be derived from Jehovah, pronounced with the Latin termination *Jovis* inſtead of *Jova;* and in medals we meet with *Jovis* in the nominative, as well as oblique caſes: for example *Jovis cuſtos, Jovis propugnator, Jovis ſtator*. To the name of *Jovis* was added *pater;* and afterwards inſtead of "Jovis pater," *Jupiter* was uſed by abbreviation.

Jupiter, Jura.

The name *Jupiter* was not known to the Hebrews till the reign of Alexander the Great, and the kings his ſucceſſors. Antiochus Epiphanes commanded the idol of Jupiter Olympius to be placed in the temple at Jeruſalem; and that of Jupiter the defender of ſtrangers in the temple of Mount Gerizim. 2 Macc. vi. 2. While St Paul and St Barnabas were at Lyſtra, they were taken for gods, becauſe they cured one who had been lame from his birth, and that by an expreſſion only: St Paul was taken for Mercury, by reaſon of his eloquence; and St Barnabas for Jupiter (Acts xiv. 11, 12.), on account probably of his good mein.

JUPITER, ♃, in aſtronomy, one of the ſuperior planets, remarkable for its brightneſs; and which by its proper motion ſeems to revolve round the earth in about twelve years. See ASTRONOMY-*Index*.

JURA, one of the Hebrides, or Weſtern Iſlands of Scotland, lying oppoſite to Knapdale in Argyleſhire, is ſuppoſed to be about 34 miles long and 10 broad. It is the moſt rugged of all the Hebrides; and is compoſed chiefly of vaſt mountains, naked, and without a poſſibility of cultivation. Some of the ſouth and weſtern ſides only are improveable, and in good ſeaſons as much bear and oats are raiſed as will maintain the inhabitants; though by the diſtillation, as Mr Pennant ſuppoſes, of their grain, they ſometimes want. Bear produces four or five fold, and oats three fold. Sloes are the only fruits of the iſland. An acid for punch is here made from the berries of the mountain-aſh; and a kind of ſpirit is alſo diſtilled from them. Neceſſity hath inſtructed the inhabitants in the uſe of native dyes. Thus the juice of the tops of heath boiled ſupplies them with a yellow; the roots of the white water-lily with a dark-brown: thoſe of the yellow water iris with a black; and the galium verum, *ru* of the iſlanders, with a very fine red, not inferior to madder. On the hills is ſome paſture for cattle; and the produce, when Mr Pennant viſited the iſland, amounted to about 300 or 400 head of black cattle, ſold annually at 3l. each to graziers who come for them: about 100 horſes are alſo ſold annually; a few ſheep with fleeces of a moſt excellent quality, and great numbers of goats. The other animals of Jura are about 100 ſtags; though theſe muſt formerly have been much more numerous, as the original name of the iſland was *Deir-ay*, or the *iſle of deer*, ſo called by the Norwegians on account of the abundance of deer found in it. Here alſo Mr Pennant had ſome obſcure account of a worm that, in a leſs pernicious degree, reſembles the *FURIA infernalis* of Linnæus. The *fillan*, a little worm of Jura, ſmall as a thread, and not an inch in length, inſinuates itſelf under the ſkin, cauſes a redneſs and great pain, flies ſwiftly from place to place; but is cured by a poultice of cheeſe and honey. Of the mountains of Jura, thoſe from

BRITISH MUSEUM

Jura.

Jura, Jurats.

from their ſhape called the *paps*, are the moſt remarkable. There are only three very large ones; the biggeſt, called *Beinn-an-oir*, or *the mountain of gold*, lies fartheſt to the north; the ſecond is called *Beinn-ſheunta*, or *the hallowed mountain;* and the third, *Beinn-a-chaolois*, or *the mountain of the ſound*, is the leaſt of the three. Mr Pennant aſcended the firſt with great labour and difficulty. It is compoſed of vaſt ſtones, covered with moſſes near the baſe; but all above bare and unconnected with each other. The whole, he ſays, ſeems a *cairn*, the work of the ſons of Saturn. The grandeur of the proſpect from the top abundantly made amends for the fatigue of aſcending the mountain. Jura itſelf afforded a ſtupendous ſcene of rock, varied with innumerable little lakes. From the weſt ſide of the hill ran a narrow ſtripe of rock terminating in the ſea, and called *the ſlide of the old hag*. To the ſouth appeared Ilay extended like a map beneath his feet; and beyond that the north of Ireland; to the eaſt two other iſlands, Cantyre, Arran, and the frith of Clyde bounded by Ayrſhire; an amazing tract of mountains to the north-eaſt as far as *Ben-lomond; Skarba* finiſhed the northern view; and over the weſtern ocean were ſcattered Colonſay and Oranſay, Mull, Iona, and its neighbouring iſles; and ſtill further, the long extents of Tirey and Col, juſt apparent. The other paps are ſeen very diſtinctly, but all of them inferior in height. Mr Banks and his friends mounted that to the ſouth, and found the height to be 2359 feet; but this is far overtopped by *Beinn-an-oir*. The ſtones of this mountain are white, a few red, quartzy, and compoſed of ſmall grains; but ſome are *breciated* or filled with cryſtalline kernels of an amethyſtine colour. The other ſtones of the iſland are, a cinereous ſlate, veined with red, and uſed here as a white-ſtone; a micaceous ſand-ſtone; and between the ſmall iſles and Arſin, a micaceous quartzy rock-ſtone. On the weſt ſide of the iſland there is an anchoring-place called *Whitfarlan;* towards the north end is a bay called *Da'l yaul:* and on the ſame coaſt is formed another riding-place for veſſels among ſeveral ſmall iſlands. Between the north end of Jura and the ſmall iſle of Skarba, there is a famous whirlpool, called *Cory-Vrekan*, from Brecan, ſon to a king of Denmark, who periſhed in this gulph. His body being caſt aſhore on the north ſide of Jura, was buried in a cave, and his grave is ſtill diſtinguiſhed by a tombſtone and altar. In this vortex, which extends about a mile in breadth, the ſea begins to boil and ferment with the tide of flood, increaſing gradually to a number of whirlpools, which, in the form of pyramids, ſpout up the water with a great noiſe, as high as the maſt of a ſmall veſſel, agitated into ſuch a foam as makes the ſea appear white even at the diſtance of two leagues. About half flood the violence begins to decreaſe, and continues to do ſo till about half an hour after high-water: then it boils as before, till within an hour of low-water, when the ſmalleſt fiſhing-boat may croſs it without danger.

Jura is furniſhed with many rivulets and ſprings of excellent water, and the air is remarkably healthy; its ſalubrity being increaſed by the high ſituation, perpetually fanned by breezes. It is, however, but ill peopled; and did not contain above 700 or 800 inhabitants at the time it was viſited by Mr Pennant. The women are prolific, and very often bear twins. The inhabitants live to a great age, and are liable to few diſtempers. Men of 90 can work; and there was then living a woman of 80, who could run down a ſheep. The inhabitants are all Proteſtants, but addicted to ſome ſuperſtitions. The pariſh is ſuppoſed to be the largeſt in Great Britain, and the duty the moſt dangerous and troubleſome: it conſiſts of Jura, Oranſay, Colonſay, Skarba, and ſeveral little iſles divided by narrow and dangerous ſounds; forming a length of not leſs than 60 miles; ſupplied by only one miniſter and an aſſiſtant.

The very old clans of Jura are the *Mac-ilvuys* and the *Mac-raines:* but it ſeems to have changed maſters more than once. In 1549, Donald of Cantyre, Mac-guillayne of Doward, Mac-guillayne of Kinloch-buy, and Mac-duffie of Colonſay, were the proprietors: Mac-lean of Mull had alſo a ſhare in 1586. At preſent it belongs to the duke of Argyle, Mr Macneil of Colonſay, and Mr Campbell of Shawfield.

Jura is alſo the name of a chain of mountains in Switzerland, beginning in the canton of Zurich, extending from thence along the Rhine into the canton and biſhopric of Baſle, ſtretching into the canton of Soleura and the principality of Neuchatel, and branching out towards the Pays de Vaud; ſeparating that county from Frenche Comte and Burgundy, and continued beyond the Genevan territories as far as the Rhone. Many elevated valleys are formed by different parts of this chain in the country of the Pays de Vaud; among which one of the moſt remarkable is the valley of the lake of Joux, on the top of that part of the chain named Mount Joux. It contains ſeveral populous villages, and is beautifully diverſified with wood, arable land, and paſture. It is watered by two lakes; the largeſt of which is that of Joux already mentioned. This has one ſhore of a high rock covered with wood; the oppoſite banks forming a gentle aſcent, fertile and well cultivated; behind which is a ridge covered with pines, beech, and oak wood. The ſmaller lake, named *Brenet*, is bordered with fine corn-fields and villages; and the ſtream which iſſues from it is loſt in a gulf named *Entonnoir*, or the *Funnel*, where the people have placed ſeveral mills which are turned by the force of the falling current. The river Orbe iſſues from the other ſide of the mountain, about two miles from this place; and probably owes its origin to the ſubterraneous ſtream juſt mentioned. The largeſt lake is ſupplied by a rivulet which iſſues from the bottom of a rock, and loſes itſelf in it. The valley contains about 3000 inhabitants, remarkable for their induſtry. Some are watch-makers; but the greateſt number employ themſelves in poliſhing cryſtals, granites, and marcaſites. The country is much infeſted with bears and wolves. In aſcending to this place there is a very extenſive proſpect of great part of the Pays de Vaud, the lake of Geneva, and that of Neuchatel, which from that high point of view appear to be nearly on a level; though M. de Luc found the latter to be 159 feet above the level of the lake of Geneva.

JURATS, Jurati, magiſtrates in the name of Aldermen, for the government of ſeveral corporations. Thus we meet with the mayor and jurats of Maidſtone, Rye, Winchelſea, &c.—So alſo Jerſey has a bailiff and twelve jurats, or ſworn aſſiſtants, to govern the iſland.

IVREA, an ancient and ſtrong town of Italy, in Piedmont, and capital of Canavez, with a ſtrong fort, a biſhop's ſee, the title of a marquiſate, and an ancient caſtle. It is ſubject to the king of Sardinia, and ſeated on the river Doria between two hills, in E. Long. 7. 48. N. Lat. 45. 12.

JURIEU (Peter), an eminent French Proteſtant divine, called ironically by the papiſts the *Goliah* of the Proteſtants, was born in 1637. He was educated in England under his maternal uncle Peter du Moulin, and took orders in the Engliſh church, but returning to ſucceed his father as paſtor of a reformed congregation at Mer in the dioceſe of Blois, he was made profeſſor of divinity and Hebrew at Sedan, where he acquired great reputation. This univerſity being taken from the Proteſtants, a profeſſorſhip of divinity was founded for him at Rotterdam; and he was alſo appointed miniſter of the Walloon church in the ſame town. Being now in a place of liberty, he gave full ſcope to an imagination naturally warm, and applied himſelf to ſtudy the book of Revelation, of which he fancied he had by a kind of inſpiration diſcovered the true meaning; a notion that led him to many enthuſiaſtical conjectures. He was moreover ſo unfortunate as to quarrel with his beſt friends for oppoſing his viſionary opinions, which produced violent diſputes between him and Meſſrs Bayle and de Beauval. He died in 1713; and left a great number of eſteemed works behind him.

JURIN (Dr James), a diſtinguiſhed perſon, who cultivated medicine and mathematics with equal ſucceſs. He was ſecretary of the Royal Society in London, as well as preſident of the College of Phyſicians there. He had great diſputes with Michelloti upon the moment of running-waters, with Robins upon diſtinct viſion, and with the partizans of Leibnitz upon moving bodies. A treatiſe of his "upon Viſion" is printed in Smith's "Optics." He died in 1750.

JURISCONSULTUS *(ICtus,)* among the Romans, was a perſon learned in the law; a maſter of the Roman juriſprudence; who was conſulted on the interpretation of the laws and cuſtoms, and on the difficult points in law-ſuits. The fifteen books of the Digeſts were compiled wholly from the anſwers or reports of the ancient juriſconſulti. Tribonianus, in deſtroying the 2000 volumes from whence the code and Digeſt were taken, has deprived the public of a world of things which would have given them light into the ancient office of the juriſconſulti. We ſhould ſcarce have known any thing beyond their bare names, had not Pomponius, who lived in the ſecond century, taken care to preſerve ſome circumſtances of their office.

The Roman juriſconſulti ſeem to have been the ſame with modern chamber-counſellors, who arrived at the honour of being conſulted through age and experience, but never pleaded at the bar. Their pleading advocates or lawyers never became juriſconſulti. See Advocate.

In the times of the commonwealth, the advocati had by much the more honourable employment, as being in the ready way to attain the higheſt preferments. They then deſpiſed the juriſconſulti, calling them in deriſion *formularii* and *legulei*, as having invented certain forms and monoſyllables, in order to give their anſwers the greater appearance of gravity and myſtery. But in proceſs of time they became ſo much eſteemed, that they were called *prudentes* and *ſapientes*, and the emperors appointed the judges to follow their advice. Auguſtus advanced them to be public officers of the empire; ſo that they were no longer confined to the petty counſels of private perſons.—Bern. Rutilius has written the lives of the moſt famous juriſconſulti who have lived within theſe 2000 years.

JURISDICTION, a power or authority, which a man has to do juſtice in caſes of complaint made before him. There are two kinds of juriſdiction, the one *eccleſiaſtical*, the other *ſecular*.

Secular Jurisdiction, in England, belongs to the king and his juſtices or delegates. The courts and judges at Weſtminſter have juriſdiction over all England, and are not reſtrained to any county or place; but all other courts are confined to their particular juriſdictions, which if they exceed, whatever they do is erroneous. There are three ſorts of inferior juriſdictions; the firſt is *tenere placita*, to hold pleas, and the plaintiff may ſue either there or in the king's courts. Another is the conuſance of pleas, where a right is inveſted in the lord of the franchiſe to hold pleas: and he is the only perſon that can take advantage of it, by claiming his franchiſe. The third ſort is an exempt juriſdiction, as where the king grants to ſome city, that the inhabitants ſhall be ſued within their city and not elſewhere; though there is no juriſdiction that can withſtand a *certiorari* to the ſuperior courts.

Eccleſiaſtical Jurisdiction belongs to biſhops and their deputies.

Biſhops, &c. have two kinds of juriſdiction; the one *internal*, which is exerciſed over the conſcience in things purely ſpiritual; and this they are ſuppoſed to hold immediately of God.

The other is *contentious*, which is a privilege ſome princes have given them in terminating diſputes between eccleſiaſtics and laymen.

JURISPRUDENCE, the ſcience of what is juſt or unjuſt; or the knowledge of laws, rights, cuſtoms, ſtatutes, &c. neceſſary for the adminiſtration of juſtice. See Law.

JUROR, Jurator, in a legal ſenſe, is one of thoſe twenty-four or twelve men who are ſworn to deliver truth upon ſuch evidence as ſhall be given them touching any matter in queſtion. The puniſhment of petty jurors attainted of giving a verdict contrary to evidence, willingly, is very ſevere.

JURY, a certain number of men ſworn to enquire into and try a matter of fact, and to declare the truth upon ſuch evidence as ſhall appear before them.

Juries are, in the United States, the ſupreme judges in all courts and in all cauſes in which either the life, property, or reputation, of any man is concerned: this is likewiſe the diſtinguiſhing privilege of every Briton, and one of the moſt glorious advantages of their conſtitution; for as every one is tried by his peers, the meaneſt ſubject is as ſafe and as free as the greateſt. See the article Trial.

Jury-Maſt, whatever is ſet up in room of a maſt that has been loſt in a ſtorm or an engagement, and to which a leſſer yard, ropes, and ſails, are affixed.

JUS coronæ. See *Hereditary Right*, and Succession.

Jus Deliberandi, in Scots law, that right which an heir has by law of deliberating for a certain time whether he will repreſent his predeceſſor.

Jus Devolutum, in Scots law, the right of the church, of preſenting a miniſter to a vacant pariſh, in caſe the patron ſhall neglect to uſe that right within the time limited by law.

Jus Mariti, in Scots law, the right the huſband acquires to his wife's moveable eſtate, in virtue of the marriage.

Jus Relictæ, in Scots law, the right the wife has in the goods in communion, in caſe of the previous deceaſe of the huſband.

Jus Preventionis, in Scots law, the preferable right of juriſdiction acquired by a court, in any cauſe to which other courts are equally competent, by having exerciſed the firſt act of juriſdiction.

Jus Civile, amongſt the Romans, ſignified no more than the interpretation given by the learned, of the laws of the twelve tables, though the phraſe now extends to the whole ſyſtem of the Roman laws.

Jus Civitatis, ſignifies freedom of the city of Rome, which intitled thoſe perſons who had obtained it to moſt of the privileges of Roman citizens—yet it differs from *Jus Quiritium*, which extended to *all* the advantages which a free native of Rome was intitled to—the difference is much the ſame as betwixt *denization* and *naturalization* with us.

Jus Honorarium, was a name given to thoſe Romans laws which were made up of edicts of the ſupreme magiſtrates, particularly the *prætors*.

Jus Imaginis, was the right of uſing pictures and ſtatues amongſt the Romans, and had ſome reſemblance to the right of bearing a coat of arms amongſt the moderns. This honour was allowed to none but thoſe whoſe anceſtors or themſelves had borne ſome *curule office*, that is, had been *Curule*, *Ædile*, *Cenſor*, *Prætor*, or *Conſul*.

The uſe of ſtatues, &c. which the *Jus Imaginis* gave, was the exhibiting them in funeral proceſſions, &c. See Image.

Jus Papirianum, was the laws of Romulus, Numa, and other kings of Rome, collected into a body by Sextus Papirius, who lived in the time of Tarquin the Proud, which accounts for the name.

Jus Trium Liberorum was a privilege granted to ſuch perſons in the city of Rome as had three children, by which they were exempted from all troubleſome offices. The ſame exemption was granted to any perſon, who lived in other parts of Italy, having four children; and thoſe that lived in the provinces, provided they had five (or as ſome ſay ſeven) children, were intitled to the ſame immunities. This was good policy, and tended to the population of the empire. For a further account of theſe privileges, See Children.

JUSSICA, in botany: A genus of the monogynia order, belonging to the decandria claſs of plants; and in the natural method ranking under the 17th order, *Calycanthemæ*. The calyx is quadripartite or quinquepartite ſuperior; there are four or five petals; the capſule quadrilocular or quinquelocular, oblong, opening at the angles; the ſeeds are numerous and ſmall.

JUST, a ſportive kind of combat on horſeback, man againſt man, armed with lances. The word is by ſome derived from the French *jouſte*, of the Latin *juxta*, becauſe the combatants fought near one another. Salmaſius derives it from the modern Greek *zouſtra*, or rather τζȣϛρα, which is uſed in this ſenſe by Nicephorus Gregorius. Others derive it from *juſta*, which in the corrupt age of the Latin tongue was uſed for this exerciſe, by reaſon it was ſuppoſed a more juſt and equal combat than the tournament.

The difference between juſts and tournaments conſiſts in this, that the latter is the genus, of which the former is only a ſpecies. Tournaments included all kinds of military ſports and engagements made out of gallantry and diverſion: Juſts were thoſe particular combats where the parties were near each other, and engaged with lance and ſword. Add, that the tournament was frequently performed by a number of cavaliers, who fought in a body: The juſt was a ſingle combat of one man againſt another.—Though the juſts were uſually made in tournaments after a general rencounter of all the cavaliers, yet they were ſometimes ſingly, and independent of any tournament. See Tournament.

He who appeared for the firſt time at a juſt, forfeited his helm or caſque unleſs he had forfeited before at a tournament.

JUSTEL (Chriſtopher), a learned counſellor, and ſecretary to the French king, was born at Paris in 1580, and applied himſelf to the ſtudy of eccleſiaſtical hiſtory. He maintained a correſpondence with the moſt learned men of his time, as archbiſhop Uſher, Sir Henry Spelman, Blondel, &c. till his death, which happened in 1649. He wrote, 1. The code of the canons of the church univerſal, and the councils of Africa, with notes. 2. A genealogical hiſtory of the houſe of Auvergne. And, 3 Collections of Greek and Latin canons, from ſeveral manuſcripts, which formed the *Bibliotheca juris canonici veteris*, publiſhed in 2 vols folio, by William Voet and our author's ſon.

Justel (Henry), ſon of the foregoing, was born at Paris in 1620. He became ſecretary and counſellor to the king; and was as diſtinguiſhed for his own learning as remarkable for encouraging it in others. He came to London in 1681, on the perſecution of the Proteſtants; and was made keeper of the royal library at St James's: which office he held till his death in 1693, when he was ſucceeded by the famous Dr Bentley. He wrote ſeveral books, the titles of which may be ſeen in the catalogue of the Bodleian library.

JUSTICE, in a moral ſenſe, is one of the four cardinal virtues, which gives every perſon his due.

Civilians diſtinguiſh juſtice into two kinds; *communicative* and *diſtributive*. The former eſtabliſhes fair dealing in the mutual commerce between man and man; and includes ſincerity in our diſcourſe, and integrity in our dealings. The effect of ſincerity is mutual confidence, ſo neceſſary among the members of the ſame community; and this mutual confidence is ſuſtained and preſerved by the integrity of our conduct.

Diſtributive juſtice is that by which the differences of mankind are decided, according to the rules of equity. The former is the juſtice of private individuals; the latter of princes and magiſtrates.

Fidelity and truth are the foundations of juſtice. As to be perfectly juſt is an attribute of the Divine Nature, to be ſo to the utmoſt of our ability is the glory of man.

The following examples of this virtue are extracted from various authors.

1. Among the ſeveral virtues of Ariſtides, that for which he was moſt renowned was juſtice; becauſe this virtue is of moſt general uſe, its benefits extending to a greater number of perſons, as it is the foundation, and in a manner the ſoul, of every public office and employment. Hence it was that Ariſtides, though in low circumſtances, and of mean extraction, obtained the glorious ſurname of the *Juſt;* a title, ſays Plutarch, truly royal, or rather truly divine; but of which princes are ſeldom ambitious, becauſe generally ignorant of its beauty and excellency. They chooſe rather to be called the conquerors of cities and the thunderbolts of war, preferring the vain honour of pompous titles, which convey no other idea than violence and ſlaughter, to the ſolid glory of thoſe expreſſive of goodneſs and virtue. How much Ariſtides deſerved the title given him, will appear in the following inſtances; though it ought to be obſerved, that he acquired it not by one or two particular actions, but by the whole tenor of his conduct.

Themiſtocles having conceived the deſign of ſupplanting the Lacedemonians, and of taking the government of Greece out of their hands, in order to put it into thoſe of the Athenians, kept his eye and his thoughts continually fixed upon that great project; and as he was not very nice or ſcrupulous in the choice of his meaſures, whatever tended towards the accompliſhing of the end he had in view he looked upon as juſt and lawful.

On a certain day then he declared in a full aſſembly of the people, that he had a very important deſign to propoſe; but that he could not communicate it to the people, becauſe its ſucceſs required it ſhould be carried on with the greateſt ſecrecy: he therefore deſired they would appoint a perſon to whom he might explain himſelf upon the matter in queſtion. Ariſtides was unanimouſly fixed upon by the whole aſſembly, who referred themſelves entirely to his opinion of the affair; ſo great a confidence had they both in his probity and prudence. Themiſtocles, therefore, having taken him aſide, told him that the deſign he had conceived was to burn the fleet belonging to the reſt of the Grecian ſtates, which then lay in a neighbouring port; and by this means Athens would certainly become miſtreſs of all Greece. Ariſtides hereupon returned to the aſſembly, and only declared to them that indeed nothing could be more advantageous to the commonwealth than Themiſtocles's project, but that at the ſame time nothing in the world could be more unjuſt. All the people unanimouſly ordained that Themiſtocles ſhould entirely deſiſt from his project.

There is not perhaps in all hiſtory a fact more worthy of admiration than this. It is not a company of philoſophers (to whom it coſts nothing to eſtabliſh fine maxims and ſublime notions of morality in the ſchool) who determine on this occaſion that the conſideration of profit and advantage ought never to prevail in preference to what is honeſt and juſt; but the whole people who are highly intereſted in the propoſal made to them, that are convinced it is of the greateſt importance to the welfare of the ſtate, and who, however, reject it with unanimous conſent, and without a moment's heſitation; and for this only reaſon, that it is contrary to juſtice. How black and perfidious, on the other hand, was the deſign which Themiſtocles propoſed to them, of burning the fleet of their Grecian confederates at a time of entire peace, ſolely to aggrandize the power of the Athenians! Had he an hundred times the merit aſcribed to him, this ſingle action would be ſufficient to ſully all his glory; for it is the heart, that is to ſay, integrity and probity, which conſtitutes and diſtinguiſhes true merit.

2. The government of Greece having paſſed from Sparta to the Athenians, it was thought proper under this new government to lodge in the iſland of Delos the common treaſure of Greece; to fix new regulations with regard to the public money; and to lay ſuch a tax as might be regulated according to the revenue of each city and ſtate, in order that the expences being equally borne by the ſeveral individuals who compoſed the body of the allies, no one might have reaſon to murmur. The difficulty was to find a perſon of ſo honeſt and incorrupt a mind, as to diſcharge faithfully an employment of ſo delicate and dangerous a kind, the due adminiſtration of which ſo nearly concerned the public welfare. All the allies caſt their eyes on Ariſtides; accordingly they inveſted him with full powers, and appointed him to levy a tax on each of them, relying entirely on his wiſdom and juſtice. The citizens had no cauſe to repent their choice. He preſided over the treaſury with the fidelity and diſintereſtedneſs of a man who looks upon it as a capital crime to embezzle the ſmalleſt portion of another's poſſeſſions, with the care and activity of a father of a family in the management of his own eſtate, and with the caution and integrity of a perſon who conſiders the public moneys as ſacred. In fine, he ſucceeded in what is equally difficult and extraordinary, viz. to acquire the love of all in an office in which he who eſcapes the public odium gains a great point. Such is the glorious character which Seneca gives of a perſon charged with an employment of almoſt the ſame kind, and the nobleſt eulogium that can be given to ſuch as adminiſter public revenues. It is the exact picture of Ariſtides. He diſcovered ſo much probity and wiſdom in the exerciſe of this office, that no man complained; and thoſe times were conſidered ever after as the golden age; that is, the period in which Greece had attained its higheſt pitch of virtue and happineſs.

While he was treaſurer-general of the republic, he made it appear that his predeceſſors in that office had cheated the ſtate of vaſt ſums of money, and among the reſt Themiſtocles in particular; for this great man, with all his merit, was not irreproachable on that head; for which reaſon, when Ariſtides came to paſs his account, Themiſtocles raiſed a mighty faction againſt him, accuſed him of having embezzled the public treaſure, and prevailed ſo far as to have him condemned and fined. But the principal inhabitants, and the moſt virtuous part of the citizens, riſing up againſt ſo unjuſt a ſentence, not only the judgment was reverſed and the fine remitted, but he was elected treaſurer again

gain for the year enſuing. He then ſeemed to repent of his former adminiſtration; and by ſhowing himſelf more tractable and indulgent towards others, he found out the ſecret of pleaſing all that plundered the commonwealth: for as he neither reproved them nor narrowly inſpected their accounts, all theſe plunderers, grown fat with ſpoil and rapine, now extolled Ariſtides to the ſkies. It would have been eaſy for him, as we perceive, to have enriched himſelf in a poſt of that nature, which ſeems, as it were, to invite a man to it by the many favourable opportunities it lays in his way; eſpecially as he had to do with officers, who for their part were intent upon nothing but robbing the public, and would have been ready to conceal the frauds of the treaſurer their maſter upon condition he did them the ſame favour. Theſe very officers now made intereſt with the people to have him continued a third year in the ſame employment: but when the time of election was come, juſt as they were on the point of electing Ariſtides unanimouſly, he roſe up, and warmly reproved the Athenian people: "What (ſays he), when I managed your treaſure with all the fidelity and diligence an honeſt man is capable of, I met with the moſt cruel treatment, and the moſt mortifying returns; and now that I have abandoned it to the mercy of theſe robbers of the republic, I am an admirable man and the beſt of citizens! I cannot help declaring to you, that I am more aſhamed of the honour you do me this day, than I was of the condemnation you paſſed againſt me this time twelvemonth; and with grief I find that it is more glorious with us to be complaiſant to knaves than to ſave the treaſures of the republic." By this declaration he ſilenced the public plunderers and gained the eſteem of all good men.

3. In the Univerſal Hiſtory we meet with the following remarkable inſtance of a ſcrupulous regard to juſtice in a Perſian king named Nouſchirvan. Having been out a-hunting, and deſirous of eating ſome of the veniſon in the field, ſeveral of his attendants went to a neighbouring village and took away a quantity of ſalt to ſeaſon it. The king ſuſpecting how they had acted, ordered that they ſhould immediately go and pay for it. Then turning to his attendants, he ſaid, "This is a ſmall matter in itſelf, but a great one as it regards me: for a king ought ever to be juſt, becauſe he is an example to his ſubjects; and if he ſwerves in trifles, they will become diſſolute. If I cannot make all my people juſt in the ſmalleſt things, I can at leaſt ſhow them it is poſſible to be ſo."

Theſe examples, to which many more might be added, are highly pleaſing to a ſagacious and virtuous mind; but the ſenſual and brutal part of mankind, who regard only the preſent moment, who ſee no objects but thoſe which fall under the cognizance of the corporeal eye, and eſtimate the merit of every action by the gain which it produces, have always conſidered juſtice and utility as independent of each other. They put utility in the balance againſt honeſty every day; and never fail to incline the beam in favour of the former, if the ſuppoſed advantage is thought to be conſiderable. They have no regard to juſtice but as they reckon to gain by it, or at leaſt not to loſe; and are always ready to deſert it when it expoſes them to any danger or threatens them with any loſs. From this diſpoſition of mind proceeds that avidity of wealth and that habitual fraud which perpetually embroil civil ſociety: from this fatal ſource ariſes that deluge of iniquity which has overflowed the world; from this preference of intereſt to honeſty proceed every unjuſt litigation and every act of violence. And yet nothing is more certain than that "Whatever is unjuſt muſt, upon the whole, be diſadvantageous;" which might be proved thus:

Nothing is advantageous or uſeful but that which has a tendency to render us happy: the higheſt advantage, or abſolute utility, is complete happineſs; and to this happineſs, whatever is advantageous or uſeful is relative as to an ultimate end; and nothing that is not thus relative to happineſs can properly be ſaid to be advantageous or uſeful. But whatever is unjuſt, is ſo far from tending to promote, that it deſtroys our happineſs; for whatever is unjuſt is contrary to the Divine will: but it is not poſſible that we ſhould become happy by reſiſting that will; becauſe of this will our happineſs is the immediate object. God is not a tyrant, proud of incontroulable power, who impoſes capricious laws only as teſts of our obedience, and to make us feel the weight of his yoke; all his precepts are leſſons which teach us how to be happy. But it is the will of God that we ſhould be juſt; from whence it follows, that no true happineſs can be acquired by thoſe who are unjuſt. An action, therefore, which is contrary to the will of God, muſt be inconſiſtent with our true intereſt; and conſequently, ſo far from being uſeful or expedient, it muſt inevitably produce ruin and miſery. Injuſtice ſometimes meets with the puniſhment it deſerves in this world; but if it ſhould eſcape here, it does not follow that it will for ever eſcape. It proves, on the contrary, that there is another world in which the fates of mankind will be impartially decided.

But to prevent the dreadful confuſion which the miſtaken notion of intereſt had introduced among mankind, it became neceſſary to have recourſe to the innate principles of juſtice; to ſuſpend the balance and diſplay the ſword, for the determination of differences and the puniſhment of guilt. This is the reaſon and origin of diſtributive juſtice, which became the neceſſary appendage of ſovereignty. Accordingly in ancient times, princes adminiſtered juſtice in perſon and without delay; but at length being embarraſſed and oppreſſed by the multiplicity of buſineſs which increaſed with their dominions, or diverted from their attention to civil government by the command of armies, certain laws were eſtabliſhed with great ſolemnity to adjuſt and determine the differences which might ariſe among the members of the ſame community, and to repreſs the inſolence of thoſe who dared to violate the public peace, by poſſeſſing them with the dread either of corporeal puniſhment or infamy. The execution of theſe laws was put into the hands of ſubordinate judges. Theſe delegates of the ſovereign power were called magiſtrates; and theſe are the perſons by whom juſtice is at this time adminiſtered, except in particular caſes, in which the ſovereign himſelf interferes. But by whomſoever this kind of juſtice is adminiſtered, it ought to be done ſpeedily, impartially, and without expence to the parties.

4. Ariſtides being judge between two private perſons,

ſons, one of them declared, that his adverſary had greatly injured Ariſtides. "Relate rather, good friend (ſaid he, interrupting him), what wrong he hath done thee; for it is thy cauſe, not mine, that I now ſit judge of."—Again: Being deſired by Simonides, a poet of Chios, who had a cauſe to try before him, to ſtretch a point in his favour, he replied, "As you would not be a good poet if your lines ran contrary to the juſt meaſures and rules of your art; ſo I ſhould neither be a good judge nor an honeſt man if I decided aught in oppoſition to law and juſtice."

5. Artabarzanes, an officer of Artaxerxes king of Perſia, begged his majeſty to confer a favour upon him; which if complied with would be an act of injuſtice. The king being informed that the promiſe of a conſiderable ſum of money was the only motive that induced the officer to make ſo unreaſonable a requeſt, ordered his treaſurer to give him thirty thouſand dariuſes, being a preſent of equal value with that which he was to have received. Giving him the order for the money, "Here, take (ſays the king) this token of my friendſhip for you: a gift of this nature cannot make me poor; but complying with your requeſt would make me poor indeed, for it would make me unjuſt."

6. Cambyſes king of Perſia was remarkable for the ſeverity of his government and his inexorable regard to juſtice. This prince had a particular favourite whom he made a judge; and this judge reckoned himſelf ſo ſecure in the credit he had with his maſter, that without any more ado cauſes were bought and ſold in the courts of judicature as openly as proviſions in the market. But when Cambyſes was informed of theſe proceedings, enraged to find his friendſhip ſo ungratefully abuſed, the honour of his government proſtituted, and the liberty and property of his ſubjects ſacrificed to the avarice of his wretched minion, he ordered him to be ſeized and publicly degraded; after which he commanded his ſkin to be ſtripped over his ears, and the ſeat of judgment to be covered with it as a warning to others. At the ſame time, to convince the world that this ſeverity proceeded only from the love of juſtice, he permitted the ſon to ſucceed his father in the honours and office of prime miniſter.

7. When Charles duke of Burgundy, ſurnamed the *Bold*, reigned over ſpacious dominions, now ſwallowed up by the power of France, he heaped many favours and honours upon Claudius Rynſault, a German, who had ſerved him in his wars againſt the inſults of his neighbours. The prince himſelf was a perſon of ſingular humanity and juſtice; and being prepoſſeſſed in favour of Rynſault, upon the deceaſe of the governor of the chief town of Zealand gave him that command. He was not long ſeated on that government before he caſt his eyes upon Sapphira, a woman of exquiſite beauty, the wife of Paul Danvelt, a wealthy merchant of the city, under his protection and government. Rynſault was a man of a warm conſtitution, and violent inclination to women. He knew what it was to enjoy the ſatisfactions which are reaped from the poſſeſſion of beauty; but was an utter ſtranger to the decencies, honours, and delicacies, that attend the paſſion toward them in elegant minds. He could with his tongue utter a paſſion with which his heart was wholly untouched. In ſhort, he was one of thoſe brutal minds which can be gratified with the violation of innocence and beauty, without the leaſt pity, paſſion, or love for that with which they are ſo much delighted.

Rynſault being reſolved to accompliſh his will on the wife of Danvelt, left no arts untried to get into a familiarity at her houſe; but ſhe knew his character and diſpoſition too well not to ſhun all occaſions that might enſnare her into his converſation. The governor, deſpairing of ſucceſs by ordinary means, apprehended and impriſoned her huſband, under pretence of an information that he was guilty of a correſpondence with the enemies of the duke to betray the town into their poſſeſſion. This deſign had its deſired effect; and the wife of the unfortunate Danvelt, the day before that which was appointed for his execution, preſented herſelf in the hall of the governor's houſe, and as he paſſed through the apartment threw herſelf at his feet, and holding his knees, beſeeched his mercy. Rynſault beheld her with a diſſembled ſatisfaction; and aſſuming an air of thought and authority, he bid her riſe, and told her ſhe muſt follow him to his cloſet; and aſking her whether ſhe knew the hand of the letter he pulled out of his pocket? went from her, leaving this admonition aloud: "If you would ſave your huſband, you muſt give me an account of all you know, without prevarication; for every body is ſatisfied that he is too fond of you to be able to hide from you the names of the reſt of the conſpirators, or any other particulars whatſoever." He went to his cloſet, and ſoon after the lady was ſent for to an audience. The ſervant knew his diſtance when matters of ſtate were to be debated; and the governor, laying aſide the air with which he had appeared in public, began to be the ſupplicant, and to rally an affliction which it was in her power eaſily to remove. She eaſily perceived his intention; and, bathed in tears, began to deprecate ſo wicked a deſign. Luſt, like ambition, takes all the faculties of the mind and body into its ſervice and ſubjection. Her becoming tears, her honeſt anguiſh, the wringing of her hands, and the many changes of her poſture and figure in the vehemence of ſpeaking, were but ſo many attitudes in which he beheld her beauty, and farther incentives of his deſire. All humanity was loſt in that one appetite; and he ſignified to her in ſo many plain terms, that he was unhappy till he poſſeſſed her, and nothing leſs ſhould be the price of her huſband's life; and ſhe muſt, before the following noon, pronounce the death or enlargement of Danvelt. After this notification, when he ſaw Sapphira enough diſtracted to make the ſubject of their diſcourſe to common eyes appear different from what it was, he called his ſervants to conduct her to the gate. Loaded with inſupportable affliction, ſhe immediately repairs to her huſband, and having ſignified to the goalers that ſhe had a propoſal to make to her huſband from the governor, ſhe was left alone with him, revealed to him all that had paſſed, and repreſented the endleſs conflict ſhe was in between love to his perſon and fidelity to his bed. It is eaſy to imagine the ſharp affliction this honeſt pair was in upon ſuch an incident, in lives not uſed to any but ordinary occurrences. The man was bridled by ſhame from ſpeaking what his fear prompted upon ſo near an approach of death; but let fall words that ſignified to her, he ſhould not think her polluted, though ſhe had not confeſſed to him that the governor had violated her perſon, ſince he knew her will had no part in the action. She parted from him with his oblique permiſſion, to ſave a life he had not reſolution enough to reſign for the ſafety of his honour.

The next morning the unhappy Sapphira attended the governor, and being led into a remote apartment, ſubmitted to his deſires. Rynſault commended her charms; claimed a familiarity after what had paſſed between them; and with an air of gaiety, in the language of a gallant, bid her return and take her huſband out of priſon: but, continued he, my fair one muſt not be offended that I have taken care he ſhould not be an interruption to our future aſſignations. Theſe laſt words foreboded what ſhe found when ſhe came to the gaol, her huſband executed by the order of Rynſault.

It was remarkable, that the woman, who was full of tears and lamentations during the whole courſe of her affliction, uttered neither ſigh nor complaint, but ſtood fixed with grief at this conſummation of her misfortunes. She betook herſelf to her abode; and, after having in ſolitude paid her devotions to Him who is the avenger of innocence, ſhe repaired privately to court. Her perſon, and a certain grandeur of ſorrow negligent of forms, gained her paſſage into the preſence of the duke her ſovereign. As ſoon as ſhe came into the preſence, ſhe broke forth into the following words: "Behold, O mighty Charles, a wretch weary of life, though it has always been ſpent with innocence and virtue. It is not in your power to redreſs my injuries, but it is to avenge them; and if the protection of the diſtreſſed, and the puniſhment of oppreſſors, is a taſk worthy of a prince, I bring the duke of Burgundy ample matter for doing honour to his own great name, and of wiping infamy off mine." When ſhe had ſpoken this, ſhe delivered to the duke a paper reciting her ſtory. He read it with all the emotion that indignation and pity could raiſe in a prince jealous of his honour in the behaviour of his officers and the proſperity of his ſubjects.

Upon an appointed day Rynſault was ſent for to court, and in the preſence of a few of the council confronted by Sapphira. The prince aſking, "Do you know that lady?" Rynſault, as ſoon as he could recover his ſurpriſe, told the duke he would marry her, if his highneſs would pleaſe to think that a reparation. The duke ſeemed contented with this anſwer, and ſtood by during the immediate ſolemnization of the ceremony. At the concluſion of it he told Rynſault, "Thus far you have done as conſtrained by my authority: I ſhall not be ſatisfied of your kind uſage of her, without you ſign a gift of your whole eſtate to her after your deceaſe." To the performance of this alſo the duke was a witneſs. When theſe two acts were executed, the duke turning to the lady, told her, "It now remains for me to put you in quiet poſſeſſion of what your huſband has ſo bountifully beſtowed on you;" and ordered the immediate execution of Rynſault.

8. One of the greateſt of the Turkiſh princes was Mamood, or Mahmud, the Gaznevide. His name is ſtill venerable in the eaſt; and of the noble parts of his character, a regard to juſtice was not the leaſt. Of this the following example is related by Mr Gibbon in his *Decline and Fall of the Roman Empire*.—As he ſat in the divan, an unhappy ſubject bowed before the throne to accuſe the inſolence of a Turkiſh ſoldier who had driven him from his houſe and bed. "Suſpend your clamours (ſaid Mahmud); inform me of his next viſit, and ourſelf in perſon will judge and puniſh the offender." The ſultan followed his guide; inveſted the houſe with his guards; and extinguiſhing the torches, pronounced the death of the criminal, who had been ſeized in the act of rapine and adultery. After the execution of his ſentence, the lights were rekindled, and Mahmud fell proſtrate in prayer; then riſing from the ground, he demanded ſome homely fare, which he devoured with the voraciouſneſs of hunger. The poor man, whoſe injury he had avenged, was unable to ſuppreſs his aſtoniſhment and curioſity; and the courteous monarch condeſcended to explain the motives of this ſingular behaviour. "I had reaſon to ſuſpect that none except one of my ſons could dare to perpetrate ſuch an outrage; and I extinguiſhed the lights, that my juſtice might be blind and inexorable. My prayer was a thankſgiving on the diſcovery of the offender; and ſo painful was my anxiety, that I had paſſed three days without food ſince the firſt moment of your complaint."

9. In Bourgoane's Travels in Spain, vol. iii. the following anecdote is given of Peter III. of Caſtile. A canon of the cathedral of Seville, affected in his dreſs, and particularly in his ſhoes, could not find a workman to his liking. An unfortunate ſhoemaker, to whom he applied after quitting many others, having brought him a pair of ſhoes not made to pleaſe his taſte, the canon became furious, and ſeizing one of the tools of the ſhoemaker, gave him with it ſo many blows upon the head as laid him dead upon the floor. The unhappy man left a widow, four daughters, and a ſon 14 years of age, the eldeſt of the indigent family. They made their complaints to the chapter: the canon was proſecuted and condemned not to appear in the choir for a year. The young ſhoemaker having attained to man's eſtate, was ſcarcely able to get a livelihood; and overwhelmed with wretchedneſs ſat down on the day of a proceſſion at the door of the cathedral of Seville in the moment the proceſſion paſſed by. Amongſt the other canons he perceived the murderer of his father. At the ſight of this man, filial affection, rage, and deſpair, got ſo far the better of his reaſon, that he fell furiouſly upon the prieſt, and ſtabbed him to the heart. The young man was ſeized, convicted of the crime, and immediately condemned to be quartered alive. Peter, whom we call the *Cruel*, and whom the Spaniards, with more reaſon, call the *lover of juſtice*, was then at Seville. The affair came to his knowledge; and after learning the particulars, he determined to be himſelf the judge of the young ſhoemaker. When he proceeded to give judgment, he firſt annulled the ſentence juſt pronounced by the clergy; and after aſking the young man what profeſſion he was, "I forbid you (ſaid he) to make ſhoes for a year to come."

10. In Galdwin's Hiſtory of Indoſtan, a ſingular fact is related of the emperor Jehangir, under whoſe father Akber the Mogul empire in Hindoſtan firſt ob-

tained any regular form. Jehangir ſucceeded him at Agra on the 22d of October 1605; and the firſt order which he iſſued on his acceſſion to the throne was for the conſtruction of the golden chain of *juſtice*. It was made of pure gold, and meaſured 30 yards, conſiſting of 60 links, weighing four maunds of Hindoſtan (about 400 pounds avoirdupois). One end of the chain was ſuſpended from the royal baſtion of the fortreſs of Agra, and the other faſtened in the ground near the ſide of the river. The intention of this extraordinary invention was, that if the officers of the courts of law were partial in their deciſions, or dilatory in the adminiſtration of juſtice, the injured parties might come themſelves to this chain; and making a noiſe by ſhaking the links of it, give notice that they were waiting to repreſent their grievances to his majeſty."

Justice is alſo an appellation given to a perſon deputed by the king to adminiſter juſtice to his ſubjects, whoſe authority ariſes from his deputation, and not by right of magiſtracy.

Of theſe juſtices there are various kinds in England; viz.

Chief Justice *of the King's Bench*, is the capital juſtice of Great Britain, and is a lord by his office. His buſineſs is chiefly to hear and determine all pleas of the crown; that is, ſuch as concern offenſes againſt the crown, dignity, and peace of the king; as treaſons, felonies, &c. This officer was formerly not only chief juſtice, but alſo chief baron for the exchequer, and maſter of the court of wards. He uſually ſat in the king's palace, and there executed that office, formerly performed *per comitem palatii*; he determined in that place all the differences happening between the barons and other great men. He had the prerogative of being viceregent of the kingdom whenever the king went beyond ſea, and was uſually choſen to that office out of the prime nobility; but his power was reduced by king Richard I. and king Edward II. His office is now divided, and his title changed from *capitalis Angliæ juſtitiarius*, to *capitalis juſtitiarius ad placita, coram rege tenenda*, or *capitalis juſtitiarius banci regii*.

Chief Justice *of the Common Pleas*, he who with his aſſiſtants hears and determines all cauſes at the common law; that is to ſay, all civil cauſes between common perſons, as well perſonal as real; and he is alſo a lord by his office.

Justice *of the Foreſt*, is a lord by his office, who has power and authority to determine offences committed in the king's foreſts, &c. which are not to be determined by any other court of juſtice. Of theſe there are two; whereof one has juriſdiction over all the foreſts on this ſide Trent, and the other beyond it.

By many ancient records, it appears to be a place of great honour and authority, and is never beſtowed but on ſome perſon of great diſtinction. The court where this juſtice ſits is called the *juſtice ſeat of the foreſt*, held once every three years, for hearing and determining all treſpaſſes within the foreſt, and all claims of franchiſes, liberties, and privileges, and all pleas and cauſes whatſoever therein ariſing. This court may fine and impriſon for offences within the foreſt, it being a court of record; and therefore a writ of error lies from hence to the court of king's bench. The laſt court of juſtice ſeat of any note was that held in the reign of Charles I. before the earl of Holland. After the reſtoration another was held for form's ſake before the earl of Oxford; but ſince the revolution in 1688, the foreſt laws have fallen into total diſuſe, to the great advantage of the ſubject.

This is the only juſtice who may appoint a deputy: he is alſo called *juſtice in eyre of the foreſt*.

Justices *of Aſſiſe*, were ſuch as were wont by ſpecial commiſſion to be ſent into this or that county to take aſſiſes, for the eaſe of the ſubjects. For, whereas theſe actions paſs always by jury, ſo many men might not without great damage and charge be brought up to London; and therefore juſtices, for this purpoſe, by commiſſions particularly authoriſed, were ſent down to them. Theſe continue to paſs the circuit by two and two twice every year through all England, except the four northern counties, where they go only once, diſpatching their ſeveral buſineſſes by ſeveral commiſſions; for they have one commiſſion to take aſſiſes, another to deliver gaols, and another of oyer and terminer. In London and Middleſex a court of general gaol-delivery is held eight times in the year.

All the juſtices of peace of any county wherein the aſſiſes are held, are bound by law to attend them, or elſe are liable to a fine; in order to return recognizances, &c. and to aſſiſt the judges in ſuch matters as lie within their knowledge and juriſdiction, and in which ſome of them have been probably concerned, by way of previous examination. See Assises and Jury.

Justices *in Eyre* (*juſticiarii itinerantes*, or *errantes*), were thoſe who were anciently ſent with commiſſion into divers counties to hear ſuch cauſes eſpecially as were termed *pleas of the crown*; and that for the eaſe of the ſubject, who muſt elſe have been hurried to the courts of Weſtminſter, if the cauſe were too high for the county-courts.

According to ſome, theſe juſtices were ſent once in ſeven years; but others will have them to have been ſent oftener. Camden ſays, they were inſtituted in the reign of king Henry II. A. D. 1184; but they appear to be of an older date.

They were ſomewhat like our juſtices of aſſiſe at this day; though for authority and manner of proceeding very different.

Justices *of Gaol-Delivery*, thoſe commiſſioned to hear and determine cauſes appertaining to ſuch as for any offence are caſt into priſon. Juſtices of gaol-delivery are impowered by the common law to proceed upon indictments of felony, treſpaſs, &c. and to order execution or reprieve; and they have power to diſcharge ſuch priſoners as upon their trials ſhall be acquitted; alſo all ſuch againſt whom, on proclamation made, no evidence appears to indict; which juſtices of oyer and terminer, &c. may not do. 2 Hawk. 24, 25. But theſe juſtices have nothing to do with any perſon not in the cuſtody of the priſon except in ſome ſpecial caſes; as if ſome of the accomplices to a felony may be in ſuch priſon and ſome of them out of it, the juſtices may receive an appeal againſt thoſe who are out of the priſon as well as thoſe who are in it; which appeal, after the trial of ſuch priſoners, ſhall be removed into B. R. and proceſs iſſue from them againſt the reſt. But if thoſe out of priſon be omitted in the appeal, they can never be put into any other; becauſe there can be but one appeal for one felony. In this way the goals are cleared, and all offenders tried, puniſhed, or delivered, in every year.—Their commiſſion is now turned over to the juſtices of aſſiſe.

Justices of Niſi Prius are now the ſame with *juſtices of aſſiſe*. It is a common adjournment of a cauſe in the common pleas to put it off to ſuch a day, *Niſi prius juſtitiarii venerint ad eas partes ad capiendas aſſiſas:* from which clauſe of adjournment they are called *juſtices of niſi prius*, as well as *juſtices of aſſiſe*, on account of the writ and actions they have to deal in.

Justices of Oyer and Terminer, were juſtices deputed on ſome ſpecial occaſions to hear and determine particular cauſes.—The commiſſion of oyer and terminer is directed to certain perſons upon any inſurrection, heinous demeanour, or treſpaſs committed, who muſt firſt enquire, by means of the grand jury or inqueſt, before they are empowered to hear and determine by the help of the petit jury. it was formerly held, that no judge or other lawyer could act in the commiſſion of oyer and terminer, or in that of goal-delivery, within the county where he was born or inhabited; but it was thought proper by 12 Geo. II. cap. 27. to allow any man to be a juſtice of oyer and terminer and general gaol-delivery within any county of England.

Justices of the Peace are perſons of intereſt and credit, appointed by the king's commiſſion to keep the peace of the county where they live.

Of theſe ſome for ſpecial reſpect are made of the quorum, ſo as no buſineſs of importance may be diſpatched without the preſence or aſſent of them or one of them. However, every juſtice of peace hath a ſeparate power, and his office is to call before him, examine, iſſue warrants for apprehending, and commit to priſon, all thieves, murderers, wandering rogues; thoſe who hold conſpiracies, riots, and almoſt all delinquents which may occaſion the breach of the peace and quiet of the ſubject; to commit to priſon ſuch as cannot find bail, and to ſee them brought forth in due time to trial; and bind over the proſecutors to the aſſiſes. And if they neglect to certify examinations and informations to the next gaol-delivery, or do not bind over proſecutors, they ſhall be fined. A juſtice may commit a perſon that doth a felony in his own view, without warrant; but if on the information of another, he muſt make a warrant under hand and ſeal for that purpoſe. If complaint and oath be made before a juſtice of goods ſtolen, and the informer, ſuſpecting that they are in a particular houſe, ſhows the cauſe of his ſuſpicion, the juſtice may grant a warrant to the conſtable, &c. to ſearch in the place ſuſpected, to ſeize the goods and perſon in whoſe cuſtody they are found, and bring them before him or ſome other juſtice. The ſearch on theſe warrants ought to be in the day-time, and doors may be broke open by conſtables to take the goods. Juſtices of peace may make and perſuade an agreement in petty quarrels and breaches of the peace, where the king is not entitled to a fine, though they may not compound offences or take money for making agreements. A juſtice hath a diſcretionary power of binding to the good behaviour; and may require a recognizance, with a great penalty of one, for his keeping of the peace, where the party bound is a dangerous perſon, and likely to break the peace, and do much miſchief; and for default of ſureties he may be committed to gaol. But a man giving ſecurity for keeping the peace in the king's bench or chancery, may have a *ſuperſedeas* to the juſtices in the county not to take ſecurity; and alſo by giving ſurety of the peace to any other juſtice. If one make an aſſault upon a juſtice of peace, he may apprehend the offender, and commit him to gaol till he finds ſureties for the peace; and the juſtice may record a forcible entry on his own poſſeſſion: in other caſes he cannot judge in his own cauſe. Contempts againſt juſtices are puniſhable by indictment and fine at the ſeſſions. Juſtices ſhall not be regularly puniſhed for any thing done by them in ſeſſions as judges; and if a juſtice be tried for any thing done in his office, he may plead the general iſſue, and give the ſpecial matter in evidence; and if a verdict is given for him, or the plaintiff be nonſuit, he ſhall have double coſts; and ſuch action ſhall only be laid in the county where the offence was committed. 7 Jac. cap. 5. 21 Jac. cap. 12. But if they are guilty of any miſdemeanor in office, information lies againſt them in the king's bench, where they ſhall be puniſhed by fine and impriſonment; and all perſons who recover a verdict againſt a juſtice for any wilful or malicious injury, are intitled to double coſts. By 24 Geo. II. cap. 44. no writ ſhall be ſued out againſt any juſtice of peace, for any thing done by him in the execution of his office, until notice in writing ſhall be delivered to him one month before the ſuing out of the ſame, containing the cauſe of action, &c. within which month he may tender amends; and if the tender be found ſufficient, he ſhall have a verdict, &c. Nor ſhall any action be brought againſt a juſtice for any thing done in the execution of his office, unleſs commenced within ſix months after the act committed.

A juſtice is to exerciſe his authority only within the county where he is appointed by his commiſſion, not in any city which is a county of itſelf or town corporate, having their proper juſtices, &c. but in other towns and liberties he may. The power and office of juſtices terminate in ſix months after the demiſe of the crown, by an expreſs writ of diſcharge under the great ſeal, by writ of *ſuperſedeas*, by a new commiſſion, and by acceſſion of the office of ſheriff or coroner.

The original of juſtices of the peace is referred to the fourth year of Edward III. They were firſt called *conſervators*, or *wardens of the peace*, elected by the county, upon a writ directed to the ſheriff; but the power of appointing them was transferred by ſtatutes from the people to the king; and under this appellation appointed by 1 Edw. III. cap. 16. Afterwards the ſtatute 34 Edw. III. cap. 1. gave them the power of trying felonies, and then they acquired the appellation of *juſtices*. They are appointed by the king's ſpecial commiſſion under the great ſeal, the form of which was ſettled by all the judges, A. D. 1590; and the king may appoint as many as he ſhall think fit in every county in England and Wales, though they are generally made at the diſcretion of the lord chancellor, by the king's leave. At firſt the number of juſtices was not above two or three in a county. 18 Edw. III. cap. 2. Then it was provided by 34 Edw. III. cap. I. that one lord, and three or four of the moſt worthy men in the county, with ſome learned in the law, ſhould be made juſtices in every county. The number was afterwards reſtrained firſt to ſix, and then to eight, in every county, by 12 Ric. II. cap. 10. and 14 Ric. II.

cap. 11. But their number has greatly increaſed ſince their firſt inſtitution. As to their qualifications, the ſtatutes juſt cited direct them to be the beſt reputation and moſt worthy men in the county; and the ſtatute 13 Rich. II. cap. 7. orders them to be of the moſt ſufficient knights, eſquires, and gentlemen, of the law; and by 2 Hen. V. Stat. 1. cap. 4. and ſtat. 2. cap 1. they muſt be reſident in their ſeveral counties. And by 18 Hen. VI. cap. 11. no juſtice was to be put in commiſſion, if he had not lands to the value of 20l. *per annum*. It is now enacted by 5 Geo. II. cap. 11. that every juſtice ſhall have 100l. *per annum*, clear of all deductions; of which he muſt make oath by 18 Geo. II. cap. 20. And if he acts without ſuch qualification, he ſhall forfeit 100l. It is alſo provided by 5 Geo. II. that no practiſing attorney, ſolicitor, or proctor, ſhall be capable of acting as a juſtice of the peace.

JUSTICES of Peace within Liberties, are in Britain, juſtices of the peace who have the ſame authority in cities or other corporate towns as the others have in counties; and their power is the ſame; only that theſe have the aſſize of ale and beer, wood and victuals, &c. Juſtices of cities and corporations are not within the qualification act, 5 Geo. II. cap. 18.

Fountain of JUSTICE, one of the characters or attributes of the kings of Britain. See PREROGATIVE.

By the fountain of juſtice the law does not mean the *author* or *original*, but only the *diſtributor*. Juſtice is not derived from the king, as from his *free gift*; but he is the ſteward of the public, to diſpenſe it to whom it is *due*. He is not the ſpring, but the reſervoir; from whence right and equity are conducted, by a thouſand channels to every individual. The original power of judicature, by the fundamental principles of ſociety, is lodged in the ſociety at large: but as it would be impracticable to render complete juſtice to every individual, by the people in their collective capacity, therefore every nation has committed that power to certain ſelect magiſtrates, who with more eaſe and expedition can hear and determine complaints; and in England this authority has immemorially been exerciſed by the king or his ſubſtitutes. He therefore has alone the right of erecting courts of judicature: for though the conſtitution of the kingdom hath entruſted him with the whole executive power of the laws, it is impoſſible, as well as improper, that he ſhould perſonally carry into execution this great and extenſive truſt: it is conſequently neceſſary that courts ſhould be erected, to aſſiſt him in executing this power; and equally neceſſary, that, if erected, they ſhould be erected by his authority. And hence it is, that all juriſdictions of courts are either mediately or immediately derived from the crown, their proceedings run generally in the king's name, they paſs under his ſeal, and are executed by his officers.

It is probable, and almoſt certain, that in very early times, before the Britiſh conſtitution arrived at its full perfection, their kings in perſon often heard and determined cauſes between party and party. But at preſent, by the long and uniform uſage of many ages, the kings have delegated their whole judicial power to the judges of their ſeveral courts; which are the grand depoſitory of the fundamental laws of the kingdom, and have gained a known and ſtated juriſdiction, regulated by certain and eſtabliſhed rules, which the crown itſelf cannot now alter but by act of parliament. And in order to maintain both the dignity and independence of the judges in the ſuperior courts, it is enacted by the ſtatute 13 W. III. c. 2. that their commiſſions ſhall be made (not, as formerly, *durante beneplacito*, but) *quamdiu bene ſe geſſerint*, and their ſalaries aſcertained and eſtabliſhed; but that it may be lawful to remove them on the addreſs of both houſes of parliament. And now, by the noble improvements of that law in the ſtatute of 1 Geo. III. c. 23. enacted at the earneſt recommendation of the king himſelf from the throne, the judges are continued in their offices during their good behaviour, notwithſtanding any demiſe of the crown (which was formerly held immediately to vacate their ſeats), and their full ſalaries are abſolutely ſecured to them during the continuance of their commiſſions; his majeſty having been pleaſed to declare, that "he looked upon the independence and uprightneſs of the judges, as eſſential to the impartial adminiſtration of juſtice; as one of the beſt ſecurities of the rights and liberties of his ſubjects; and as moſt conducive to the honour of the crown."

In criminal proceedings or proſecutions for offences, it would ſtill be a higher abſurdity, if the king perſonally ſat in judgment; becauſe in regard to theſe he appears in another capacity, that of *proſecutor*. All offences are either againſt the king's peace or his crown and dignity; and are ſo laid in every indictment. For though in their conſequences they generally ſeem (except in the caſe of treaſon and a very few others) to be rather offences againſt the kingdom than the king; yet, as the public, which is an inviſible body, has delegated all its power and rights, with regard to the execution of the laws, to one viſible magiſtrate, all affronts to that power, and breaches of thoſe rights, are immediately offences againſt him to whom they are ſo delegated by the public. He is therefore the proper perſon to proſecute for all public offences and breaches of the peace, being the perſon injured in the eye of the law. And this notion was carried ſo far in the old Gothic conſtitution (wherein the king was bound by his coronation oath to conſerve the peace), that in caſe of any forcible injury offered to the perſon of a fellow-ſubject, the offender was accuſed of a kind of perjury, in having violated the king's coronation oath; *dicebatur fregiſſe juramentum regis juratum*. And hence alſo ariſes another branch of the prerogative, that of *pardoning* offences; for it is reaſonable, that he only who is injured ſhould have the power of forgiving. See PARDON.

In this diſtinct and ſeparate exiſtence of the judicial power, in a peculiar body of men, nominated indeed, but not removeable at pleaſure, by the crown, conſiſts one main preſervative of the public liberty; which cannot ſubſiſt long in any ſtate, unleſs the adminiſtration of common juſtice be in ſome degree ſeparated both from the legiſlative and alſo from the executive power. Were it joined with the legiſlative, the life, liberty, and property, of the ſubject would be in the hands of arbitrary judges, whoſe deciſions would be then regulated only by their own opinions, and not by any fundamental principles of law; which, though legiſlators may depart from, yet judges are bound to obſerve. Were it joined with the executive, this union might ſoon be an over-balance for the legiſlative. For which reaſon, by the ſtatute of 16 Car. I. c. 10. which aboliſhed the court of ſtar-chamber,, effectual care is taken to remove all judicial power out of the hands of the king's privy-council; who, as then was evident from recent inſtances, might ſoon be inclined to pronounce that for law which was moſt agreeable to the prince or his officers. Nothing therefore is more to be avoided in a free conſtitution, than uniting the provinces of a judge and a miniſter of ſtate. And indeed, that the abſolute power, claimed and exerciſed in ſome nations, is more tolerable than that of the eaſtern empires, is in a great meaſure owing to their having veſted the judicial power in their parliaments; a body ſeparate and diſtinct from both the legiſlative and executive: and if ever thoſe nations recover their former liberty, they will owe it to the efforts of thoſe aſſemblies. In Turkey, where every thing is centered in the ſultan or his miniſters, deſpotic power is in its meridian, and wears a more dreadful aſpect.

A conſequence of this prerogative is the legal ubiquity of the king. His majeſty, in the eye of the law, is always preſent in all his courts, though he cannot perſonally diſtribute juſtice. His judges are the mirror by which the king's image is reflected. It is the regal office, and not the royal perſon, that is always preſent in court, always ready to undertake proſecutions or pronounce judgment, for the benefit and protection of the ſubject. And from this ubiquity it follows, that the king can never be nonſuited; for a nonſuit is the deſertion of the ſuit or action by the non-appearance of the plaintiff in court. For the ſame reaſon alſo, in the forms of legal proceedings, the king is not ſaid to appear by his attorney, as other men do; for he always appears, in contemplation of law, in his own proper perſon.

From the ſame original, of the king's being the fountain of juſtice, we may alſo deduce the prerogative of iſſuing proclamations, which is veſted in the king alone. See **Proclamation.**

Juſtice-Seat. See *Foreſt Courts.*

JUSTICIA, **malabar-nut**: A genus of the monogynia order, belonging to the diandria claſs of plants; and in the natural method ranking under the 40th order, *Perſonatæ*. The corolla is ringent; the capſule bilocular, parting with an elaſtic ſpring at the heel; the ſtamina have only one anthera. There are 19 ſpecies, all of them natives of the Eaſt Indies, growing many feet high; ſome adorned with fine large leaves, others with ſmall narrow ones, and all of them with monopetalous ringent flowers. Only two ſpecies are cultivated in Engliſh gardens, viz. the adhatoda or common Malabar-nut, and the hyſſopifolia or ſnap-tree. The firſt grows ten or twelve feet high, with a ſtrong woody ſteem, branching out widely all around: having large, lanceolate, oval leaves, placed oppoſite; and from the ends of the branches ſhort ſpikes of white flowers, with dark ſpots, having the helmet of the corolla concave. The ſecond hath a ſhrubby ſtem branching from the bottom pyramidically three or four feet high; ſpear-ſhaped, narrow, entire leaves, growing oppoſite; and white flowers, commonly by threes, from the ſides of the branches; ſucceeded by capſules, which burſt open with elaſtic force for the diſcharge of the ſeeds; whence the name of *ſnap-tree*. Both ſpecies flower here in ſummer, but never produce any fruit. They are propagated by layers and cuttings, and require the ſame treatment with other tender exotics.

JUSTICIAR, in the old Engliſh laws, an officer inſtituted by William the Conqueror, as the chief officer of ſtate, who principally determined in all caſes civil and criminal. He was called in Latin *Capitalis Juſticiarius totius Angliæ*. For **Justiciar** in Scotland, See **Law**, n° clvi. 10—12.

Justiciary, or *Court of Juſticiary*, in Scotland. See **Law**, n° clvi. 10—12.

JUSTIFICATION, in law, ſignifies a maintaining or ſhowing a ſufficient reaſon in court why the defendant did what he is called to anſwer. Pleas in juſtification muſt ſet forth ſome ſpecial matter: thus, on being ſued for a treſpaſs, a perſon may juſtify it by proving, that the land is his own freehold; that he entered a houſe in order to apprehend a felon; or by virtue of a warrant, to levy a forfeiture, or in order to take a diſtreſs; and in an aſſault, that he did it out of neceſſity.

Justification, in theology, that act of grace which renders a man juſt in the ſight of God, and worthy of eternal happineſs. See **Theology.**

The Romaniſts and Reformed are extremely divided about the doctrine of juſtification: the latter contending for juſtification by faith alone, and the former by good works.

JUSTIN, a celebrated hiſtorian, lived, according to the moſt probable opinion, in the ſecond century, under the reign of Antoninus Pius. He wrote, in elegant Latin, an abridgement of the hiſtory of Trogus Pompeius; comprehending the actions of almoſt all nations, from Ninus the founder of the Aſſyrian empire to the emperor Auguſtus. The original work, to the regret of the learned, is loſt: this abridgement, being written in a polite and elegant ſtyle, was probably the reaſon why that age neglected the original. The beſt editions of Juſtin are, *ad uſum Delphini*, in 4to; and *cum notis variorum et Gronovii* in 8vo.

Justin (St), commonly called *Juſtin Martyr*, one of the earlieſt and moſt learned writers of the eaſtern church, was born at Neapolis, the ancient Sechem of Paleſtine. His father Priſcus, a Gentile Greek, brought him up in his own religion, and had him educated in all the Grecian learning. To complete his ſtudies he travelled to Egypt; and followed the ſect of Plato, with whoſe intellectual notions he was much pleaſed. But one day walking by the ſea-ſide, wrapt in contemplation, he was met by a grave ancient perſon of a venerable aſpect; who, falling into diſcourſe with him, turned the converſation by degrees from the excellence of Platoniſm to the ſuperior perfection of Chriſtianity; and reaſoned ſo well, as to raiſe in him an ardent curioſity to inquire into the merits of that religion; in conſequence of which inquiry, he was converted about the year 132. On his embracing that religion, he quitted neither the profeſſion nor the habit of a philoſopher: but a perſecution breaking out under Antoninus, he compoſed *An Apology for the Chriſtians*; and afterwards preſented another to the emperor Marcus Aurelius, in which he vindicated the innocence and holineſs of the Chriſtian religion againſt Creſcens a Cynic philoſopher, and other calumniators. He did honour to Chriſtianity by his learning and the purity of his manner; and ſuffered martyrdom in 167. Beſides his two Apologies, there are ſtill extant his *Dialogue with Trypho*, a Jew; two treatiſes addreſſed to the Gentiles, and another on the unity of God. Other works are alſo aſcribed to him. The beſt editions of St Juſtin are thoſe of Robert Stephens, in 1551 and 1571, in Greek and Latin: that of Morel, in Greek and Latin, in 1656; and that of Don Prudentius Marandus, a learned Benedictine, in 1742 in folio. His ſtyle is plain, and void of all ornament.

JUSTINIAN I. ſon of Juſtin the elder, was made Cæſar and Auguſtus in 527, and ſoon after emperor. He conquered the Perſians by Beliſarius his general, and exterminated the Vandals; regained Africa; ſubdued the Goths in Italy; defeated the Moors; and reſtored the Roman empire to its primitive glory. See (Hiſtory of) CONSTANTINOPLE, n° 93—97. and ITALY, n° 12. &c.

The empire being now in the full enjoyment of a profound peace and tranquillity, Juſtinian made the beſt uſe of it, by collecting the immenſe variety and number of the Roman laws into one body. To this end, he ſelected ten of the moſt able lawyers in the empire; who reviſing the Gregorian, Theodoſian, and Hermogenian codes, compiled one body, called *Codex Juſtinianus*. This may be called the *ſtatute law*, as conſiſting of the reſcripts of the emperors. But the reduction of the other part was a much more difficult taſk: it was made up of the deciſions of the judges and other magiſtrates, together with the authoritative opinions of the moſt eminent lawyers; all which lay ſcattered, without any order, in no leſs than 2000 volumes and upwards. Theſe were reduced to the number of 50; but ten years were ſpent in the reduction. However, the deſign was completed in the year 553, and the name of *Digeſts* or *Pandects* given to it. Beſides theſe, for the uſe chiefly of young ſtudents in the law to facilitate that ſtudy, Juſtinian ordered four books of inſtitutes to be drawn up, containing an abſtract or abridgement of the text of all the laws: and, laſtly, the laws of modern date, poſterior to that of the former, were thrown into one volume in the year 541, called the *Novellæ*, or New Code.

This emperor died in the year 565, aged 83, in the 39th of his reign, after having built a great number of churches; particularly the famous Sancta Sophia at Conſtantinople, which is eſteemed a maſterpiece of architecture.

JUSTINIANI (St Laurence), the firſt patriarch of Venice, was born there of a noble family in 1381. He was a very pious prelate, and died in 1485; he left ſeveral pieces of piety, which were printed together at Lyons in 1568, in one volume folio, with his life prefixed by his nephew. Clement VII. beatified him in 1524, and he was canonized by Alexander VIII. in 1690.

JUSTINIANI (Bernard), was born at Venice in 1408. He obtained the ſenators robe at the age of 19, ſerved the republic in ſeveral embaſſies, and was elected procurator of St Mark in 1474. He was a learned man, and wrote *the Hiſtory of Venice*, with ſome other works of conſiderable merit; and died in 1498.

JUSTINIANI (Auguſtin), biſhop of Nebo, one of the moſt learned men of his time, was deſcended from a branch of the ſame noble family with the two foregoing; and was born at Genoa in 1480. He aſſiſted at the fifth council of Lateran, where he oppoſed ſome articles of the concordat between France and the court of Rome. Francis I. of France made him his almoner; and he was for five years regius profeſſor of Hebrew at Paris. He returned to Genoa in 1522, where he diſcharged all the duties of a good prelate; and learning and piety flouriſhed in his dioceſe. He periſhed at ſea in his paſſage from Genoa to Nebbio, in 1536. He compoſed ſeveral pieces; the moſt conſiderable of which is, *Pſalterium Hebræum, Græcum, Arabicum, et Chaldæum, cum tribus Latinis interpretationibus et gloſſis*. This was the firſt pſalter of the kind printed; and there is alſo aſcribed to the ſame prelate a tranſlation of Maimonides's *More Nevochim*.

JUSTNESS, the exactneſs or regularity of any thing.

Juſtneſs is chiefly uſed in ſpeaking of thought, language, and ſentiments. The juſtneſs of a thought conſiſts in a certain preciſion or accuracy, by which every part of it is perfectly true, and pertinent to the ſubject. Juſtneſs of language conſiſts in uſing proper and well choſen terms; in not ſaying either too much or too little. M. de Mere, who has written on juſtneſs of mind, diſtinguiſhes two kinds of juſtneſs; the one ariſing from taſte and genius, the other from good ſenſe or right reaſon. There are no certain rules to be laid down for the former, *viz.* to ſhow the beauty and exactneſs in the turn or choice of a thought; the latter conſiſts in the juſt relation which things have to another.

JUTES, the ancient inhabitants of Jutland in Denmark.

JUTLAND, a large peninſula, which makes the principal part of the kingdom of Denmark. It is bounded on the ſouth-eaſt by the duchy of Holſtein, and is ſurrounded on the other ſides by the German ocean and the Baltic ſea. It is about 180 miles in length from north to ſouth, and 50 in breadth from eaſt to weſt. The air is very cold but wholeſome; and the ſoil is fertile in corn and paſtures, which feed a great number of beeves, that are ſent to Germany, Holland, and elſewhere. This was anciently called the *Cimbrian Cherſoneſus*, and is ſuppoſed to be the country from whence the Saxons came into England. It is divided into two parts, called *North* and *South Jutland*: the latter is the duchy of Sleſwick, and lies between North Jutland and the duchy of Holſtein; and the duke of that name is in poſſeſſion of part of it, whoſe capital town is Gottorp, for which reaſon the ſovereign is called the *duke of Holſtein Gottorp*.

JUVENAL (Decius Junius), the celebrated Roman ſatyriſt, was born about the beginning of the emperor Claudian's reign, at Aquinum in Campania. His father was probably a freed-man, who, being rich, gave him a liberal education, and, agreeably to the taſte of the times, bred him up to eloquence; in which he made a great progreſs, firſt under Fronto the grammarian, and afterwards, as is generally conjectured, under Quintilian; after which he attended the bar, and made a diſtinguiſhed figure there for many years by his eloquence. In the practice of this profeſſion he had improved his fortune and intereſt at Rome before he turned his thoughts to poetry, the very ſtyle of which, in his ſatires, ſpeaks a long habit of declamation; *ſulactum redolent declamatorem*, ſay the critics. It is ſaid he was above 40 years of age when he recited his firſt eſſay to a ſmall audience of his friends; but being encouraged by their applauſe, he ventured a greater publication: which reaching the ears of Paris, Domitian's favourite at that time, though but a pantomime player, whom our ſatyriſt had ſeverely inſulted, that minion made his complaint to the emperor; who ſent him thereupon into baniſhment, under pretence of giving him the command of a cohort in the army, which was quartered at Pentapolis, a city upon the frontiers of Egypt and Libya.

After Domitian's death, our ſatyriſt returned to Rome, ſufficiently cautioned not only againſt attacking the characters of thoſe in power, under arbitrary princes, but againſt all perſonal reflections upon the great men then living; and therefore he thus wiſely concludes the debate he is ſuppoſed to have maintained for a while with a friend on this head, in the firſt ſatire, which ſeems to be the firſt that he wrote after his baniſhment:

Experiar quid concedatur in illos
Quorum Flaminia tegitur cinis atque Latina.

"I will try what liberties I may be allowed with thoſe whoſe aſhes lie under the Flaminian and Latin ways," along each ſide of which the Romans of the firſt quality uſed to be buried.—It is believed that he lived till the reign of Adrian in 128. There are ſtill extant 16 of his ſatires, in which he diſcovers great wit, ſtrength, and keenneſs, in his language: but his ſtyle is not perfectly natural; and the obſcenities with which theſe ſatires were filled render the reading of them dangerous to youth.

JUVENCUS (Caius Vecticus Aquilinus), one of the firſt of the Chriſtian poets, was born of an illuſtrious family in Spain. About the year 320 he put the life of Jeſus Chriſt into Latin verſe, of which he compoſed four books. In this work he followed almoſt word for word the text of the four evangeliſts: but his verſes are written in a bad taſte, and his Latin is not pure.

JUVENTAS, in mythology, the goddeſs who preſided over youth among the Romans. This goddeſs was long honoured in the Capitol, where Servius Tullius erected her ſtatue. Near the chapel of Minerva there was the altar of Juventas, and upon this altar a picture of Proſerpine. The Greeks called the goddeſs of youth *Hebe*; but it has been generally ſuppoſed that this was not the ſame with the Roman *Juventas*.

JUXON (Dr William), born at Chicheſter in 1682, was bred at Merchant-Taylor's ſchool, and from thence elected into St John's college Oxford, of which he became preſident. King Charles I. made him biſhop of London; and in 1635 promoted him to the poſt of lord high treaſurer of England. The whole nation, and eſpecially the nobility, were greatly offended at this high office being given to a clergyman; but he behaved ſo well in the adminiſtration, as ſoon put a ſtop to all the clamour raiſed againſt him. This place he held no longer than the 17th of May 1641, when he prudently reſigned the ſtaff, to avoid the ſtorm which then threatened the court and the clergy. In the following February, an act paſſed depriving the biſhops of their votes in parliament, and incapacitating them from any temporal juriſdiction. In theſe leading ſteps, as well as the total abolition of the epiſcopal order which followed, he was involved with his brethren; but neither as biſhop nor as treaſurer was a ſingle accuſation brought againſt him in the long parliament. During the civil wars, he reſided at his palace at Fulham, where his meek, inoffenſive, and genteel behaviour, notwithſtanding his remaining ſteady in his loyalty to the king, procured him the viſits of the principal perſons of the oppoſite party, and reſpect from all. In 1648, he attended on his majeſty at the treaty in the iſle of Wight; and by his particular deſire, waited upon him at Cotton-houſe, Weſtminſter, the day after the commencement of his trial; during which he frequently viſited him in the office of a ſpiritual father; and his majeſty declared he was the greateſt comfort to him in that afflictive ſituation. He likewiſe attended his majeſty on the ſcaffold, where the king taking off his cloak and George, gave him the latter: after the execution, our pious biſhop took care of the body, which he accompanied to the royal chapel at Windſor, and ſtood ready with the common-prayer book in his hands to perform the laſt ceremony for the king; but was prevented by Colonel Whichcot, governor of the caſtle.—He continued in the quiet poſſeſſion of Fulham-palace till the enſuing year 1649, when he was deprived, having been ſpared longer than any of his brethren. He then retired to his own eſtate in Glouceſterſhire, where he lived in privacy till the reſtoration, when he was preſented to the ſee of Canterbury; and in the little time he enjoyed it, expended in buildings and reparations at Lambeth-palace and Croyden-houſe near 15,000 l. He died in 1663; having bequeathed 7000 l. to St John's college, and to other charitable uſes near 5000 l. He publiſhed a Sermon on Luke xviii. 31. and Some Conſiderations upon the Act of Uniformity.

JUXTAPOSITION, is uſed by philoſophers to denote that ſpecies of growth which is performed by the appoſition of new matter to the ſurface or outſide of old. In which ſenſe it ſtands oppoſed to *intuſſuſception;* where the growth of a body is performed by the reception of a juice within it diffuſed through its canals.

IVY, in botany. See HEDERA.

IXIA, in botany: A genus of the monogynia order, belonging to the triandria claſs of plants; and in the natural method ranking under the 6th order, *Enſatæ*. The corolla is hexapetalous, patent, and equal; there are three ſtigmata a little upright and petalous. There are ſeveral ſpecies, conſiſting of herbaceous, tuberous, and bulbous-rooted flowery perennials, from one to two feet high, terminated by hexapetalous flowers of different colours. They are propagated by off-ſets, which ſhould be taken off in ſummer at the decay of the leaves: but as all the plants of this genus are natives of warm climates, few of them can bear the open air of this country in winter.

IXION, in fabulous hiſtory, king of the Lapithæ, married Dia the daughter of Deionius, to whom he

Ixora, Jynx.

refuſed to give the cuſtomary nuptial preſents. Deionius in revenge took from him his horſes: when Ixion, diſſembling his reſentment, invited his father-in-law to a feaſt, and made him fall through a trap-door into a burning furnace, in which he was immediately conſumed. Ixion being afterwards ſtung with remorſe for his cruelty, ran mad; on which Jupiter, in compaſſion, not only forgave him, but took him up into heaven, where he had the impiety to endeavour to corrupt Juno. Jupiter, to be the better aſſured of his guilt, formed a cloud in the reſemblance of the goddeſs, upon which Ixion begat the centaurs: but boaſting of his happineſs, Jove hurled him down to Tartarus, where he lies fixed on a wheel encompaſſed with ſerpents, which turns without ceaſing.

IXORA, in botany: A genus of the monogynia order, belonging to the tetrandria claſs of plants; and in the natural method ranking under the 47th order, *Stellatæ*. The corolla is monopetalous, funnel-ſhaped, and long, ſuperior; the ſtamina above the throat; the berry tetraſpermous.

Plate, CCLIX.

JYNX, in ornithology, a genus of birds belonging to the order of picæ: the characters of which are, that the bill is ſlender, round, and pointed; the noſtrils are concave and naked: the tongue is very long, very ſlender, cylindric, and terminated by a hard point; and the feet are formed for climbing. There is only one ſpecies, *viz.* the *torquilla*. The colours of this bird are elegantly pencilled, though its plumage is marked with the plaineſt kinds: a liſt of black and ferruginous ſtrokes divides the top of the head and back; the ſides of the head and neck are aſh coloured, beautifully traverſed with fine lines of black and reddiſh-brown; the quill-feathers are duſky, but each web is marked with ruſt-coloured ſpots; the chin and breaſt are of a light yellowiſh-brown, adorned with ſharp-pointed bars of black; the tail conſiſts of ten feathers, broad at their ends and weak, of a pale aſh-colour, powdered with black and red, and marked with four equidiſtant bars of black: the irides are of a yellowiſh colour.—The wry-neck, Mr Pennant apprehends, is a bird of paſſage, appearing with us in the ſpring before the cuckoo. Its note is like that of the keſtril, a quick repeated ſqueak; its eggs are white, with a very thin ſhell; it builds in the hollows of trees, making its neſt of dry graſs. It has a very whimſical way of turning and twiſting its neck about, and bringing its head over its ſhoulders, whence it had its Latin name *torquilla*, and its Engliſh one of *wry-neck*: it has alſo the faculty of erecting the feathers of the head like thoſe of the jay. It feeds on ants, which it very dexterouſly transfixes with the bony and ſharp end of its tongue, and then draws them into its mouth; and while the female is ſitting, the male has been obſerved to carry theſe inſects to her.—We find this bird mentioned as an inhabitant throughout Europe, and of many parts of the old Continent. It is in Ruſſia, Sweden, Lapland, Greece, Italy, Babylon, and Bengal; authorities for which Buffon mentions, and ſays, that at the end of ſummer this bird grows very fat, when it becomes excellent eating; for which reaſon ſome have named it the *Ortolan*. The young ones, while in the neſt, will hiſs like ſo many ſnakes; inſomuch that many have been prevented plundering the old ones of their offspring, on ſuppoſition that they were advancing their hands on the brood of this loathſome reptile.

K.

K, the tenth letter, and ſeventh conſonant, of our alphabet; being formed by the voice, by a guttural expreſſion of the breath through the mouth, together with a depreſſion of the lower jaw and opening of the teeth.

Its ſound is much the ſame with that of the hard *c*, or *qu*: and it is uſed, for the moſt part, only before *e*, *i*, and *n*, in the beginning of words, as *ken*, *kill*, *know*, &c. It uſed formerly to be always joined with *c* at the end of words, but is at preſent very properly omitted, at leaſt in words derived from the Latin: thus, for *publick*, *muſick*, &c. we ſay, *public*, *muſic* &c. However, in monoſyllables, it is ſtill retained, as *jack*, *block*, *mock*, &c.

K is borrowed from the Greek *kappa*; and was but little uſed among the Latins: Priſcian looked on it as a ſuperfluous letter; and ſays, it was never to be uſed except in words borrowed from the Greek. Dauſquius, after Salluſt, obſerves, that it was unknown to the ancient Romans.—Indeed we ſeldom find it in any Latin authors, excepting in the word *kalendæ*, where it ſometimes ſtands in lieu of a *c*.—Carthage, however, is frequently ſpelt on medals with a *K*: SALVIS AUG. ET CAES. FEL. KART. and ſometimes the letter *K* alone ſtood for *Carthage*.—M. Berger has obſerved, that a capital *K*, on the reverſe of the medals of the emperors of Conſtantinople, ſignified *Konſtantinus*; and on the Greek medals he will have it to ſignify ΚΟΙΛΗ ΣΥΡΙΑ, "Coleſyria."

Quintilian tells us, that in his time ſome people had a miſtaken notion, that wherever the letter *c* and *a* occurred at the beginning of a word, *k* ought to be uſed inſtead of the *c*. See C.

Lipſius obſerves, that *K* was a ſtigma anciently marked on the foreheads of criminals with a red-hot iron.

The letter *K* has various ſignifications in old charters and diplomas; for inſtance, KR. ſtood for *chorus*, KR. C. for *cara civitas*, KRM. for *carmen*, KR. AM. N. *carus amicus noſter*, KS. *chaos*, KT. *capite tonſus*, &c.

The French never uſe the letter *k* excepting in a few terms of art and proper names borrowed from other countries. Ablancourt, in his dialogue of the letters, brings in *k* complaining, that he has been often in a fair was to be baniſhed out of the French alphabet, and confined to the countries of the north.

K is alſo a numeral letter, ſignifying 250, according to the verſe;

K quoque ducentos & quinquaginta tenebit.

When it had a ſtroke at top, K̄, it ſtood for 250,000.

K on the French Coinage denotes money coined at Bourdeaux.

KABA. See Mecca.

KADESH, Kadesh-barnea, or En-mishpat, (anc. geog.), a city celebrated for ſeveral events. At Kadeſh, Miriam the ſiſter of Moſes died (Numb. xx. 1.). Here it was that Moſes and Aaron, ſhowing a diſtruſt in God's power when they ſmote the rock at the waters of ſtrife, were condemned to die, without the conſolation of entering the promiſed land (Numb. xxvii. 14.). The king of Kadeſh was one of the princes killed by Joſhua (xii. 22.). This city was given to the tribe of Judah, and was ſituated about eight leagues from Hebron to the ſouth.

Mr Wells is of opinion, that this Kadeſh, which was ſituated in the wilderneſs of Zin, was a different place from Kadeſh-barnea in the wilderneſs of Paran.

KADMONÆI, or Cadmonæi (anc. geog.), a people of Paleſtine, ſaid to dwell at the foot of mount Hermon; which lies eaſt, and is the reaſon of the appellation, with reſpect to Libanus, Phoenicia, and the north parts of Paleſtine. Called alſo *Hevæi* (Moſes).

KÆMPFERIA, zedoary, in botany: A genus of the monogynia order, belonging to the monandria claſs of plants; and in the natural method ranking under the 8th order, *Scitamineæ*. The corolla is ſexpartite, with three of the ſegments larger than the reſt, patulous; and one only bipartite.

Species. 1 The galanga, common galangal, or long zedoary, has tuberous, thick, oblong, fleſhy roots; crowned with oval, cloſe-ſitting leaves, by pairs, four or five inches long, without footſtalks; and between them cloſe-ſitting white flowers, with purple bottoms, growing ſingly. 2. The rotunda, or round zedoary, has thick, fleſhy, ſwelling, roundiſh, cluſtering roots, ſending up ſpear-ſhaped leaves, ſix or eight inches long, near half as broad, on upright footſtalks; and between them, immediately from the roots, riſe whitiſh flowers, tinged with green, red, yellow, and purple, centres. Both theſe are perennial in root; but the leaves riſe annually in ſpring, and decay in winter. They flower in ſummer: each flower is of one petal, tubulous below, but plain above, and divided into ſix parts; they continue three or four weeks in beauty, but are never ſucceeded by ſeeds in Britain.

Culture. Both theſe plants muſt be potted in light rich mould, and always kept in the hot-houſe, giving them plenty of water in ſummer, but more ſparingly in winter. They are propagated by parting the roots in the ſpring, juſt before they begin to puſh forth new leaves.

Uſes. This plant is cultivated with great care by the inhabitants of Siam for the ſake of its root; the uſe of which, ſays Kempfer, is to remove obſtructions of the hypochondria, to warm the ſtomach, diſcuſs flatulencies, and to ſtrengthen the bowels and the whole nervous ſyſtem. The root was formerly uſed in bitter infuſions; but is now generally laid aſide, on account of its flavour being diſagreeable.

KALENDAR, a diſtribution of time, accommodated to the uſes of life; or a table or almanac, containing the order of days, weeks, months, feaſts, &c. happening throughout the year. See Time, Month, Year, &c.

It is called *kalendar*, from the word *kalendæ*, anciently wrote in large characters at the head of each month. See Kalends.

The days in Kalendars, were originally divided into *octoades*, or eights; but afterwards, in imitation of the Jews, into *hebdomades*, or ſevens; which cuſtom, Scaliger obſerves, was not introduced among the Romans till after the time of Theodoſius.

There are divers kalendars, according to the different forms of the year and diſtributions of time eſtabliſhed in different countries. Hence the Roman, the Jewiſh, the Perſian, the Julian, the Gregorian, &c. kalendars.

The ancient Roman kalendar is given by Ricciolus, Struvius, Danet, and others; by which we ſee the order and number of the Roman holidays and work-days.

The three Chriſtian kalendars are given by Wolfius in his Elements of Chronology.

The Jewiſh kalendar was fixed by rabbi Hillel about the year 360, from which time the days of their year may be reduced to thoſe of the Julian kalendar.

The Roman Kalendar owed its origin to Romulus; but it has undergone various reformations ſince his time. That legiſlator diſtributed time into ſeveral periods, for the uſe of the people under his command: but as as he was much better verſed in matters of war than of aſtronomy, he only divided the year into ten months, making it begin in the ſpring, on the firſt of March; imagining the ſun made his courſe through all the ſeaſons in 304 days.

Romulus's kalendar was reformed by Numa, who added two months more, January and February; placing them before March: ſo that his year conſiſted of 355 days, and began on the firſt of January. He choſe, however, in imitation of the Greeks, to make an intercalation of 45 days, which he divided into two parts; intercalating a month of 22 days at the end of each two years; and at the end of each two years more another of 23 days; which month, thus interpoſed, he called *Marcedonius*, or the intercalary February.

But theſe intercalations being ill obſerved by the pontiffs, to whom Numa committed the care of them, occaſioned great diſorders in the conſtitution of the year; which Cæſar, as ſovereign pontiff, endeavoured to remedy. To this end, he made choice of Soſigenes, a celebrated aſtronomer of thoſe times; who found, that the diſpenſation of time in the kalendar could never be ſettled on any ſure footing without having regard to the annual courſe of the ſun. Accordingly, as the ſun's yearly courſe is performed in 365 days ſix hours, he reduced the year to the ſame number of days: the year of this correction of the kalendar was a year of confuſion; they being obliged, in order to ſwallow up the 65 days that had been imprudently added, and which occaſioned the confuſion, to add two months beſides the Marcedonius, which chanced to fall out that year; ſo that this year conſiſted of 15 months, or 445 days. This reformation was made in the year of Rome 708, 42 or 43 years before Chriſt.

The Roman kalendar, called alſo *Julian kalendar*, from its reformer Julius, is diſpoſed into quadriennial periods; whereof the firſt three years, which he called *communes*, conſiſt of 365 days; and the fourth, *biſſextile*, of 366;

by reaſon of the ſix hours, which in four years make a day or ſomewhat leſs, for in 134 years an intercalary day is to be retrenched. On this account it was, that pope Gregory XIII. with the advice of Clavius and Ciaconius, appointed, that the hundredth year of each century ſhould have no biſſextile, excepting in each fourth century: that is, a ſubtraction is made of three biſſextile days in the ſpace of four centuries; by reaſon of the 11 minutes wanting in the ſix hours whereof the biſſextile conſiſts.

The reformation of the kalendar, or the *new ſtyle*, as we call it, commenced on the 4th of October 1582, when ten days were thrown out at once, ſo many having been introduced into the computation ſince the time of the council of Nice in 325, by the defect of 11 minutes.

Julian Chriſtian KALENDAR, is that wherein the days of the week are determined by the letters A, B, C, D, E, F, G, by means of the ſolar cycle; and the new and full moons, eſpecially the paſchal full moon, with the feaſt of Eaſter, and the other moveable feaſts depending thereon, by means of golden numbers, rightly diſpoſed through the Julian year. See CYCLE, and *GOLDEN Number*.

In this kalendar, the vernal equinox is ſuppoſed to be fixed to the 21ſt day of March; and the cycle of 19 years, or the golden numbers, conſtantly to indicate the places of the new and full moons; yet both are erroneous. And hence aroſe a very great irregularity in the time of Eaſter. To ſhow this error the more apparently, let us apply it to the year 1715. In this year, then, the vernal equinox falls on the 10th of March; and therefore comes too early by 11 days. The paſchal full moon falls on the 7th of April; and therefore too late, with regard to the cycle, by three days. Eaſter, therefore, which ſhould have been on the 10th of April, was that year on the 17th. The error here lies only in the metemptoſis, or poſtpoſition of the moon, through the defect of the lunar cycle. If the full moon had fallen on the 11th of March, Eaſter would have fallen on the 13th of March; and therefore the error ariſing from the anticipation of the equinox would have exceedingly augmented that ariſing from the poſtpoſition. Theſe errors, in courſe of time, were ſo multiplied, that the kalendar no longer exhibited any regular Eaſter. Pope Gregory XIII. therefore, by the advice of Aloyſius Lilius, in 1582, threw 10 days out of the month of October, to reſtore the equinox to its place, viz. the 21ſt of March; and thus introduced the form of the Gregorian year, with ſuch a proviſion, as that the equinox ſhould be conſtantly kept to the 21ſt of March. The new moons and full moons, by advice of the ſame Lilius, were not to be indicated by golden numbers, but by epacts. The kalendar, however, was ſtill retained in Britain without this correction; whence there was a difference of 11 days between their time and that of their neighbours. But by 24 Geo. II. c. 23. the Gregorian computation was eſtabliſhed there, and accordingly took place in 1752.

Gregorian KALENDAR, is that which, by means of epacts, rightly diſpoſed through the ſeveral months, determines the new and full moons, and the time of Eaſter, with the moveable feaſts depending thereon, in the Gregorian year.

The Gregorian kalendar, therefore, differs from the Julian, both in the form of the year, and in that epacts are ſubſtituted in lieu of golden numbers: for the uſe and diſpoſition whereof, ſee EPACT.

Though the Gregorian kalendar be preferable to the Julian, yet it is not without its defects (perhaps, as Tycho Brahe and Caſſini imagine, it is impoſſible ever to bring the thing to a perfect juſtneſs). For, firſt, the Gregorian intercalation does not hinder, but that the equinox ſometimes ſucceeds the 21ſt of March as far as the 23d; and ſometimes anticipates it, falling on the 19th; and the full moon, which falls on the 20th of March, is ſometimes the paſchal; yet not ſo accounted by the Gregorians. On the other hand, the Gregorians account the full moon of the 22d of March the paſchal; which yet falling before the equinox, is not paſchal. In the firſt caſe, therefore, Eaſter is celebrated in an irregular month; in the latter, there are two Eaſters in the ſame eccleſiaſtical year. In like manner, the cyclical computation being founded on mean full-moons, which yet may precede or follow the true ones by ſome hours, the paſchal full-moon may fall on Saturday, which is yet referred by the cycle to Sunday: whence, in the firſt caſe, Eaſter is celebrated eight days later than it ſhould be; in the other, it is celebrated on the very day of the full-moon, with the Jews and Quartodeciman heretics; contrary to the decree of the council of Nice. Scaliger and Calviſius ſhow other faults in the Gregorian kalendar, ariſing from the negligence and inadvertency of the authors; yet is this kalendar adhered to by the Romaniſts throughout Europe, &c. and uſed wherever the Roman breviary is uſed.

Reformed or *Corrected* KALENDAR, is that which, ſetting aſide all apparatus of golden numbers, epacts, and dominical letters, determines the equinox, with the paſchal full-moon, and the moveable feaſts depending thereon, by aſtronomical computation, according to the Rudolphine Tables.

This kalendar was introduced among the Proteſtant ſtates of Germany in the year 1700, when 11 days were at once thrown out of the month of February; ſo that in 1700 February had but 18 days: by this means, the corrected ſtyle agrees with the Gregorian. This alteration in the form of the year they admitted for a time; in expectation that, the real quantity of the tropical year being at length more accurately determined by obſervation, the Romaniſts would agree with them on ſome more convenient intercalation.

Conſtruction of a KALENDAR, or *Almanac.* 1. Compute the ſun's and moon's place for each day of the year; or take them from ephemerides. 2. Find the dominical letter, and by means thereof diſtribute the kalendar into weeks. 3. Compute the time of Eaſter, and thence fix the other moveable feaſts. 4. Add the immoveable feaſts, with the names of the martyrs. 5. To every day add the ſun's and moon's place, with the riſing and ſetting of each luminary; the length of day and night; the crepuſcula, and the aſpects of the planets. 6. Add in the proper places the chief phaſes of the moon, and the ſun's entrance into the cardinal-points; *i. e.* the ſolſtices and equinoxes; together with the riſing and the ſetting, eſpecially heliacal, of the planets and chief fixed ſtars. See ASTRONOMY.

The duration of the crepuſcula, or the end of the evening and beginning of the morning twilight, together with the ſun's riſing and ſetting, and the length of days, may be transferred from the kalendars of one year into thoſe of another; the differences in the ſeveral

Kalendar.

veral years being too ſmall to be of any conſideration in civil life.

Hence it appears, that the conſtruction of a kalendar has nothing in it of myſtery or difficulty, if tables of the heavenly motions be at hand.

Some divide kalendars or almanacs into public and private, perfect and imperfect; others into Heathen and Chriſtian.

Public almanacs are thoſe of a larger ſize, uſually hung up for common or family uſe; private are thoſe of a ſmaller kind, to be carried about either in the hand, inſcribed on a ſtaff, or in the pocket; perfect, thoſe which have the dominical letters as well as primes and feaſts inſcribed on them; imperfect, thoſe which have only the primes and immoveable feaſts. Till about the fourth century, they all carry the marks of heatheniſm; from that age to the ſeventh, they are generally divided between heatheniſm and Chriſtianity.

Almanacs are of ſomewhat different compoſition, ſome containing more points, others fewer. The eſſential part is the kalendar of months and days, with the riſing and ſetting of the ſun, age of the moon, &c. To theſe are added various parerga, aſtronomical, aſtrological, meteorological, chronological, and even political, rural, medical, &c. as calculations, and accounts of eclipſes, ſolar ingreſſes, aſpects, and configurations of the heavenly bodies, lunations, heliocentrical and geocentrical motions of the planets, prognoſtics of the weather, and predictions of other events, tables of the planetary motions, the tides, terms, intereſt, twilight, equation, kings, &c.

Gelalean, or *Jellalæan Kalendar*, is a correction of the Perſian kalendar, made by order of ſultan Geladeddan, in the 467th year of the Hegira; of Chriſt 1089.

Kalendar, is alſo applied to divers other compoſitions reſpecting the 12 months of the year.

In this ſenſe, Spencer has given the ſhepherds kalendar; Evelyn and Miller the gardner's kalendar, &c.

Kalendar, is uſed for the catalogue of faſti anciently kept in each church of the ſaints both univerſal and thoſe particularly honoured in each church; with their biſhops, martyrs, &c. Kalendars are not to be confounded with martyrologies; for each church had its peculiar kalendar, whereas the martyrologies regarded the whole church in general, containing the martyrs and confeſſors of all the churches. From all the ſeveral kalendars were formed one martyrology: ſo that martyrologies are poſterior to kalendars.

Kalendar, is alſo extended to an orderly table or enumeration of perſons or things.

Lord Bacon wiſhes for a kalendar of doubts. A late writer has given a kalendar of the perſons who may inherit eſtates in fee-ſimple.

Kalendar, *Kalendarium*, originally denoted, among the Romans, a book containing an account of moneys at intereſt, which become due on the kalends of January, the uſual time when the Roman uſurers let out their money.

Kalendar Months, the ſolar months as they ſtand in the kalendar, viz. January 31 days, &c.

Aſtronomical Kalendar, an inſtrument engraved upon copper-plates, printed on paper, and paſted on a board, with a braſs ſlider which carries a hair, and ſhows by inſpection the ſun's meridian altitude, right aſcenſion, declination, riſing, ſetting, amplitude, &c. to a greater exactneſs than our common globes will ſhow.

Kalendar
||
Kalends.

Kalendar of Priſoners. See Calendar.

Kalendar Brothers, a ſort of devout fraternities, compoſed of eccleſiaſtics as well as laymen; whoſe chief buſineſs was to procure maſſes to be ſaid, and alms diſtributed, for the ſouls of ſuch members as were deceaſed. They were alſo denominated *kalend-brothers*, becauſe they uſually met on the kalends of each month, though in ſome places only once a quarter.

KALENDARIUM pistum. The chriſtians retained much of the ceremony and wantonneſs of the kalends of January, which for many ages was held a feaſt, and celebrated by the clergy with great indecencies, under the names *feſtum kalendarum*, or *hypodiaconorum*, or *ſtultorum*, that is, "the feaſt of fools:" ſometimes alſo *libertas decembrica*. The people met maſked in the church; and in a ludicrous way proceeded to the election of a mock pope, or biſhop, who exerciſed a juriſdiction over them ſuitable to the feſtivity of the occaſion. Fathers, councils, and popes, long laboured to reſtrain this licence to little purpoſe. We find the feaſt of the kalends in uſe as low as the cloſe of the 15th century.

KALENDERS. See Calenders.

KALENDS, or Calends, in the Roman chronology, the firſt day of every month.—The word is formed from καλεω *I call* or *proclaim*; becauſe, before the publication of the Roman faſti, it was one of the offices of the pontifices to watch the appearance of the new moon, and give notice thereof to the *rex ſacrificulus*; upon which a ſacrifice being offered, the pontiff ſummoned the people together in the Capitol, and there with a loud voice proclaimed the number of kalends, or the day whereon the nones ſhould be; which he did by repeating this formula as often as there were days of kalends, *Calo Juno Novella*. Whence the name *calendæ* was given thereto, from *calo*, *calare*. This is the account given by Varro. Others derive the appellation hence, That the people being convened on this day, the pontifex called or proclaimed the ſeveral feaſts or holidays in the month: a cuſtom which continued no longer than the year of Rome 450, when C. Flavius, the curule ædile, ordered the faſti or kalendar to be ſet up in public places, that every body might know the difference of times, and the return of the feſtivals.

The kalends were reckoned backwards, or in a retrograde order. Thus, e. g. the firſt of May being the kalends of May; the laſt or the 30th of April was the *pridie kalendarum*, or ſecond of the kalends of May; the 29th of April, the third of the kalends, or before the kalends: and ſo back to the 13th, where the ides commence; which are likewiſe, numbered invertedly to the fifth, where the nones begin; which are numbered after the ſame manner to the firſt day of the month, which is the kalends of April. See Ides, and Nones.

The rules of computation by kalends are included in the following verſes:

Prima dies menſis cujuſque eſt dicta kalendæ:
Sex Maius nonas, October, Julius, & Mars;
Quatuor at reliqui: habet idus quilibet octo.
Inde dies reliquos omnes dic eſſe kalendas;
Quas retro numerans dices a menſe ſequente.

To find the day of the kalends anſwering to any day of the month we are in; ſee how many days there are yet remaining of the month, and to that number add two: for example, ſuppoſe it the 22d day of April; it is then the 10th of the kalends of May. For April contains 30 days: and 22 taken from 30 there remains 8; to which two being added, the ſum is 10. The reaſon of adding two is, becauſe the laſt day of the month is called *ſecundo kalendas*, the laſt but one *tertio kalendas*, &c.

The Roman writers themſelves are at a loſs for the reaſon of this abſurd and whimſical manner of computing the days of the month: yet it is ſtill kept up in the Roman chancery; and by ſome authors, out of a vain affectation of learning, preferred to the common, more natural, and eaſy manner.

KALENDS, are alſo uſed in church-hiſtory to denote conferences anciently held by the clergy of each deanry, on the firſt day of every month, concerning their duty and conduct, eſpecially in what related to the impoſition of penance.

KALENDS of January, in Roman antiquity, was a ſolemn feſtival conſecrated to Juno and Janus; wherein the Romans offered vows, and ſacrifices to thoſe deities, and exchanged preſents among themſelves as a token of friendſhip.

It was only a melancholy day to debtors, who were then obliged to pay their intereſts, &c. Hence Horace calls it *triſtes kalendæ*; Lib. i. Serm. Sat. 3.

KALI, in botany. See SALSOLA.

KALISH, a province of Lower Poland, with the title of a palatinate. It is bounded on the weſt by the palatinate of Boſnia, on the eaſt by that of Syrad, on the north by Regal Pruſſia, and on the ſouth by Sileſia. Kaliſh is the capital town.

KALISH, a town of Lower Poland, and capital of a palatinate of the ſame name, where the Jeſuits have a magnificent college. It is ſeated on the river Proſna, in a moraſs, which renders it difficult of acceſs. E. Long. 18. 0. N. Lat. 52. 20.

KALMIA, in botany: A genus of the monogynia order, belonging to the decandria claſs of plants; and in the natural method ranking under the 18th order, *Bicornes*. The calyx is quinquepartite; the corolla ſalver-ſhaped, formed with five nectariferous horns on the under or outer ſide; the capſule quinquelocular. Of this genus there are two ſpecies, viz.

1. The latifolia, a moſt beautiful ſhrub, which riſes uſually to the height of five or ſix feet, and ſometimes twice that height in its native places. The ſtems of ſome are as big as the ſmall of a man's leg, though generally they are ſmaller, and covered with a brown rough bark. The wood is very cloſe grained, heavy, and hard like box. The limbs in general are crooked, and grow irregular; but are thick-clothed with ſtiff ſmooth leaves of a ſhining bright green. The flowers grow in bunches on the tops of the branches to foot-ſtalks of three inches long: they are white, ſtained with purpliſh red, conſiſting of one leaf in form of a cup divided at the verge into five ſections: in the middle is a ſtilus and 12 ſtamina; which, when the flower firſt opens, appear lying cloſe to the ſides of the cup at equal diſtances, their apices being lodged in ten little hollow cells, which being prominent on the outſide, appear as ſo many little tubercles. The flowers are ſucceeded by ſmall round capſules; which when ripe open in five parts, and diſcharge their ſmall duſt like ſeeds. This plant is a native of Carolina, Virginia, and other parts of the United States of America; yet they are not common, but are found only in particular places: they grow on rocks hanging over rivulets and running ſtreams, and on the ſides of barren hills. They bloſſom in May, and continue in flower the greateſt part of the ſummer. The noxious qualities of this elegant plant leſſen that eſteem which its beauty claims: for although deer feed on its green leaves with impunity, yet when cattle and ſheep, by ſevere winters deprived of better food, feed on the leaves of theſe plants, a great many of them die annually.

2. The anguſtifolia, riſes to the height of about 16 feet, producing ever-green leaves in ſhape like the lauro-ceraſus, but ſmall, and of a ſhining dark green. The flowers grow in cluſters, the buds of which appear in autumn wrapped up in a conic ſcaly perianthium, on which is lodged a viſcous matter, which protects them from the ſevere cold in winter. Theſe buds dilating in the following ſpring, break forth into twenty or more monopetalous flowers divided into five ſegments, and ſet ſingly on pedicles half an inch long. Theſe flowers, when blown, appear white; but on a near view are of a faint bluiſh-colour, which as the flower decays grow paler. One of the five petals is longer and more concave than the reſt, and is blended with purple, green, and yellow ſpecks, being a viſcous matter on the extremities of very fine hairs. The convex ſide of the ſame petal is alſo ſpeckled with yellowiſh green. The pointal riſes from the centre of the flower, and has its head adorned with ſcarlet, and ſurrounded by 10 ſtamina, whereof three are long and ſeven ſhort, whoſe farina iſſues out at a ſmall round hole at its top. This elegant tree adorns the weſtern and remote parts of Pennſylvania, always growing in the moſt ſterile ſoil, or on the rocky declivities of hills and river-banks, in ſhady moiſt places.

KALMUCS, a tribe of Tartars, called alſo *Eluths*, inhabiting the larger half of what the Europeans call *Weſtern Tartary*. Their territory extends from the Caſpian ſea, and the river *Taik*, or *Ural*, in 72 degrees of longitude from Ferro, to mount Altay, in 110 degrees, and from the 40th to the 52d degree of north latitude; whence it may be computed about 1930 miles in length from weſt to eaſt, and its breadth from north to ſouth about 650 miles where broadeſt. It is bounded on the north by Ruſſia and Siberia, from which it is ſeparated by a chain of mountains; on the eaſt by mount Altay; on the ſouth by the countries of Karazm and the two Bukharias, from which it is alſo ſeparated partly by a chain of mountains and partly by ſome rivers. See TARTARY.

Of the Kalmuc Tartars the following curious account is given by profeſſor Pallas. They are in general, ſays he, of a middle ſize, and it is even rare to ſee among them a perſon that is tall; the women eſpecially are of low ſtature, and have very agreeable features. Their limbs are neatly turned, and very few have any defects contracted in infancy. Their education being left ſolely to nature, procures for them a well formed body and ſound conſtitution. The only defect which is common among them is their having the thighs and legs ſomewhat bent. A fat perſon is hardly ever to be met with; the richeſt and moſt diſtinguiſhed, though they lead a life ſufficiently indolent, and enjoy abundance

dance of every thing they deſire, are never exceſſively corpulent. Their ſkin is pretty fair, eſpecially when young; but it is the cuſtom of the lower ſort to allow their male children to go quite naked both in the heat of the ſun and in the ſmoky atmoſphere of their felt huts; the men too ſleep naked, covered only with their drawers; and from theſe circumſtances they acquire that yellowiſh brown colour which characteriſes them. The women, on the contrary, have a very delicate complexion; among thoſe of a certain rank are found ſome with the moſt beautiful faces, the whiteneſs of which is ſet off by the fine black of their hair; and in this as well as in their features they perfectly reſemble the figures in Chineſe paintings.

The phyſiognomy which diſtinguiſhes the Kalmucs is pretty generally known. Strangers are made to believe that it is frightfully deformed; and though indeed there are very ugly men to be found, yet in general their countenance has an openneſs in it that beſpeaks a mild, a frank and ſocial diſpoſition. In many it is of a roundiſh ſhape, and exceedingly agreeable; among the women ſome would be thought beauties even in thoſe European cities where the taſte is moſt ſcrupulous. The characteriſtic features of a Kalmuc or Mongul countenance are the following: The interior angle of the eye is placed obliquely downwards towards the noſe, and is acute and fleſhy; the eye-brows are black, narrow, and much arched; the noſe is of a ſtructure quite ſingular, being generally flat and broken towards the forehead; the cheek bone is high, the head and face very round; the eye is dark, the lips thick and fleſhy, the chin ſhort, and the teeth exceeding white continuing ſo to old age; the ears are of an enormous ſize, ſtanding out from the head. Theſe characters are more or leſs viſible in each individual; but the perſon that poſſeſſes them all in the higheſt degree is conſidered as the moſt beautifully formed.

Among all the Mongul nations, the men have much leſs beard than in the European countries, and among the Tartars it appears much later. The Kalmucs have moſt of it; and yet even with them the beard is very ſcanty and thin, and few have much hair on any other part of the body.

People that lead a paſtoral life enjoy the bodily ſenſes in the greateſt perfection. The Kalmucs find the ſubtility of their ſenſe of ſmell very uſeful in their military expeditions, for by it they perceive at a diſtance the ſmoke of a fire or the ſmell of a camp. There are many of them who can tell by applying the noſe to the hole of a fox or any other quadruped if the animal be within or not. They hear at a great diſtance the trampling of horſes, the noiſe of an enemy, of a flock of ſheep, or even of ſtrayed cattle; they have only to ſtretch themſelves on the ground, and to employ their ear cloſe to the turf. But nothing is more aſtoniſhing than the acuteneſs of ſight in moſt of the Kalmucs, and the extraordinary diſtance at which they often perceive very minute objects, ſuch as the duſt raiſed by cattle or horſes, and this from places very little elevated; in immenſe level deſerts, though the particular inequalities of the ſurface and the vapours which in fine weather are ſeen to undulate over the ſoil in great heats, conſiderably increaſe the difficulty. They are alſo accuſtomed to trace the print of a foot in theſe deſerts by the ſight alone.

Theſe people poſſeſs many good qualities, which give them a great ſuperiority over the wandering Tartars. A certain natural ſagacity, a ſocial diſpoſition, hoſpitality, eagerneſs to oblige, fidelity to their chiefs, much curioſity, and a certain vivacity accompanied with good humour, which hardly ever forſakes even the moſt wretched among them, form the fair ſide of their character. On the other hand, they are careleſs, ſuperficial, and want true courage; beſides, they are remarkable for credulity, diſtruſt, and a natural inclination authoriſed by cuſtom for drunkenneſs and debauchery, but eſpecially for a great degree of cunning, which they too often practiſe. The diſpoſition to indolence is common and natural, eſpecially among the men, to all Aſiatic nations, who lead a kind of life exempt from ſubjection and devoid of activity; but this is leſs to be perceived among the Kalmucs, on account of their natural vivacity, and does not prevent their endeavours to oblige. Thoſe among them who exerciſe any little trade, or who are reduced by poverty to hire themſelves to the Ruſſians either for labour or for fiſhing, are very aſſiduous and indefatigable. They ſleep but little, going to reſt late and riſing with the ſun. To ſleep through the day, unleſs a perſon is drunk, is conſidered by them as diſhonourable. But their extreme dirtineſs can neither be diſguiſed nor juſtified, and proceeds much more from their education, from the ſlovenlineſs attached to the profeſſion of a herdſman, and from levity, than from lazineſs; for the Kalmuc women are indefatigable in whatever concerns domeſtic matters: and it is for this reaſon, as well as on the ſcorce of ſenſuality, that the Kirgiſiens are eager to ſeize and carry them off whenever an opportunity preſents itſelf.

With regard to the intellectual faculties of the Kalmucs, notwithſtanding their want of inſtruction and information, they poſſeſs good natural parts, an excellent memory, and a ſtrong deſire to learn. They acquire the Ruſſian language with great facility, and pronounce it well; in which laſt article they very much ſurpaſs the Chineſe. It would be very eaſy to civilize them, if their petulance and manner of life did not render it impracticable.

Although the Kalmucs are generally of a ſanguine and choleric temperament, they live more amicably together than one could expect in a people that lead ſo independent a life. They ſeldom come to blows even over their cups, and their quarrels are hardly ever bloody. A murder very rarely happens, though their anger has ſomething in it exceedingly fierce. It would ſeem that the morality of their religion, though extremely idolatrous, has been able to moderate their natural diſpoſition in this reſpect; for in conſequence of their dogmas, with regard to the tranſmigration of ſouls, every wanton murder either of men or beaſts is thought a deadly ſin.

The Kalmucs are exceedingly affable; and of ſo ſocial a diſpoſition, that it is rare for a traveller to perceive another even at the diſtance of ſeveral miles without going to ſalute him, and to inquire into the object of his journey. When a troop of Kalmucs perceive any perſon at a diſtance, it is cuſtomary for them to detach one of their number to the next eminence, from whence he makes a ſignal with his cap for the perſon to draw near. If this ſignal is not obeyed, the perſon is conſidered as an enemy or a robber, and is often purſued as ſuch. They enter willingly into friend-ſhips: but theſe connections are not quite diſintereſted; for to give and to receive preſents are with them eſſential articles. A mere trifle, however, is ſufficient to induce them to do you all manner of ſervice; and they are never ungrateful as far as they are able. Adverſity cannot deprive them of courage nor alter their good humour. A Kalmuc will never beg if he were in the extremeſt miſery, but rather endeavour to acquire a ſubſiſtence by cheating; and when no other way remains, he will hire himſelf to ſome rich individual of his nation, or to ſome Ruſſian, either as a herdſman, a fiſherman, or for any other ſort of labour. Very few of the rich value themſelves much upon their wealth: but thoſe who do, ſhow no contempt for the poor of their own nation; though the meaner ſort pay their court very obſequiouſly to the rich, who are always ſurrounded with a ſwarm of idle dependants.

Nothing can be more prudent than that exerciſe of hoſpitality practiſed by wandering nations: it is of the greateſt advantage to thoſe among them who travel acroſs their deſarts; and each individual who practiſes it, may rely on reaping the benefit of it wherever he goes. A Kalmuc provided with a horſe, with arms and equipage, may ramble from one place to another for three months together, without taking with him either money or proviſions. Wherever he comes he finds either diſtant relations or friends, to whom he is attached by the ties of hoſpitality, from whom he meets with the kindeſt reception, and is entertained in the beſt manner their circumſtances afford. Perhaps he lodges in the firſt unknown cottage he finds upon his road; and ſcarcely has he entered it, but his wants are ſupplied with the moſt affectionate cordiality. Every ſtranger, of whatſoever nation, never fails to be well received by a Kalmuc; and he may depend upon having his effects in the greateſt ſecurity the moment he has put himſelf under the protection of his hoſt: for to rob a gueſt is conſidered by the Kalmucs as the moſt abominable of all crimes.

When the maſter of the houſe ſits down to meat in company with others of inferior rank, he begins indeed by ſerving himſelf and his family, but whatever remains is diſtributed among the aſſiſtants. When they ſmoke tobacco, the pipe circulates inceſſantly from one to another. When any one receives a preſent either of meat or drink, he divides it faithfully with his companions, even though of inferior rank. But they are much more niggardly of their other effects, and eſpecially of their cattle, and do not willingly give theſe away except when they hope to receive a ſuitable return: or if any relation has accidentally ſuffered the loſs of his flocks, he is ſure to be moſt willingly aſſiſted. Perhaps too it may be related as an article of their hoſpitality, that they abandon their wives to their friends with the greateſt facility, and in general they are very little inclined to jealouſy.

Their robberies are never committed upon their equals, and even the greater part of the rapine exerciſed on other tribes is founded on hatred or national quarrels; neither do they willingly attempt this by open force, but prefer the machinations of cunning, which are ſo natural to them. It muſt alſo be confeſſed, that it is only thoſe that live with princes, and in camps where theſe hold their courts, or their prieſts, that are moſt addicted to theſe practices; while the common people, ſatisfied with the pleaſures of the paſtoral life, ſpend their days in innocent ſimplicity, and never attack the property of another till forced by neceſſity, or led by their ſuperiors who ſhew them the example.

The Kalmucs are very faithful to their lawful prince; they endure every ſort of oppreſſion, and yet are with difficulty induced to revolt: but if they belong to a prince who has not become ſo by right of ſucceſſion, they very eaſily rebel. They honour old age. When young men travel with ſuch as are older than themſelves, they take upon them the whole care of the cattle as well as of the feaſt. They are exceedingly prudent in matters that relate to their ſovereign or their nation, or which are recommended to their direction by the prieſts, to whom they yield an unreſerved obedience.

The moveable habitations of the Kalmucs are thoſe felt huts with a conical roof in uſe among all the roaming Aſiatics. The truly ingenious invention of theſe tents was undoubtedly conceived in the eaſtern parts of Aſia, and moſt probably by the mongul nations. As they can be entirely taken to pieces and folded in a ſmall compaſs, they are very uſeful, and perfectly agree with the migratory life of theſe people, who are ſtill ignorant of the uſe of carriages. The frame of theſe huts, and the felt they are covered with, though made as light as poſſible, yet are a ſufficient load for a camel or two oxen. But the capacity of theſe huts, their warmth in winter, their ſtrength in reſiſting tempeſts and excluding rain, abundantly compenſate for this inconvenience. The wood endures many years; and though the felt begins to break into holes in the ſecond year, the common people, who do not conſider it as diſgraceful to have them mended and patched, make them ſerve a good deal longer. The huts are in general uſe from the prince down to the meaneſt Kalmuc, differing only in ſize and in the embelliſhments within. In winter, they are warm even when heated with the dried excrements of their cattle, to which they are often obliged to have recourſe for want of other combuſtibles in many places of the deſarts which are deſtitute of wood. In ſummer they remove the felt to enjoy the freſh air.

The maſter of the tent has his bed placed oppoſite to the door behind the fire-place. The bedſteads are low and made of wood. The rich adorn their beds with curtains, and ſpread carpets of felt upon the ground. When a Kalmuc poſſeſſes an idol, he places it near the head of his bed, and ſets before it ſeveral ſmall conſecrated cups full of water, milk, or other food. Before this ſort of altar he fixes in the ground the trunk of a tree, on which he places a large iron baſin deſtined to receive the libations of all the drink he makes uſe of in a day. On feſtivals the idol is decorated, the lamps are lighted, and perfumes burnt before it.

The riches of the Kalmucs, and their whole means of ſubſiſtence, depend on their flocks, which many of them reckon by hundreds and even by thouſands. A man is thought capable of living on his poſſeſſions when he is maſter of ten cows with a bull, eight mares with a ſtallion. The animals they have in greateſt abundance are horſes, horned cattle, and ſheep. Camels, which re-

require time and pains to rear, cannot multiply much with them: they are beſides too delicate; and it is only the rich or the prieſts who poſſeſs any of them. Their horſes are but ſmall, too weak for the draught, and too wild; but they do not yield to any in ſwiftneſs, and ſupport with eaſe the weight of a man. They may be made to gallop for ſeveral hours ſucceſſively without injury; and when neceſſity requires it, they can paſs twice 24 hours without drinking. They have a little hoof, but very hard; and they may be uſed at all times without being ſhod. In this country the horſes live and perpetuate themſelves without any aſſiſtance from man. The Kalmucs caſtrate the greater part of their male foals, and at the ſame time ſlit their noſtrils, that they may breathe more freely when they run. The ſtallions are never ſeparated from the mares, that there may always be plenty of milk. The ſtallions are leaders of the herd, and often wander at a diſtance into the deſarts at the head of their females, defending them from the wolves with the greateſt intrepidity. The Kalmucs have the art of breaking a young horſe without uſing a bridle. They ſeize him before he is two years old by means of a nooſe fixed to the end of a long pole; an inſtrument they uſe in taking their riding horſes which feed in the midſt of the herd. They put no ſaddle at firſt on the colt they mean to break, but tie a ſtrait girth round his body; by the help of which the horſeman can keep himſelf firm. When he is mounted, the horſe is abandoned to his fury; they allow him to run and agitate himſelf as much as he pleaſes on the open plain till he is fatigued. The horſeman is ſolicitous only to keep himſelf faſt; and when the horſe begins to abate of his impetuoſity, he urges him again with the whip till his ſtrength is almoſt gone: he is then ſaddled and bridled, and made to go for ſome time at a moderate pace; after which he is entirely tamed.

The horned cattle of the Kalmucs are of a beautiful ſhape. They keep more bulls than are neceſſary for the cows, and employ a great number of them as beaſts of burden for carrying their houſes and their other furniture from place to place. They think a bull equal to 50 cows. Theſe and the mares give milk only while they ſuckle their calves or their foals, which are accordingly kept cloſe to the tents during the day, and only ſuffered to ſuck freely during the night; a practice which the Kalmucs pretend makes their cattle ſtronger and more durable. They generally milk their mares three or four times a day, and ſometimes every two hours when the herbage is abundant. The cows are milked but twice a-day.

The Kalmuc ſheep are of the ſame ſpecies with thoſe found in all Great Tartary, having large tails like a bag, exceedingly fat, and which furniſh a ſuet as ſoft as butter. They have alſo large pendant ears, and their head is much arched. Their wool is coarſe, and the ewes ſeldom have horns. One ram is ſufficient for a hundred ewes. Little uſe is made of the milk. The wool is fit for nothing but to make felt for the tents. A great many ſheep die during winter, and a greater number ſtill of the early lambs; the ſkins of which are wrought into thoſe fine furs ſo much eſteemed in Ruſſia and foreign parts.

Camels belong only to the rich; for they are very dear, multiply very ſlowly, and are ſubject to many diſeaſes. The deſarts of the Wolga, and almoſt all thoſe of the ſouthern parts of Great Tartary, furniſh excellent paſture for theſe animals; but they require not only much attention in winter, but they muſt be continually under the eye of the herdſmen; for notwithſtanding the advantage of their ſtature, they are of all animals leaſt able to defend themſelves againſt the wolf. They are guarded with much care againſt the violence of the cold and the winds of winter; nevertheleſs many of them die of a conſumption accompanied with a diarrhœa, occaſioned moſt probably by the moiſture of their paſture and of the ſeaſon. This diſeaſe, for which no remedy has been found, makes them languiſh for ſix months or more. They are in general ſo delicate that a ſlight wound or blow often prove fatal to them. Beſides, no animal is ſo much tormented with inſects; and they often die in ſummer of thoſe they ſwallow in eating the leaves of the oak and of the birch. The *melæ praſcarabæus*, which covers all the plants in many of thoſe places where they feed, is generally fatal to them. In ſpring, when they caſt their hair, and which falls at once from every part of their body, they are expoſed to the bite of the ſpider-ſcorpion, an animal very common in ſouthern countries. The wound inflicted by this inſect on the ſkin thus naked is ſo venomous, that the camel dies of it in leſs than eight days, ſometimes in three. In winter, and eſpecially after rutting time, which happens at the end of March, the camels become lean and weak; the bunch upon their back grows flabby, and hangs down upon the ſide, nor does it recover its plumpneſs till ſummer.

Camels milk is thick, unctuous, and of a ſaltiſh taſte, eſpecially when the animals frequent paſtures abounding with ſaline plants; and this laſt property makes the Kalmucs fond of it to tea. They make uſe of the hair for ſtuffing cuſhions, and for making ropes, packthread, and felt. It may be wrought into the moſt beautiful camlets, or into the fineſt and ſofteſt cloths. The camels with two bunches are a very uneaſy ſeat to the perſon who mounts them; their trot is ſo heavy, and even their walk ſo rude, that he receives the moſt violent ſhocks at every ſtep.

When a Kalmuc Horde intends to remove in ſearch of freſh paſture, which in ſummer neceſſarily happens every four, ſix, or eight days, people are in the firſt place diſpatched to reconnoitre the beſt place for the khan or prince, for the lama, and for the huts containing the idols. Theſe begin the march, and are followed by the whole troop, each chooſing for himſelf the place he thinks moſt convenient. The camel that is loaded with the moſt precious furniture is decorated with little bells, the reſt march in a ſtring one behind another, and the bulls with burdens are driven on before. On theſe days the women and girls dreſs themſelves in their beſt clothes, and lay on abundance of paint. They have the charge, together with the boys, of leading the flocks and the beaſts of burden; and on the road they beguile the tediousneſs of the journey with their ſongs.

The Kalmucs are ſupplied by their flocks with milk, cheeſe, butter, and fleſh, which are the principal articles of their food. With regard to the laſt, they are ſo little ſqueamiſh, that they not only eat the fleſh of their own diſeaſed cattle, but that of almoſt every ſort of wild beaſt, and the poor will even feed upon carion. They eat, however, the roots and ſtalks of many plants; ſuch as the bulbous-rooted chervil and dandelion, &c. which they uſe both boiled and raw.

Their ordinary drink is the milk of mares or cows; but the former is for ſeveral reaſons preferred. This, when freſh, has indeed a very diſagreeable taſte of garlic: but beſides that it is much thinner than cow-milk, it takes as it grows ſour a very agreeable vinous flavour; it yields neither cream nor curd, but furniſhes a very wholſome refreſhing beverage, which ſenſibly inebriates when taken to exceſs. They never make uſe of new milk, and ſtill leſs of milk or of water that have not been boiled. Their milk is boiled as ſoon as it is taken from the animal; when it is cold it is poured into a large leathern bag, in which there remains as much of the old milk as is ſufficient to turn the new quantity ſour, for they never think of cleanſing thoſe bags; and as the inſide is lined with a cruſt depoſited by the caſeous part of the milk and other impurities, it is eaſy to imagine that a nauſeous ſmell muſt exhale from them. But this is preciſely the circumſtance in which the ſecret conſiſts of communicating to the milk a vinous fermentation.

In ſummer, and as often as the Kalmucs procure much milk from their flocks, they never fail to intoxicate themſelves continually with the ſpirituous liquor which they know how to diſtil from it. Mares milk is the moſt ſpirituous; and the quantity meant to be diſtilled remains twenty-four hours in ſummer, and three or four days in winter, in thoſe corrupted bags we mentioned, to prepare it for the operation. The cream is left, but the butter which forms at top is taken off and reſerved for other purpoſes. Cows milk yields one-thirtieth part, and mares milk one-fifteenth part, of ſpirit. This liquor is limpid and very watery, and conſequently does not take fire, but is capable of being long kept in glaſs-bottles. The rich Kalmucks increaſe its ſtrength by a ſecond diſtillation.

Theſe people are exceedingly fond of tea and tobacco. The former is ſo dear, as it comes to them from China by the way of Ruſſia, that the poor people ſupply its place with various wild plants; ſuch as a ſpecies of liquorice, the ſeed of the ſharp-leaved dock, the roots of wild angelica, and the ſeed of the Tartarian maple.

The Kalmucs are excellent horſemen. Their arms are lances, bows, and arrows, poignards, and crooked ſabres, though the rich have fire-arms. They wear, when at war, coats of mail, which coſt 50 horſes, and their helmets are guilded at top. They are fond of falconry, and hunting of all ſorts is their principal amuſement. Their paſſion for play, eſpecially with thoſe who play cards, is carried to as great exceſs among them as in any other nation.

The greater part of their time is ſpent in diverſions; and however miſerable their manner of life may ſeem to us, they are perfectly happy with it. They cannot endure for any time the air of a cloſe room; and think our cuſtom of living in houſes inſupportable. The greateſt part of them, notwithſtanding the apparent unhealthineſs of their way of life, arrive at a vigorous old age; their diſeaſes are neither frequent nor dangerous. Men of 80 or 100 years old are not uncommon; and at that age they can ſtill very well endure the exerciſe of riding. Simple food, the free air which they conſtantly breathe, a hardy vigorous conſtitution, continual exerciſe without ſevere labour, and a mind free from care, are the natural cauſes of their health and longevity.

It is very remarkable, that a migratory people, whoſe manner of life ſeems ſo congruous to the natural liberty of mankind, ſhould have been ſubjected from time immemorial to the unlimited authority of an abſolute ſovereign. The Monguls of Aſia afford the only inſtance of it; for neither written records nor ancient tradition have preſerved the ſmalleſt trace of their ever having enjoyed a ſtate of independence. On the contrary, they acknowledge that they have at all times been ſubject to khans and princes, whoſe authority has been tranſmitted to them by ſucceſſion, and is conſidered as a right perfectly eſtabliſhed, ſacred, and divine.

KAMAKURA, a famous iſland of Japan, about three miles in circumference, lying on the ſouth coaſt of Niphon. It is here they confine their great men when they have committed any fault. The coaſt of this iſland is ſo ſteep, that they are forced to be lifted up by cranes.

KAMEEL, Kamel, or *Camel*, a machine for lifting ſhips. See Camel.

KAMINIECK, a very ſtrong town of Poland, and capital of Podolia, with two caſtles and a biſhop's ſee. It was taken by the Turks in 1672, who gave it back in 1690, after the treaty of Carlowitz. It is ſeated on a craggy rock, in E. Long. 27. 30. N. Lat. 48. 58.

KAMSIN, the name of a hot ſoutherly wind common in Egypt, of which we find the following deſcription in Mr Volney's Travels.—Theſe winds, ſays he, are known in Egypt by the general name of *winds of 50 days;* not that they laſt 50 days without intermiſſion, but becauſe they prevail more frequently in the 50 days preceding and following the equinox. Travellers have mentioned them under the denomination of *poiſonous winds*, or, more correctly, *hot winds of the deſart*. Such in fact is their quality; and their heat is ſometimes ſo exceſſive, that it is difficult to form any idea of its violence without having experienced it; but it may be compared to the heat of a large oven at the moment of drawing out the bread. When theſe winds begin to blow, the atmoſphere aſſumes an alarming aſpect. The ſky, at other times ſo clear in this climate, becomes dark and heavy; the ſun loſes his ſplendor, and appears of a violet colour; the air is not cloudy, but grey and thick, and is in fact filled with an extremely ſubtile duſt, which penetrates every where. This wind, always light and rapid, is not at firſt remarkably hot, but it increaſes in heat in proportion as it continues. All animated bodies ſoon diſcover it by the change it produces in them. The lungs, which a too rarefied air no longer expands, are contracted, and become painful. Reſpiration is ſhort and difficult; the ſkin parched and dry, and the body conſumed by an internal heat. In vain is recourſe had to large draughts of water; nothing can reſtore perſpiration. In vain is coolneſs ſought for; all bodies in which it is uſual to find it deceive the hand that touches them. Marble, iron, water, notwithſtanding the ſun no longer appears, are hot. The ſtreets are deſerted, and the dead ſilence of night reigns every where.

The inhabitants of towns and villages ſhut themſelves up in their houſes, and thoſe of the deſert in their tents or in wells dug in the earth, where they wait the termination of this deſtructive heat. It uſually laſts three days, but if it exceeds that time it becomes inſupportable. Wo to the traveller whom this wind ſurpriſes remote from ſhelter; he muſt ſuffer all its horrible effects, which ſometimes are mortal. The danger is moſt imminent when it blows in ſqualls; for then the rapidity of the wind increaſes the heat to ſuch a degree as to cauſe ſudden death. This death is a real ſuffocation; the lungs being empty are convulſed, the circulation is diſordered, and the whole maſs of blood driven by the heart towards the head and breaſt; whence the hæmorrhage at the noſe and mouth which happens after death. This wind is eſpecially deſtructive to perſons of a plethoric habit, and thoſe in whom fatigue has deſtroyed the tone of the muſcles and the veſſels. The corpſe remains a long time warm, ſwells, turns blue, and ſoon becomes putrid. Theſe accidents are to be avoided by ſtopping the noſe and mouth with handkerchiefs; an efficacious method likewiſe is that practiſed by the camels. On this occaſion theſe animals bury their noſes in the ſand, and keep them there till the ſquall is over. Another quality of this wind is its extreme aridity; which is ſuch, that water ſprinkled on the floor evaporates in a few minutes. By this extreme dryneſs it withers and ſtrips all the plants; and by exhaling too ſuddenly the emanations from animal bodies, criſps the ſkin, cloſes the pores, and cauſes that feveriſh heat which is the conſtant effect of ſuppreſſed perſpiration.

KAMTCHATKA, KAMSCHATKA, or *kamchatka;* a large peninſula on the north-eaſtern part of Aſia, lying between 51° and 62° of north latitude, and between 173° and 182° of eaſt longitude from the iſle of Ferro. It is bounded on the eaſt and ſouth by the ſea of Kamtchatka on the weſt by the ſeas of Ochotſk and Penſhinſk, and on the north by the country of the Koriacs.

1 When firſt viſited by the Ruſſians.

This peninſula was not diſcovered by the Ruſſians before the end of the laſt century. It is probable, however, that ſome of that nation had viſited Kamtchatka before the time abovementioned. For when Volodomir Atlaſſoff entered upon the conqueſt of this peninſula in 1697, he found that the inhabitants had already ſome knowledge of the Ruſſians. A common tradition as yet prevails among them, that, long before the expedition of Atlaſſoff, one Feodotoff and his companions had reſided among them, and had intermarried with the natives; and they ſtill ſhow the place where the Ruſſian habitations ſtood. None of the Ruſſians remained when Atlaſſoff firſt viſited Kamtchatka. They are ſaid to have been held in great veneration, and almoſt deified by the natives; who at firſt imagined that no human power could hurt them, until they quarrelled among themſelves, and the blood was ſeen to flow from the wounds which they gave each other; and ſoon after, upon a ſeparation taking place, they were all killed by the natives.—Theſe Ruſſians were thought to be the remains of a ſhip's crew who had ſailed quite round the north-eaſtern promontory of Aſia called *Tſchukutſkoi-Noſs.* The account we have of this voyage is as follows.—In 1648, ſeven kotches or veſſels ſailed from the mouth of the river Kovyma or Kolyma, lying in the frozen ocean in about 72° north latitude, and 173° or 174° eaſt longitude from Ferro, in order to penetrate into the eaſtern ocean. Four of theſe were never more heard of; the remaining three were commanded by Simon Deſhneff, Geraſim Ankudinoff, two chiefs of the Coſſacs, and Feodotoff Alexeef, head of the Promyſhlenics or wandering Ruſſians, who occaſionally viſited Siberia. Each veſſel was probably manned with about 30 perſons. They met with no obſtructions from the ice; but Ankudinoff's veſſel was wrecked on the promontory abovementioned, and the crew were diſtributed on board the two remaining veſſels. Theſe two ſoon after loſt ſight of each other, and never afterwards rejoined. Deſhneff was driven about by tempeſtuous winds till October, when he was ſhipwrecked on the northern part of Kamtchatka. Here he was informed by a woman of Yakutſk, that Feodotoff and Geraſim had died of the ſcurvy; that part of the crew had been ſlain; and that a few had eſcaped in ſmall veſſels, who had never afterwards been heard of; and theſe were probably the people who, as we have already mentioned, ſettled among the Kamtchatkans.

2 Subdued by them.

As the inhabitants of this country were neither numerous nor warlike, it required no great force to ſubdue them; and in 1711 the whole peninſula was finally reduced under the dominion of the Ruſſians.—For ſome years this acquiſition was of very little conſequence to the crown, excepting the ſmall tribute of furs exacted from the inhabitants. The Ruſſians indeed occaſionally hunted, in this peninſula, foxes, wolves, ermines, ſables, and other animals, whoſe ſkins form an extenſive article of commerce among the eaſtern nations. But the fur-trade carried on from thence was very inconſiderable, until the ſeries of iſlands mentioned in the next article were diſcovered; ſince which time the quantities of furs brought from theſe iſlands have greatly increaſed the trade of Kamtchatka, and rendered it an important part of the Ruſſian commerce.

3 Country deſcribed.

The face of the country throughout the peninſula is chiefly mountainous. It produces in ſome parts birch, poplars, elders, willows, underwood, and berries of different ſorts. Greens and other vegetables are raiſed with great facility; ſuch as white cabbage, turnips, radiſhes, beet-root, carrots, and ſome cucumbers. Agriculture is in a very low ſtate, owing chiefly to the nature of the ſoil and the ſevere hoarfroſts; for though ſome trials have been made with reſpect to the cultivation of grain, and oats, barley, and rye, have been ſown, yet no crop has ever been procured ſufficient in quantity or quality to anſwer the trouble of raiſing it. Hemp, however, has of late years been cultivated with great ſucceſs.—Every year a veſſel belonging to the crown ſails from Ochotſk to Kamtchatka laden with ſalt, proviſions, corn, and Ruſſian manufactures; and returns in June or July of the following year with ſkins and furs.

4 Volcanoes.

Many traces of volcanoes have been obſerved in this peninſula; and there are ſome mountains which are in a burning ſtate at preſent. The moſt conſiderable of theſe is ſituated near the middle of the peninſula. In 1762, a great noiſe was heard iſſuing from the inſide of that mountain, and flames of fire were ſeen to burſt from different parts. Theſe flames were immediately ſucceeded by a large ſtream of melted ſnow-water, which flowed into the neighbouring valley, and drowned two natives who were there on a hunting party. The aſhes and burning matters thrown from the mountain were ſpread over a ſurface of 300 verſts. In 1767 was another diſcharge, but leſs conſiderable. Every night flames of fire were obſerved ſtreaming from the mountain; and conſiderable damage was done by the eruption which attended them. Since that year no flames have been ſeen; but the mountain emits a conſtant ſmoke.

5 **Population, &c.** Kamtchatka is divided by the Ruſſians into four diſtricts; and the government of the whole is dependent upon, and ſubject to, the inſpection of the chancery of Ochotſk. The whole Ruſſian force ſtationed in this peninſula amounts to no more than 300 men. The preſent population of Kamtchatka is very ſmall, amounting to ſcarce 4000 ſouls. Formerly the inhabitants were more numerous; but in 1768, the ſmall-pox carried off 5368 perſons. There are now only about 700 males in the whole peninſula who are tributary, and few more than 100 in the neighbouring iſlands, called the *Kuril Iſles*, who are ſubject to Ruſſia. The fixed annual tribute conſiſts in 279 ſables, 464 red foxes, 50 ſea-otters with a dam, and 38 cub otters. All furs exported from Kamtchatka pay a duty of 10 *per cent.* to the crown; the tenth part of the cargoes bought from the neighbouring iſland is alſo delivered into the cuſtoms.

6 **Manners, &c. of the natives.** The natives of Kamtchatka are as wild as the country itſelf. Some of them have no fixed habitations, but wander from place to place with their herds of rein-deer; others have ſettled habitations, and reſide upon the banks of the rivers and the ſhore of the Penſchinſka ſea, living upon fiſh and ſea-animals, and ſuch herbs as grow upon the ſhore: the former dwell in huts covered with deer-ſkins; the latter in places dug out of the earth; both in a very barbarous manner. Their diſpoſitions and tempers are rough; and they are entirely ignorant of letters or religion. The natives are divided into three different people, namely, the Kamtchatkans, Koreki, and Kuriles. The Kamtchatkans live upon the ſouth ſide of the promontory of Kamtchatka: the Koreki inhabit the northern parts on the coaſt of the Penſchinſka ſea, and round the eaſtern ocean almoſt to the river Anadir, whoſe mouth lies in that ocean almoſt in 68° N. Lat.; the Kuriles inhabit the iſlands in that ſea, reaching as far as thoſe of Japan. The Kamtchatkans have this particular cuſtom, that they endeavour to give every thing a name in their language which may expreſs the property of it; but if they do not underſtand the thing quite well themſelves, then they take a name from ſome foreign language, which perhaps has no relation to the thing itſelf; as, for example, they call a prieſt *bogbog*, becauſe probably they hear him uſe the word *bogbog*, "God;" bread they call *brightatin augſh*, that is, Ruſſian root; and thus of ſeveral other words to which their language is a ſtranger.

It appears probable, that the Kamtchatkans lived formerly in Mungalia beyond the river Amur, and made one people with the Mungals; which is farther confirmed by the following obſervations, ſuch as the Kamtchatkan having ſeveral words common to the Mungal Chineſe language, as their terminations in ong, ing, oang, chin, cha, ching, kſii, kſung; it would be a ſtill greater proof, if we could ſhow ſeveral words and ſentences the ſame in both languages. The Kamtchatkans and Mungals alſo are both of a middling ſtature, are ſwarthy, have black hair, a broad face, a ſharp noſe, with the eyes falling in, eye-brows ſmall and thin, a hanging belly, ſlender legs and arms; they are both remarkable for cowardice, boaſting, and ſlaviſhneſs, to people who uſe them hard, and for their obſtinacy and contempt of thoſe who treat them with gentleneſs.

Although in outward appearance they reſemble the other inhabitants of Siberia, yet the Kamtchatkans differ in this, that their faces are not ſo long as the other Siberians; their cheeks ſtand more out, their teeth are thick, their mouth large, their ſtature middling, and their ſhoulders broad, particularly thoſe people who inhabit the ſea-coaſt.

Before the Ruſſian conqueſt, they lived in perfect freedom, having no chief, being ſubject to no law, not paying any taxes; the old men, or thoſe who were remarkable for their bravery, bearing the principal authority in their villages, though none had any right to command or inflict puniſhment.

Their manner of living is ſlovenly to the laſt degree: they never waſh their hands nor face, nor cut their nails; they eat out of the ſame diſh with the dogs, which they never waſh; they never comb their heads, but both men and women plait their hair in two locks, binding the ends with ſmall ropes. When any hair ſtarts out, they ſew it with threads to make it lie cloſe; by this means they have ſuch a quantity of lice, that they can ſcrape them off by handfuls, and they are naſty enough even to eat them. Thoſe that have not natural hair ſufficient, wear falſe locks, ſometimes as much as weigh 10 pounds, which makes their heads look like a haycock.

They place their chief happineſs in idleneſs, and ſatisfying their natural luſt and appetites; which incline them to ſinging, dancing, and relating of love-ſtories; and they think it more eligible to die than to lead a diſagreeable life; which opinion often leads them to ſelf-murder. This was ſo common after the conqueſt, that the Ruſſians had great difficulty to put a ſtop to it. 7 **Kamtchatkans inclined to ſelf-murder.** They have no notion of riches, fame, or honour; therefore covetouſneſs, ambition, and pride; are unknown among them. On the other hand, they are careleſs, luſtful, and cruel: theſe vices occaſion frequent quarrels and wars among them, ſometimes with their neighbours, not from a deſire of increaſing their power, but from ſome other cauſes; ſuch as the carrying off their proviſions, or rather their girls, which is frequently practiſed as the moſt ſummary method of procuring a wife. Their trade is almoſt entirely confined to procuring the immediate neceſſaries and conveniences of life. They ſell the Koreki ſables, fox and white dog-ſkins, dried muſhrooms, and the like, in exchange for cloaths made of deer-ſkins and other hides. Their domeſtic trade conſiſts in dogs, boats, diſhes, troughs, nets, hemp, yarn, and proviſions: and this kind of barter is carried on under a great ſhow of friendſhip; for when one wants any thing that another has, he goes freely to viſit him, and without any ceremony makes known his wants, although

though perhaps he never had any acquaintance with him before: the hoſt is obliged to behave according to the cuſtom of the country, and give his gueſt what he has occaſion for; but he may afterwards return the viſit, and muſt be received in the ſame manner. They fill almoſt every place in heaven and earth with different ſpirits, and offer them ſacrifices upon every occaſion. Some carry little idols about them, or have them placed in their dwellings; but with regard to God, they not only neglect to worſhip him, but in caſe of troubles and misfortunes, they curſe and blaſpheme him.

8 Cannot number above twenty. It is very diverting to ſee them attempt to reckon above ten: for having reckoned the fingers of both hands, they claſp them together, which ſignifies ten; then they begin with their toes, and count to twenty; after which they are quite confounded, and cry Metcha? that is, Where ſhall I take more? They reckon ten months in the year, ſome of which are longer and ſome ſhorter; for they do not divide them by the changes of the moon, but by the order of particular occurrences that happen in thoſe regions. They commonly divide our year in two, ſo that the winter is one year and ſummer another: the ſummer year begins in May, and the winter in November. They do not diſtinguiſh the days by any particular appellation, nor form them into weeks or months, nor yet know how many days are in the month or year. They mark their epochs by ſome remarkable thing or other; ſuch as the arrival of the Ruſſians, or the firſt expedition to Kamtchatka.

9 Their laws. If any one kills another, he is to be killed by the relations of the perſon ſlain. They burn the hands of people who have been frequently caught in theft; but for the firſt offence the thief muſt reſtore what he hath ſtolen, and live alone in ſolitude, without expecting the aſſiſtance of others. They never have any diſputes about their land or their huts, every one having land and water more than ſufficient for his wants. They think themſelves the happieſt people in the world, and look upon the Ruſſians who are ſettled among them with contempt. However, this notion begins to change: for the old people who are confirmed in their cuſtoms drop off; and the young ones being converted to the Chriſtian religion, adopt the cuſtoms of the Ruſſians, and deſpiſe the barbarity and ſuperſtition of their anceſtors.

In every oſtrog or large village, by order of her imperial majeſty, is appointed a chief, who is ſole judge in all cauſes except in thoſe of life and death; and not only thoſe chiefs, but even the common people, have their chapels for worſhip. Schools are alſo erected in almoſt every village, to which the Kamtchatkans ſend their children with great pleaſure: by this means it is to be hoped that barbarity will be in a ſhort time rooted out from among them.

10 Manner of building their huts. Under the name of *oſtrog*, is underſtood every habitation conſiſting of one or more huts, all ſurrounded by an earthen wall or paliſado.—The huts are built in the following manner: they dig a hole in the earth about five feet deep, the breadth and length proportioned to the number of people deſigned to live in it. In the middle of this hole they plant four thick wooden pillars; over theſe they lay balks, upon which they form the roof or ceiling, leaving in the middle a ſquare opening which ſerves them for a window and chimney; this they cover with graſs and earth, ſo that the outward appearance is like a round hillock; but within they are an oblong ſquare, with the fire in one of the long ſides of the ſquare: between the pillars round the walls of their huts they make benches, upon which each family lies ſeparately; but on that ſide oppoſite to the fire there are no benches, it being deſigned for their kitchen-furniture, in which they dreſs their victuals for themſelves and dogs. In thoſe huts where there are no benches, there are balks laid upon the floor, and covered with mats. They adorn the walls of their huts with mats made of graſs. They enter their huts by ladders, commonly placed near the fire-hearth; ſo that, when they are heating their huts, the ſteps of the ladder become ſo hot, and the ſmoke ſo thick, that it is almoſt impoſſible for a ſtranger to go up or down without being burnt, and even ſtifled to death; but the natives find no difficulty in it; and though they can only fix their toes on the ſteps of the ladder, they mount like ſquirrels; nor do the women heſitate to go through this ſmoke with their children upon their ſhoulders, though there is another opening through which the women are allowed to paſs; but if any man pretend to do the ſame, he would be laughed at. The Kamtchatkans live in theſe huts all the winter, after which they go into others called *balagans*: theſe ſerve them not only to live in during the ſummer; but alſo for magazines. They are made in the following manner: nine pillars, about two fathoms long, or more, are fixed in the ground, and bound together with balks laid over them which they cover with rods, and over all lay graſs, faſtening ſpars, and a round ſharp roof at top, which they cover with bramble, and thatch with graſs. They faſten the lower ends of the ſpars to the balks with ropes and thongs, and have a door on each ſide, one directly oppoſite to the other. They make uſe of the ſame kind of huts to keep their fiſh, &c. till winter comes on, when they can more eaſily remove it; and this without any guard, only taking away the ladders. If theſe buildings were not ſo high, the wild beaſts would undoubtedly plunder them; for notwithſtanding all their precaution, the bears ſometimes climb up and force their way into their magazines, eſpecially in the harveſt, when the fiſh and berries begin to grow ſcarce.

The ſouthern Kamtchatkans commonly build their villages in thick woods and other places which are naturally ſtrong, not leſs than 20 verſts from the ſea; and their ſummer habitations are near the mouths of the rivers; but thoſe who live upon the Penſchinſka ſea and the eaſtern ocean build their villages very near the ſhore. They look upon that river near which their village is ſituated as the inheritance of their tribe.

11 Method of kindling fire. In order to kindle fire, they uſe a board of dry wood with round holes in the ſides of it, and a ſmall round ſtick; this they rub in a hole till it takes fire; and inſtead of tinder they uſe dry graſs beat ſoft. Theſe inſtruments are held in ſuch eſteem by the Kamtchatkans, that they are never without them, and they value them more than our ſteels and flints; but they

are exceſſively fond of iron inſtruments, ſuch as hatchets, knives, or needles: nay, at the firſt arrival of the Ruſſians, a piece of broken iron was looked upon as a great preſent; and even now they receive it with thankfulneſs, finding uſe for the leaſt fragment, either to point their arrows or make darts, which they do by hammering it out cold between two ſtones. As ſome of them delight in war, the Ruſſian merchants are forbid to ſell them any warlike inſtruments: but they are ingenious enough to make ſpears and arrows out of the iron pots and kettles which they buy; and they are ſo dexterous, when the eye of a needle breaks, as to make a new eye, which they will repeat until nothing remains but the point.

72 Conſtruction of their boats.

The Kamtchatkans make their boats of poplar-wood; but the Kuriles not having any wood of their own, make uſe of what is thrown on ſhore by the ſea, and is ſuppoſed to come from the coaſts of Japan, China, or America. The northern inhabitants of Kamtchatka, the ſettled Koreki and Tſchukotſkoi, for want of proper timber and plank, make their boats of the ſkins of ſea-animals. They ſew the pieces together with whales beards, and caulk them with moſs or nettles beat ſmall. Theſe boats hold two perſons; one of which ſits in the prow, and the other in the ſtern. They puſh them againſt the ſtream with poles, which is attended with great trouble: when the current is ſtrong, they can ſcarcely advance two feet in ten minutes; notwithſtanding which, they will carry theſe boats, fully loaded ſometimes 20 verſts, and when the ſtream is not very ſtrong, even 30 or 40 verſts. The larger boats carry 30 or 40 pood: when the goods are not very heavy, they lay them upon a float or bridge reſting upon two boats joined together. They uſe this method in tranſporting their proviſions down the ſtream, and alſo to and from the iſlands.

73 Of their cloths.

Their cloaths for the moſt part are made of the ſkins of deer, dogs, ſeveral ſea and land animals, and even of the ſkins of birds, thoſe of different animals being frequently joined in the ſame garment. They make the upper garment after two faſhions; ſometimes cutting the ſkirts all of an equal length, and ſometimes leaving them long behind in form of a train, with wide ſleeves of a length to come down below the knee, and a hood or caul behind, which in bad weather they put over their heads below their caps; the opening above is only large enough to let their heads paſs: they ſew the ſkins of dogs feet round this opening, with which they cover their faces in cold ſtormy weather; and round their ſkirts and ſleeves they put a border of white dog-ſkin; upon their backs they ſew the ſmall ſhreds of ſkins of different colours. They commonly wear two coats; the under coat with the hair-ſide inwards, the other ſide being dyed with alder; and the upper with the hair outwards. For the upper garment they chooſe black, white, or ſpeckled ſkins, the hair of which is moſt eſteemed for the beauty of its colour.

Men and women without diſtinction uſe the abovementioned garments, their dreſs only differing in their under-cloathing and in the covering of their feet and legs. The women have an under-garment which they commonly wear at home in the houſe, conſiſting of a breeches and waiſtcoat ſewed together. The breeches are wide like thoſe of the Dutch ſkippers, and tie below the knee; the waiſtcoat is wide above, and drawn round with a ſtring. The ſummer habits are made of dreſſed ſkins without hair: the winter-garment is made of deer or ſtone-ram ſkins with the hair on. The undreſs or houſehold habit of the men is a girdle of leather with a bag before, and likewiſe a leathern apron to cover them behind; theſe girdles are ſewed with hair of different colours. The Kamtchatkans uſed formerly to go a hunting and fiſhing during the ſummer in this dreſs; but now this faſhion is changed, and they wear linen ſhirts, which they buy from the Ruſſians.

The covering of their feet and legs is made of ſkins of different ſorts: in the ſummer-time, during the rains they wear the ſkins of ſeal with the hair outwards; but their moſt common covering is the ſkin of the legs of the rein-deer, and ſometimes of the legs of other beaſts, the ſhaggieſt they can find, to preſerve them againſt the cold. But the buſkins which both the Coſſacs and Kamtchatkans uſe in their fineſt dreſs, are made in the following manner: the ſole is of white ſeal-ſkin, the upper part of white fine leather, the hind quarters of white dog-ſkin; what comes round the legs is of dreſſed leather of dyed ſeal-ſkin; the upper parts are embroidered. Theſe buſkins are ſo extraordinary, that if a bachelor is obſerved to wear them, he is immediately concluded to be upon a ſcheme of courtſhip.

They wear the ſame ſort of caps as the people of Yakutſki. In ſummer they have a ſort of hats of birch bark tied about their head. The Kuriles uſe in the ſummer-time caps made of plaited graſs. The womens head-dreſs is the perukes that we formerly mentioned; and theſe were ſo dear to them, that when they came to be Chriſtians they were with difficulty prevailed upon to quit this dreſs for one more decent: however, at preſent, round the Ruſs ſettlements, all is entirely changed, the women wearing ſhirts, ruffles, waiſtcoats, caps, and ribbands; which change nobody now complains of except the very old people. The women do all their work in mittins; they formerly never waſhed their faces, but now they uſe both white and red paint: for white paint they make uſe of a rotten wood; and for red a ſea-plant, which they boil in ſeal's fat, and rubbing their cheeks with it, make them very red. They dreſs moſt in the winter-time, eſpecially when they either receive or pay viſits.

The common cloaths for a Kamtchatkan and his family will not coſt him leſs than 100 rubbles; for the coarſeſt worſted ſtockings, which coſt in Ruſſia 20 kopeeks, cannot be bought here for leſs than a ruble; and all other things are ſold in the ſame proportion. The Kuriles are more able to buy good cloaths than the Kamtchatkans; for they can purchaſe for one ſea-beaver as much as the Kamtchatkans can for twenty foxes; and one beaver coſts the Kuriles no more trouble than five foxes do the Kamtchatkans; for he muſt be a good hunter who catches more than ten foxes in the winter; and a Kurile thinks himſelf unlucky if he doth not catch three beavers in the ſeaſon; beſides which, great numbers are thrown upon the ſhore by ſtorms.

74 Their diet.

The Kamtchatkans divide their fiſh into ſix parts: the ſides and tail are hung up to dry; the back and thinner part of the belly are prepared apart, and generally dried over the fire; the head is laid to ſour in pits, and then they eat it like ſalt fiſh, and eſteem it much, though the ſtink is ſuch that a ſtranger cannot bear it; the ribs and the fleſh which remain upon them they hang up and dry, and afterwards pound for uſe; the larger bones they likewiſe dry for food for their dogs: in this manner all theſe different people prepare the yokola, which is the principal food, or, one may ſay, houſehold bread: and they eat it for the moſt part dry.

Their ſecond favourite food is caviar, or the roes of fiſh, which they prepare three different ways. They dry the roe whole in the air; or take it out of the ſkin which invelopes it, and ſpreading it upon a bed of graſs, dry it before the fire; or, laſtly, make rolls of it with the leaves of graſs, which they alſo dry. They never take a journey or go to hunting without dry caviar; and if a Kamtchatkan has a pound of this, he can ſubſiſt without any other proviſion a great while: for every birch and alder tree furniſhes him with bark, which with his dried caviar makes him an agreeable meal: but they cannot eat either ſeparately, for the caviar ſticks like glue to the teeth; and it is almoſt impoſſible to ſwallow the bark, chewed ever ſo long by itſelf. There is ſtill a fourth method, which both Kamtchatkans and Koreki uſe in preparing their caviar: the firſt having covered the bottom of a pit with graſs, they throw the freſh caviar into it, and leave it there to grow ſour: the Koreki tie theirs in bags, and leave it to ſour; this is eſteemed their moſt delicate diſh.

There is a third ſort of diet, called by the Kamtchatkans *chupriki*, which is prepared in this manner: in their huts, over the fire-place, they make a bridge of ſtakes, upon which they lay a heap of fiſh, which remains there until the hut becomes as warm as a bagnio. If there is no great thickneſs of fiſh, one fire ſerves to dreſs it; but ſometimes they are obliged to make two, three, or more fires. Fiſh dreſſed in this manner is half roaſted, half ſmoaked, but has a very agreeable taſte, and may be reckoned the beſt of all the Kamtchatkan cookery: for the whole juice and fat is prepared with a gradual heat, and kept in by the ſkin, from which they may, when done enough, be eaſily ſeparated; and a ſoon as it is thus dreſſed, they take out the guts, and ſpread the body upon a mat to dry: this they afterwards break ſmall, and putting it into bags, carry it along with them for proviſion, eating it like the yokola.

The Kamtchatkans have a diſh which they eſteem very much, called *huigul:* it is fiſh laid to grow ſour in pits: and though the ſmell of it is intolerable, yet the Kamtchatkans eſteem it a perfume. This fiſh ſometimes rots ſo much in the pits, that they cannot take it out without ladles; in which caſe indeed they uſe it for feeding their dogs.

As for the fleſh of land and the larger ſea animals, they boil it in their troughs with ſeveral different herbs and roots, the broth they drink out of ladles and bowls, and the meat they take out upon boards, and eat in their hands. The whale and ſea-horſe fat they alſo boil with roots.

There is a principal diſh at all their feaſts and entertainments, called *ſelaga*, which they make by pounding all ſorts of different roots and berries, with the addition of caviar, and whale and ſeal's fat.

Before the conqueſt, they ſeldom uſed any thing for drink but plain water, unleſs when they made merry; then they drank water which had ſtood ſome time upon muſhrooms. At preſent they drink ſpirits as faſt as the Ruſſians. After dinner they drink water: and when they go to bed at night, ſet a veſſel of water by them, with the addition of ſnow or ice to keep it cold, and always drink it up before morning. In the winter-time, they amuſe themſelves frequently by throwing handfuls of ſnow into their mouths: and the bridegrooms, who work with the fathers of their future brides, find it their hardeſt taſk to provide ſnow for the family in ſummer time; for they muſt bring it from the higheſt hills be the weather what it will, otherwiſe they would never be forgiven.

15 Method of travelling with dogs.

The Kamtchatkans commonly travel in ſledges drawn by dogs. The animals uſed for their purpoſe differ very little from the common houſe-dogs; they are of a middling ſize, of various colours, though there ſeem to be more white, black, and grey, than of any other. In travelling, they make uſe of thoſe that are caſtrated, and generally yoke four to a ſledge. They drive and direct their dogs with a crooked ſtick about four feet long, which they ſometimes adorn with different coloured thongs; this is looked upon as a great piece of finery. They drive their ſledge ſitting upon their right ſide, with their feet hanging down; for it would be looked upon as a diſgrace for a man to ſit down at the bottom of the ſledge, or to make uſe of any perſon to drive him, nobody doing this but the women. It is very difficult to travel in theſe ſledges; for unleſs a man keeps the exacteſt balance, he is liable every moment from the height and narrowneſs of them to be overturned: in a rugged road this would be very dangerous, as the dogs never ſtop till they come to ſome houſe, or are entangled by ſomething upon the road, eſpecially in going down ſteep hills, when they run with all their force, and are ſcarcely to be kept in; for which reaſon, in deſcending any great declivity, they unyoke all the dogs except one, and lead them ſoftly down. They likewiſe walk up hills; for it is as much as the dogs can do to drag up the ſledge empty. After a deep ſnow, before it has been hardened by a froſt, there is no travelling with dogs till a road be made, which is effected by a man going before upon ſnow-ſhoes, whom they call *brodovſkika*. The ſnow-ſhoes are made of two thin boards, ſeparated in the middle, bound together at the ends, and with the fore part bent a little upwards. The brodovſhika, having one of theſe ſhoes upon each foot, leaves the dogs and ſledge, and going on clears the road for ſome way; then returning, leads forward the dogs and ſledge ſo far as the road is made; a method which he muſt continue till he comes to ſome dwelling-houſe. This is very laborious; and it happens ſo often that no driver ever ſets out without his ſnow-ſhoes. When a ſtorm of driven ſnow ſurpriſes them, they are obliged with all haſte to ſeek the ſhelter of ſome wood, and ſtay there as long as the tempeſt laſts, which ſometimes is a whole week. If they are a large company, they dig a place for themſelves under the ſnow, and cover the entry with wood or brambles. Sometimes they hide themſelves in caves or holes of the earth, wrapping themſelves up in their furs; and when thus covered, they move or turn themſelves with the greateſt caution leſt they ſhould throw off the ſnow, for under that they lie as warm as in their common huts: they only require a breathing-place; but their clothes muſt not be tight or hard girt about them, for then the cold is inſufferable. Another danger attending travellers, is that in the ſevereſt froſt ſeveral rivers are not quite frozen over; and as the roads for the moſt part lie cloſe upon the rivers, the banks being very ſteep, ſcarce a year paſſes without many being drowned. A diſagreeable circumſtance alſo to thoſe who travel in theſe parts, is their ſometimes being obliged to paſs through copſes, where they run the riſk of having their eyes ſcratched out or their limbs broken; for the dogs always run moſt violently in the worſt roads, and, to free themſelves, very often overturn their driver. The beſt travelling is in the month of March or April, when the ſnow is turned hard or frozen a little at top; however, there is ſtill this inconvenience attending it, that ſometimes travellers are obliged to lodge two or three nights in deſert places; and it is difficult to prevail upon the Kamtchatkans to make a fire either for warming themſelves or dreſſing victuals, as they and their dogs eat dried fiſh, and find themſelves ſo warm wrapped in their furs, that they want no other heat: nay, all the people of this climate bear cold ſo well, that they ſleep in the open air as ſound as others in a warm bed, and awake next morning perfectly refreſhed and alert. This ſeems to be ſo natural to all here, that ſome of them have been ſeen to lie down with their backs uncovered againſt a fire, and notwithſtanding the fire has been burnt out long before morning, they continued to ſleep on very comfortably, and without any inconvenience.

Iſlands in the Sea of KAMTCHATKA. So many of theſe have been diſcovered by the Ruſſians, that the exiſtence of almoſt a continued chain of iſlands between the continents of Aſia and America is now rendered extremely probable. Many further diſcoveries of great importance to ſcience, however, remain yet to be made. The principal iſlands already known are the Kuril iſles, which ſtretch ſouthweſt towards the coaſts of China or Japan, and are almoſt uninhabited; thoſe called *Beering's*, and *Copper iſlands*, the Aleutian iſles, and Fox-iſlands, or *Lyſſie Oſtrova*, lie almoſt directly eaſt, ſtretching nearly to 230° of longitude eaſt from Ferro. The firſt project of making diſcoveries in that tempeſtuous ſea which lies between Kamtchatka and America was ſet on foot by Peter the Great of Ruſſia. Captains Beering and Tſchirikoff were employed in the undertaking; the former of whom was ſhipwrecked and died on the iſland which is ſtill called by his name. As this lies at no great diſtance from Kamtchatka, the inhabitants of the latter ſoon ventured over to it, as the ſea-otters and other animals of that kind were accuſtomed to reſort thither in great numbers.

16 Copper iſland deſcribed. Mednoi Oſtroff, or Copper-iſland, which lies in full ſight of Beering's iſland, was next viſited. This iſland has its name from the great quantity of copper with which the north-eaſt coaſt of it abounds, the only ſide which is known to the Ruſſians. It is waſhed up by the ſea, and covers the ſhores in ſuch abundance that many ſhips might be loaded with it. Perhaps an India trader might make a profitable voyage from thence to China, where this metal is in high demand. This copper is moſtly in a metallic or malleable ſtate, and many pieces ſeem as if they had formerly been in fuſion. The iſland is not high; but has many hillocks, each of which has the appearance of having formerly been a volcano. With this kind of hillocks all the iſlands in the ſea of Kamtchatka abound, inſomuch that not a ſingle iſland, though ever ſo ſmall, was found without one; and many of them conſiſted of nothing elſe. In ſhort, all the chain of iſlands abovementioned may without any ſtretch of imagination be conſidered as thrown up by ſome late volcanoes. The apparent novelty of every thing ſeems to juſtify this conjecture: nor can any objection be derived from the vegetable productions with which theſe iſlands abound; for the ſummer after the lower diſtrict of Zutphen in Holland was gained from the ſea, it was covered over with wild muſtard.—All theſe iſlands are ſubject to frequent and violent earthquakes, and abound in ſulphur. We are not informed whether any lava is found upon them; but a party-coloured ſtone as heavy as iron, probably a lava, is mentioned as being found there. From this account it is by no means improbable that the copper abovementioned has been melted in ſome eruption.

17 Beering's iſland and the Aleutian iſles. Beering's iſland is ſituated due eaſt from Kamtchatka, in the 185th degree of longitude; and Copper-iſland about one degree more to the eaſtward, and in the latitude of 54° north. The former is from 70 to 80 verſts long, and ſtretches from north-weſt to ſouth-eaſt in the ſame direction as Copper-iſland. The latter is about 50 verſts in length. About 300 verſts eaſt-by-ſouth of Copper-iſland lie the Aleutian iſles; of which Attak is the neareſt: it is rather larger than Beering's iſland, and ſtretches from weſt to ſouth-eaſt. From thence about 20 verſts eaſtwards is ſituated Semitſhi, extending from weſt to eaſt: and near its extremity is another ſmall iſland. To the ſouth of the ſtrait which ſeparates the two latter iſlands, and at the diſtance of 40 verſts from both of them, lies Shimiya in a ſimilar poſition, and not above 25 verſts in length. All theſe iſlands lie between 54 and 55 degrees of north latitude.

18 Fox-iſlands. The Fox-iſlands are ſituated eaſt-north-eaſt from the Aleutians: the neareſt of theſe, Atchak, is about 800 verſts diſtant; it lies in 56° north latitude, and extends from weſt-ſouth-weſt, towards eaſt-north-eaſt. It greatly reſembles Copper-iſland, and is provided with a commodious harbour on the north. From thence all the other iſlands of this chain ſtretch in a direction towards north-eaſt by eaſt. The next to Atchak is Amlak, and about 15 verſts diſtant; it is nearly of the ſame ſize, and has an harbour on its ſouth ſide. Next follows Saugagamak, at about the ſame diſtance, but ſomewhat ſmaller; from thence is 50 verſts to Amuchta, a ſmall rocky iſland; and the latter to Yunakſan, another ſmall iſland. About 20 verſts from Punakſan there is a cluſter of five ſmall iſlands, or rather mountains, Kigalgiſt, Kagamila, Tſigulac, Ulaga, and Tana Unok; which are therefore called by the Ruſſians *Pat Sopki*, or the Five Mountains. Of theſe Tana-Unok lies moſt to the north-eaſt, towards which the weſtern point of Umnak advances within the diſtance of 20 verſts.

Umnak ſtretches from ſouth-weſt to north-eaſt; it is 150 verſts in length, and has a very conſiderable bay on the weſt end of the northern coaſt, in which there is a ſmall iſland or rock, called *Aduzak;* and on the ſouth ſide Shemalga, another rock. The weſtern point of Aghunalaſhka, or Unalaſhka, is ſeparated from the eaſt end of Umnak by a ſtrait near 20 verſts in breadth. The poſition of theſe two iſlands is ſimilar; but Aghunalaſhka is much the largeſt, and is above 200 verſts long. It is divided towards the north-eaſt into three promontories, one of which runs out in a weſterly direction, forming one ſide of a large bay on the north coaſt of the iſland: the ſecond ſtretches out north-eaſt, ends in three points, and is connected with the iſland by a ſmall neck of land. The third, or moſt ſoutherly one, is ſeparated from the laſt-mentioned promontory by a deep bay. Near Unalaſhka towards the eaſt lies another ſmall iſland called *Shirkin.* About 20 verſts from the north-eaſt promontory of Aghunalaſhka lie four iſlands: the firſt, Akutan, is about half as big as Umnak; a verſt further is the ſmall iſland Akun; a little beyond is Akunok: and laſtly, Kigalga, which is the ſmalleſt of theſe four; and ſtretches with Akun and Akunok almoſt from north to ſouth. Kigalga is ſituated about the 61ſt degree of latitude. About 100 verſts from thence lies an iſland called *Unimak*, upon which a Ruſſian navigator (Captain Krenitzin) wintered; and beyond it the inhabitants ſaid there was a large tract of country called *Alaſhka*, of which they did not know the boundaries.

The Fox-iſlands are in general very rocky, without containing any remarkably high mountains: they are deſtitute of wood; but abound in rivulets and lakes, which are moſtly without fiſh. The winter is much milder than in Siberia; the ſnow ſeldom falls before the beginning of January, and continues on the ground till the end of March. There is a volcano in Amuchta, and ſulphur is produced on another iſland; in ſome others are ſprings hot enough to boil proviſions. Sulphureous flames alſo are ſometimes ſeen at night upon the mountains of Unalaſhka and Akuton.

19 Manners, &c. of the inhabitants

The Fox-iſlands are tolerably populous in proportion to their ſize. The inhabitants are entirely free, and pay tribute to no one; they are of a middle ſtature, and live, both in ſummer and winter, in holes dug in the earth. No ſigns of religion were found among them. Several perſons indeed paſs for ſorcerers, pretending to know things paſt and to come; and are accordingly held in high eſteem, but without receiving any emolument. Filial duty and reſpect towards the aged are not held in eſtimation by theſe iſlanders. They are not, however, deficient in fidelity towards each other; they are of a lively and cheerful temper, though rather impetuous, and naturally prone to anger. In general, they do not obſerve any rules of decency; but follow all the calls of nature publicly and without the leaſt reſerve. Their principal food conſiſts in fiſh, and other ſea-animals, ſmall ſhell fiſh, and ſea-plants; their greateſt delicacies are wild lilies and other roots, together with different kinds of berries. When they have laid in a ſtore of proviſions, they eat at any time of the day without diſtinction; but in caſe of neceſſity, they are capable of faſting ſeveral days together. They ſeldom heat their dwellings: but when they are deſirous of warming themſelves, they light a bundle of hay, and ſtand over it; or elſe they ſet fire to train-oil, which they pour into a hollow ſtone. They feed their children when very young with the coarſeſt fleſh, and for the moſt part raw. If an infant cries, the mother immediately carries it to the ſea-ſide, and, be it ſummer or winter, holds it naked in the water until it is quiet. This cuſtom, it it is ſaid, is ſo far from doing the children any harm, that it hardens them againſt the cold; and accordingly they go barefooted through the winter without the leaſt inconvenience. They are alſo trained to bathe frequently in the ſea; and it is an opinion generally received among the iſlanders, that by theſe means they are rendered bold and fortunate in fiſhing.

The men wear ſhirts made of the ſkins of cormorants, ſea-divers, and gulls; and in order to keep out the rain, they have upper garments of the bladders and other inteſtines of ſea-lions, ſea-calves, and whales, blown up and dried. They cut their hair in a circular form quite cloſe to their ears; and ſhave alſo a round place on the top. The women, on the contrary, let the hair deſcend over the forehead as low as the eyebrows, and tie the remaining part in a knot upon the top of the head. They pierce the ears, and hang in them bits of coral, which they get from the Ruſſians. Both ſexes make holes in the griſtles of their noſes, and in the under lips, in which they thruſt pieces of bone, and are very fond of ſuch kind of ornaments. They mark alſo and colour their faces with different figures. They barter among one another ſea-otters, ſea-bears, cloathes made of birds ſkins and of dried inteſtines, ſkins of ſea-lions and ſea-calves for the coverings of their canoes, wooden maſks, darts, thread made of ſinews and hair of reindeer.

Their houſehold utenſils are ſquare pitchers and large troughs, which they make out of the wood driven aſhore by the ſea. Their weapons are bows and arrows pointed with flint, and javelins of two yards in length, which they throw from a ſmall board. Inſtead of hatchets, they uſe crooked knives of flint or bone. Some iron knives, hatchets, and lances, were obſerved among them, which they had probably got by plundering the Ruſſians.

According to the reports of the oldeſt inhabitants of Umnak and Unalaſhka, they have never been engaged in any war, either amongſt themſelves or with their neighbours, except with the people of Alaſha, the occaſion of which was as follows. The ſon of the toigon or chief of Umnak had a maimed hand; and ſome inhabitants of Alaſhka, who came to viſit upon that iſland, faſtened to his arm a drum, out of mockery, and invited him to dance. The parents and relations of the boy were offended at this inſult: hence a quarrel enſued; and from that time the people have lived in continual enmity, attacking and plundering each other by turns. According to the reports of the iſlanders, there are mountains upon Alaſhka, and woods of great extent at ſome diſtance from the coaſt. The natives wear clothes made of the ſkins of reindeer, wolves, and foxes; and are not tributary to any of their neighbours. The inhabitants of the Fox-iſlands ſeem to have no knowledge of any country beyond Alaſhka, which is one of the moſt eaſterly iſlands yet diſcovered in theſe ſeas, and is probably not far diſtant from the continent of America.

Feaſts are very common among theſe iſlanders; and more particularly when the inhabitants of one iſland are viſited by thoſe of the others. The men of the village meet their gueſts, beating drums, and preceded by the women who ſing and dance. At the concluſion of the dance, the hoſts invite them to partake of the feaſts; after which ceremony, the former return firſt to their dwellings, place mats in order, and ſerve up their beſt proviſion. The gueſts next enter, take their places, and, after they are ſatisfied, the diverſions begin. Firſt, the children dance and caper, at the ſame time making a noiſe with their ſmall drums, while the owners of the huts of both ſexes ſing. Next, the men dance almoſt naked, tripping after one another, and beating drums of a larger ſize: when theſe are weary, they are relieved by the women, who dance in their clothes, the men continuing in the mean time to ſing and beat their drums. At laſt the fire is put out which had been kindled for the ceremony. The manner of obtaining fire is by rubbing two pieces of dry wood againſt each other, or moſt commonly by ſtriking two flints together, and letting the ſparks fall upon ſome ſea-otter's hair mixed with ſulphur. If any ſorcerer is preſent, it is then his turn to play his tricks in the dark; if not, the gueſts immediately retire to their huts, which are made, on that occaſion, of their canoes and mats. The natives who have ſeveral wives do not with-hold them from their gueſts; but where the owner of the hut has himſelf but one wife, he then makes the offer of a female ſervant.

Their hunting ſeaſon is principally from the end of October to the beginning of December; during which time they kill great numbers of young ſea-bears for their clothing. They paſs all December in feaſtings and diverſions ſimilar to thoſe abovementioned: with this difference, however, that the men dance in wooden maſks, repreſenting various ſea-animals, and painted red, green, or black, with coarſe-coloured earths found upon theſe iſlands.

During theſe feſtivals, they viſit each other from village to village, and from iſland to iſland. The feaſts concluded, maſks and drums are broken to pieces, or depoſited in caverns among the rocks, and never afterwards made uſe of. In ſpring, they go out to kill old ſea-bears, ſea-lions, and whales. During ſummer, and even in winter when it is calm, they row out to ſea, and catch cod and other fiſh. Their hooks are of bone; and for lines they make uſe of a ſtring made of a long tenacious ſea-weed, which is ſometimes found in thoſe ſeas, near 160 yards in length.

Whenever they are wounded in any encounter, or bruiſed by any accident, they apply a ſort of yellow root to the wound, and faſt for ſome time. When their head aches, they open a vein in that part with a ſtone-lancet. When they want to glue the points of their arrows to the ſhafts, they ſtrike their noſe till it bleeds, and uſe the blood as glue.

Murder is not puniſhed among them; for they have no judge. The following ceremonies are uſed in the burial of the dead. The bodies of poor people are wrapped up in their own clothes, or in mats; then laid in a grave, and covered over with earth. The bodies of the rich are put, together with their clothes and arms, in a ſmall boat made of the wood driven aſhore by the ſea: this boat is hung upon poles placed croſswiſe; and the body is thus left to rot in the open air.

The cuſtoms and manners of the inhabitants of the Aleutian iſles are nearly ſimilar to thoſe of the inhabitants of the Fox-iſlands. The former indeed are rendered tributary and entirely ſubject to Ruſſia; and moſt of them have a ſlight acquaintance with the Ruſſian language, which they have learned from the crews of the different veſſels who have landed there.

KAN, or Khan, the name of an officer in Perſia, anſwering to that of governor in Europe.—There are kans of provinces, countries, and cities, who have different additions to diſtinguiſh them.

KANGUROO. See Didelphis.

KANISKA, a very ſtrong town of Lower Hungary, capital of the county of Selawar. It was taken by the Imperialiſts in 1690. It is ſeated on the river Drave, in E. Long. 17. 37. N. Lat. 46. 23.

KAN-TCHEOU-FOU, a flouriſhing town of China, in the province of Kiang-ſi. Its rivers, port, riches, and population, all contribute to attract ſtrangers. A days journey from this city is a very rapid current, almoſt 30 leagues in length, which flows with great impetuoſity over a number of ſcattered rocks that are level with the water. Travellers here are in great danger of being loſt, unleſs they take care to be conducted by one of the pilots of the country; after this paſſage, the river becomes twice as large as the Seine at Rouen; it is continually covered with loaded barks and other veſſels under ſail.—Near the walls of the city is a very long bridge, compoſed of 130 boats joined together by ſtrong iron chains. The cuſtom-houſe is upon this bridge, where a receiver conſtantly reſides to viſit all barks, and examine if they have paid the duties impoſed on the commodities with which they are loaded. Two or three moveable boats are ſo placed, that by their means the bridge can be opened or ſhut, to give or refuſe a paſſage; and no barks are ever permitted to paſs until they have been examined. In the territory belonging to this city, a great number of thoſe valuable trees grow, from which varniſh diſtils. Its diſtrict is extenſive, and contains 12 cities of the third claſs.

KAOLIN, the name of an earth which is uſed as one of the two ingredients in oriental porcelain. Some of this earth was brought from China, and examined by Mr Reaumur. He found that it was perfectly infuſible by fire, and believed that it is a talky earth; but Mr Macquer obſerves, that it is more probably of an argillaceous nature, from its forming a tenacious paſte with the other ingredient called *petuntſe*, which has no tenacity. Mr Bomare ſays, that by analyſing ſome Chineſe kaolin, he found it was a compound earth conſiſting of clay, to which it owed its tenacity; of calcareous earth, which gave it a meally appearance; of ſparkling cryſtals of mica; and of ſmall gravel, or particles of quartz-cryſtals. He ſays, that he has found a ſimilar earth upon a ſtratum of granite, and conjectures that it may be a decompoſed granite. This conjecture is the more probable, as kaolins are frequently found in the neighbourhood of granites. See PORCELAIN.

KAOUTCHOUK. See CAOUTCHOUC.

KARAITES. See CARAITES.

KARAT. See CARACT.

KARECK, an iſland in the Perſian Gulf, lately ſubject to the Dutch. It was viſited by Mr Ives in 1758. He found the ſouth part of the iſland well cultivated, with agreeable fields of corn, and producing plenty of eſculent vegetables. In the middle are very high hills abounding with a variety of ſhells. Some fragments torn from their ſides afforded an opportunity of obſerving an immenſe quantity of oyſters, ſcallop, cockle, and other ſhells. The common tree here is the banian, but without thoſe luxuriant ſhoots, which in ſome other places go downward and take root in the ground. The lavender-cotton is alſo found here; and the iſland abounds with fowls of various kinds. Pearl oyſters are alſo found here, but lie at conſiderable depths. Mr Ives mentions one pearl of conſiderable ſize, which had upon it a natural repreſentation of the face of a human fetus in the early months of pregnancy.

This ſettlement was founded by Baron Kniphauſen, brother to one of that name ſome time ago ambaſſador at the court of London. Having left the Pruſſian ſervice on ſome diſguſt, he entered into that of France. He afterwards went to the Eaſt Indies, and was appointed reſident to the Dutch factory at Baſſora. Here he became an object to the avarice and rapacity of the Turkiſh governors; who having got him accuſed of capital crimes, he was at laſt glad to compound with them for 50,000 rupees, the whole ſum he was worth, beſides giving directions how they might ſqueeze other 50,000 from his ſucceſſor in office (who in truth wiſhed him turned out) and the banian who did the buſineſs of the Dutch factory, and who had likewiſe been concerned in underhand practices againſt him.

The new reſident was overjoyed at his acceſſion, but loſt all patience when he found himſelf obliged to pay 30,000 rupees to the governor as a compliment on his entering into a poſt of ſuch conſequence. Nor had the banian much better reaſon to be ſatisfied, being obliged to pay down 20,000 rupees to make up the ſum which was to ſatisfy the rapacity of the governor.

Baron Kniphauſen ſailed from Baſſora the very day after he was ſet at liberty; but having landed on this iſland, he, in conjunction with an Arabian ſheick, formed the plan of the ſettlement. He then carried a letter from the ſheick to the governor and council of Batavia, in which the former propoſed to give up the ſovereignty of the iſland. Before ſetting out for this place, however, the baron took care to diſpatch a meſſenger acroſs the deſart to Conſtantinople, acquainting the Dutch ambaſſador with the treatment he had received, and requeſting liberty of the grand vizier for the Dutch to ſettle at Kareck The meſſenger returned with a favourable anſwer before the baron came back from Batavia. The governor of Baſſora, then, having attempted in vain to perſuade him to return to that place, wrote a letter of complaint to Batavia, accuſing the baron in terms of the utmoſt exaggeration, but without any mention of the 100,000 rupees. The baron, however, having got intelligence of this proceeding, uſed ſuch diligence that he got back to Batavia in the very ſhip which carried the letter. Being thus preſent on the ſpot to anſwer the charges brought againſt him, he acquitted himſelf ſo well that his ſcheme was inſtantly approved of, and he was ſent back with two ſhips and 50 men to take poſſeſſion of Kareck, whoſe inhabitants at that time amounted to no more than 100 poor fiſhermen.

Conſiderable difficulties now occurred in the eſtabliſhment of the new colony; for he had but very few materials with him, and the government of Batavia was very ſlow in ſending him the ſuccors they had promiſed. He was therefore obliged to ſend for workmen from Perſia and Arabia, with whoſe aſſiſtance he built a ſmall compact fort, ſtrong enough to defend itſelf againſt any of the country powers and any ſhips uſually ſailing to India, excepting thoſe of the Eaſt India company. Nor was he content with putting himſelf in a poſture of defence, but even commenced hoſtilities againſt the Turks; and by detaining two veſſels very richly laden, which happened to touch at the iſland, he at laſt obliged the governor of Baſſora to pay back the 100,000 rupees he had extorted, 30,000 of which he reſtored to his ſucceſſor in office at Baſſora, and 20,000 to the banian. When Mr Ives viſited him, he informs us, that ſurpriſing progreſs had been made during the little time the baron had held the ſovereignty of the iſland, and that he intended to make it a ſtrong and wealthy place; at the ſame time that he diſcovered his taſte for literature by advancing a ſum of money for books and inſtruments of various kinds, which were afterwards punctually ſent. After that time, however, the baron quitted the ſervice of the Dutch; and the iſland is again in the poſſeſſion of the ſheick of Bundaric, to whom it formerly belonged. It is about five miles long and two in breadth; lying nearly in the middle of the Perſian Gulf, about ſeven leagues from each ſide, and about 30 leagues from the mouth of Baſſora river, where all ſhips bound to that port muſt call for pilots.

KARLE, a Saxon word uſed in Engliſh law, ſometimes ſimply for a man; and ſometimes, with an addition, for a ſervant or clown. Thus the Saxons call a ſeaman *buſcarli*, and a domeſtic ſervant *buſcarle*. From hence comes the modern word *churl*.

KARMATIANS, a ſect of Mohammedans, who occaſioned great diſorders in the empire of the Arabs. See BAGDAD, n° 49.

KASTRIL, or KESTRIL. See FALCO.

KATTEGATTE, a noted ſea lying between part of Jutland and the coaſt of Sweden, and towards the latter covered with a great number of iſles. It is almoſt cloſed at the extremity by the low Daniſh iſlands of Sealand and Funen, which had in old times been (with Sweden) the ſeat of the Suiones. Between the firſt and the coaſt of Sweden is the famous ſound, the paſſage tributary to the Danes by thouſands of ſhips. Theſe iſlands were of old called *Codonania*, and gave to the Kattegatte the name of *Sinus Codanus*. Its greateſt depth is 35 fathoms. It decreaſes as it approaches the ſound; which begins with 16 fathoms, and near Copenhagen ſhallows to even four. The Roman fleet, under the command of Germanicus, ſailed, according to Pliny, round Germany, and even doubled the *Cimbricum Promontorium*, and arrived at the iſlands which fill the bottom of the Kattegatte: either by obſervation or information, the Romans were acquainted with 23. One they called *Gleſſaria*, from its amber, a foſſil abundant to this day on part of the ſouth ſide of the Baltic. A Roman knight was employed by Nero's maſter of the Gladiators to collect in theſe parts that precious production, by which he came perfectly acquainted with this country.

KAUFFBEUREN, a free and imperial town of Germany, ſituated on the river Wardach, in E. Long. 10. 53. N. Lat. 47. 57.

KAY, QUAY, or *Key*. See KEY.

KAZY, in the Eaſt Indies, a Mahometan judge or magiſtrate; appointed originally by the court of Delhi to adminiſter juſtice according to their written law; but particularly in matters relative to marriages, the ſales of houſes, and tranſgreſſions of the Koran. He atteſts or authenticates writings, which under his ſeal are admitted as the originals in proof.

KEBLA, an appellation given by the Mahometans to that part of the world where the temple of Mecca is ſituated towards which they are obliged to turn themſelves when they pray.

KECKERMAN (Bartholomew), a native of Dantzick, and profeſſor of philoſophy there about the beginning of the 17th century, compoſed ſyſtems of almoſt all the ſciences, in which he ſhows more method than genius. He died in 1609, fairly worn out at the age of 38 with mere ſcholaſtic drudgery.

KEDAR (anc. geog.), a diſtrict in the deſert of the Saracens (ſo called from *Cedar*, the ſon of Iſhmael, according to Jerome, who in another place ſays that Kedar was uninhabitable), on the north of Arabia Felix. *Kedareni*, the people; who dwelt in tents like the other Scenites (Pſalm cxx.), were rich in cattle (Iſaiah lx.), of a ſwarthy complexion (Canticles i.), and excellent at the bow (Iſaiah xxi.)

KEDES (anc. geog.), a city of refuge and Levitical in the tribe of Naphthali, on the confines of Tyre and Galilee; (Joſephus). Jerome calls it a ſacerdotal city, ſituated on a mountain 20 miles from Tyre, near Paneas, and called *Cidiſſus*, taken by the king of Aſſyria.—Another *Kedes* in the tribe of Iſſachar (1 Chron. vii. 72.) which ſeems to be called *Kiſion* (Joſhua xix.).

KEDGE, a ſmall anchor, uſed to keep a ſhip ſteady whilſt ſhe rides in a harbour or river, particularly at the turn of the tide, when ſhe might otherwiſe drive over her principal anchor, and entangle the ſtock or flukes with her ſlack-cable, ſo as to looſen it from the ground. This is accordingly prevented by a kedge-rope that hinders her from approaching it. The Kedges are particularly uſeful in tranſporting a ſhip; i. e. removing her from one part of the harbour to another, by means of ropes which are faſtened to theſe anchors. They are generally furniſhed with an iron ſtock, which is eaſily diſplaced for the convenience of ſtowing them.

KEDRON, or CEDRON (anc. geog.), a town which, from the defeat and purſuit of the Syrians (1 Mac. xvi.), appears to have ſtood on the road which led from the Higher Judea to Azotus: in this war it was burnt by the Jews.

KEDRON, or *Cedron* (anc. geog.), St John calls it a brook, but Joſephus a deep valley between Jeruſalem and mount olivet to the eaſt; called alſo *Kedron* from its blackneſs. A brook only in winter, or in rainy weather, according to Maundrel.

KEEL, the principal piece of timber in a ſhip, which is uſually firſt laid on the blocks in building. If we compare the carcaſe of a ſhip to the ſkeleton of the human body, the keel may be conſidered as the backbone, and the timbers as the ribs. It therefore ſupports and unites the whole fabric, ſince the ſtem and ſtern-poſt, which are elevated on its ends, are in ſome meaſure a continuation of the keel, and ſerve to connect and incloſe the extremities of the ſides by tranſoms; as the keel forms and unites the bottom by timbers.

The keel is generally compoſed of ſeveral thick pieces placed lengthways, which, after being ſcarfed together, are bolted, and clinched upon the upper ſide. When theſe pieces cannot be procured large enough to afford a ſufficient depth to the keel, there is a ſtrong thick piece of timber bolted to the bottom thereof, called the *falſe keel*, which is alſo very uſeful in preſerving the lower ſide of the main keel. In the largeſt ſhips of war, the falſe keel is generally compoſed of two pieces, which are called the *upper* and the *lower falſe keels*. See MIDSHIP-*Frame*.

The loweſt plank in a ſhip's bottom, called the *garboard-ſtreak*, has its inner-edge let into a groove or channel cut longitudinally on the ſide of the keel: the depth of this channel is therefore regulated by the thickneſs of the garboard-ſtreak.

KEEL is alſo a name given to a low flat-bottomed veſſel, uſed in the river Tyne to bring the coals down from Newcaſtle and the adjacent parts, in order to load the colliers for tranſportation.

KEEL-Hauling, a puniſhment inflicted for various offences in the Dutch navy. It is performed by plunging the delinquent repeatedly under the ſhip's bottom on one ſide, and hoiſting him up on the other, after having paſſed under the keel. The blocks or pullies by which he is ſuſpended are faſtened to the oppoſite extremities of the main-yard, and a weight of lead or iron is hung upon his legs, to ſink him to a competent depth. By this apparatus he is drawn cloſe up to the yard-arm, and thence let fall ſuddenly into the ſea, where, paſſing under the ſhip's bottom, he is hoiſted up on the oppoſite ſide of the veſſel. As this extraordinary ſentence is executed with a ſerenity of temper peculiar to the Dutch, the culprit is allowed ſufficient intervals to recover the ſenſe of pain, of which indeed he is frequently deprived during the operation. In truth a temporary inſenſibility to his ſufferings ought by no means to be conſtrued into a diſreſpect of his judges, when we conſider that this puniſhment is ſuppoſed to have peculiar propriety in the depth of winter, whilſt the flakes of ice are floating on the ſtream: and that it is continued till the culprit is almoſt ſuffocated for want of air, benumbed with the cold of the water, or ſtunned with the blows his head receives by ſtriking the ſhip's bottom.

KEELSON, a piece of timber which may be properly defined the interior or counter-part of the keel; as it is laid upon the middle of the floor-timbers, immediately over the keel, and like it compoſed of ſeveral pieces ſcarfed together. In order to fit with more ſecurity upon the floor-timbers and crotches, it is notched about an inch and an half deep, oppoſite to each of thoſe pieces, and thereby firmly ſcored down upon them to that depth, where it is ſecured by ſpike-nails. The pieces of which it is formed are only half the breadth and thickneſs of thoſe of the keel.

The keelſon ſerves to bind and unite the floor-timbers to the keel. It is confined to the keel by long bolts, which, being driven from without through ſeveral of the timbers, are fore-locked or clenched upon rings on the upper-ſide of the keelſon.

KEEPER OF THE GREAT SEAL, is a lord by his office, and ſtyled *lord keeper of the great ſeal of Great Britain;* he is always one of the privy-council. All grants, charters, and commiſſions of the king under the great ſeal, paſs through the hands of the lord-keeper; for without that ſeal many of thoſe grants, &c. would be of no force; the king being, in the interpretation of the law, a corporation, and therefore paſſes nothing but by the great ſeal, which is alſo ſaid to be the public faith of the kingdom, being in the higheſt eſteem and reputation.

Whenever there is a lord-keeper, he is inveſted with the ſame place, authority, pre-eminence, juriſdiction, or execution of laws, as the lord-chancellor of Great Britain is inveſted with.

The lord-keeper is conſtituted by the delivery of the great ſeal, &c.

Keeper of the Privy-ſeal, is alſo a lord by his office, through whoſe hands all grants, pardons, &c. paſs before they come to the great ſeal; and even ſome things paſs his hands which do not paſs the great ſeal at all. This officer is alſo one of the privy-council, yet was anciently called *clerk of the privy ſeal.* His duty is to put the ſeal to no grant, &c. without a proper warrant; nor with warrant where it is againſt law, or inconvenient, but ſhall firſt acquaint the king therewith.

KEEPING, in painting, denotes the repreſentation of objects in the ſame manner that they appear to the eye at different diſtances from it; for which the painter ſhould have recourſe to the rules of perſpective. There are two inſtances in which the famous Raphael Urbin has tranſgreſſed theſe rules: in one of his cartons, repreſenting the miraculous draught of fiſhes, the men in each of the two boats appear of full ſize, the features of their faces being ſtrongly marked; and the boats are repreſented ſo ſmall, and the men ſo big, that any one of them appears ſufficient to ſink either of the boats by his own bare weight: and the fowls on the ſhore are alſo drawn ſo big, as to ſeem very near the eye of the obſerver, who could not poſſibly, in that caſe, diſtinguiſh the features of the men in the diſtant boats. Or, ſuppoſing the obſerver to be in either of the boats, he could not ſee the eyes or beaks of the fowls on the ſhore. The other inſtance occurs in his hiſtorical picture of our Saviour's tranſfiguration on the mount; where he is repreſented with thoſe who were then with him, almoſt as large as the reſt of his diſciples at the foot of the mount, with the father and mother of the boy whom they brought to be cured; and the mother, though on her knees, is more than half as tall as the mount is high. So that the mount appears only of the ſize of a little hay-rick, with a few people on its top, and a greater number at its bottom on the ground; in which caſe, a ſpectator at a little diſtance could as well diſtinguiſh the features of thoſe at the top as of thoſe on the ground. But upon any large eminence, deſerving the name of a mount, that would be quite impoſſible.

KEIL, a very important fortreſs of Germany, ſeated on the banks of the Rhine, built by the French after a deſign of marſhal Vauban, for the defence of Straſburg. It was ceded to the empire in 1697, by the treaty of Ryſwick. The French retook it in 1703; and it was reſtored to the empire by the treaty of Reſtadt. E. Long. 7. 45. N. Lat. 48. 40.

KEILL (Dr John), a celebrated aſtronomer and mathematician, was born at Edinburgh in 1671, and ſtudied in the univerſity of that city. In 1694 he went to Oxford; where, being admitted of Baliol college, he began to read lectures according to the Newtonian ſyſtem in his private chamber in that college. He is ſaid to have been the firſt who taught Sir Iſaac Newton's principles by the experiments on which they are founded: and this, it ſeems, he did by an apparatus of inſtruments of his own providing, by which means he acquired a great reputation in the univerſity. The firſt ſpecimen he gave the public of his ſkill in mathematical and philoſophical knowledge, was his *Examination of Dr Burnet's theory of the earth*, with *Remarks on Mr Whiſton's theory:* and theſe theories being defended by their reſpective inventors, drew from Mr Keill *An examination of the reflections on the theory of the earth*, together with *A defence of the remarks on Mr Whiſton's new theory.* In 1701, he publiſhed his celebrated treatiſe, intitled, *Introductio ad veram phyſicam*, which only contains 14 lectures; but in the following editions he added two more. This work has been tranſlated into Engliſh, under the title of *An introduction to natural philoſophy.* Afterwards, being made fellow of the Royal Society, he publiſhed, in the Philoſophical Tranſactions, a paper, of the laws of attraction; and being offended at a paſſage in the *Acta eruditorum* of Leipſic, warmly vindicated againſt Mr Leibnitz Sir Iſaac Newton's right to the honour of the firſt invention of his method of fluxions. In 1709 he went to New-England as treaſurer of the Palatines. About the year 1711, ſeveral objections being urged againſt Sir Iſaac Newton's philoſophy, in ſupport of Des Cartes's notions of a plenum, Mr Keill publiſhed a paper in the Philoſophical Tranſactions on the rarity of matter, and the tenuity of its compoſition. But while he was engaged in this diſpute, queen Anne was pleaſed to appoint him her decypherer; and he continued in that place under king George I. till the year 1716. He had alſo the degree of doctor of phyſic conferred on him by the univerſity of Oxford in 1713. He died in 1721. He publiſhed, beſides the works already mentioned, *Introductio ad veram aſtronomiam*, which was tranſlated into Engliſh by Dr Keill himſelf; and an edition of Commandinus's Euclid, with additions of his own.

Keill (James), M. D. an eminent phyſician, and brother of the former, was born in Scotland about the year 1673; and having travelled abroad, read lectures on anatomy with great applauſe in the univerſities of Oxford and Cambridge, by the latter of which he had the degree of doctor of phyſic conferred upon him.

In 1700 he ſettled at Northampton, where he had conſiderable practice as a phyſician; and died there of a cancer in the mouth in 1719. He publiſhed, 1. An Engliſh tranſlation of Lemery's chemiſtry. 2. An account of animal ſecretion, the quantity of blood in the human body, and muſcular motion. 3. A treatiſe on Anatomy. 4. Several pieces in the Philoſophical Tranſactions.

KEISERSBERG, a town of Alſace in France, and in the bailiwic of Haguenau, which has belonged to the French ever ſince the year 1548. It is ſeated in a pleaſant country, in E. Long. 7. 25. N. Lat. 48. 10.

KEISERSLAUERN, a town of Germany, in the Lower Palatinate, belonging to the elector Palatine; ſeated on the river Louter, in E. Long. 7. 51. N. Lat. 49. 22.

KEISERTOUL, a town of Switzerland, in the county of Baden, with a bridge over the Rhine, and a caſtle. It belongs to the biſhop of Conſtance, and is ſituated in E. Long. 8. 40. N. Lat. 47. 10.

KEISERWERT, a town of Germany in the circle of Weſtphalia, the dioceſe of Cologne, and the duchy of Berg; ſubject to the elector Palatine. The fortifications are demoliſhed. It is ſeated on the Rhine, in E. Long. 6. 49. N. Lat. 51. 16.

KEITH (James), field-marſhal in the Pruſſian ſervice, was the younger ſon of William Keith, earl-marſhal of Scotland; and was born in 1696. He was deſigned by his friends for the law; but his inclination led to arms, and the firſt occaſion of drawing his ſword was rather an unhappy one. When he was 18 years old the rebellion broke out in Scotland; and through the inſtigation of his mother, he joined James's party: he was wounded at the battle of Sheriff-muir, and made his eſcape to France. Here he applied himſelf to military ſtudies; and going to Madrid, he by the intereſt of the duke of Liria obtained a commiſſion in the Iriſh brigades, then commanded by the duke of Ormond. He afterwards attended the duke of Liria, when he went ambaſſador to Muſcovy; and being by him recommended to the czarina, was promoted to the rank of lieutenant-general, and inveſted with the order of the black eagle. He diſtinguiſhed himſelf by his valour and conduct in the Ruſſian ſervice, and had no inconſiderable ſhare in the revolution that raiſed Elizabeth the daughter of Peter the Great to the throne; he alſo ſerved in ſeveral embaſſies; but finding the honours of that country but a ſplendid kind of ſlavery, he left that court and entered the Pruſſian ſervice. The king of Pruſſia made him field-marſhal of the Pruſſian armies, and governor of Berlin; and diſtinguiſhed him ſo far by his confidence, as to travel in diſguiſe with him over a great part of Germany, Poland, and Hungary. In buſineſs, he made him his chief counſellor; in his diverſions, his chief companion. The king was much pleaſed with an amuſement which the marſhal invented in imitation of the game of cheſs. The marſhal ordered ſeveral thouſand ſmall ſtatues of men in armour to be caſt by a founder; theſe he would ſet oppoſite to each other, and range them in battalia, in the ſame manner as if he had been drawing up an army; he would bring out a party from the wings or centre, and ſhow the advantage or diſadvantage reſulting from the different draughts which he made. In this manner the king and the marſhal often amuſed themſelves, and at the ſame time improved their military knowledge. This brave and experienced general, after many important ſervices in the late wars of that illuſtrious monarch, was killed in the unfortunate affair of Hohkerchen in the year 1758.

The family of Keith was among the moſt ancient in Europe. In 1010 the Scots gained a complete victory over the Danes at Camus town in Angus; King Malcolm II. as a reward for the ſignal bravery of a certain young nobleman who purſued and killed Camus the Daniſh general, beſtowed on him ſeveral lands, particularly the barony of Keith in Eaſt Lothian, from which his poſterity aſſumed their ſirname. The king alſo appointed him hereditary great mareſchal of Scotland, which high office continued in his family till the year 1715, when the laſt earl engaged in the rebellion and forfeited his eſtate and honours; and thus ended the family of Mareſchal, after ſerving their country in a diſtinguiſhed capacity above 700 years.

KELLINGTON, or KILKHAMPTON, a town of Cornwall in England, which ſends two members to parliament. W. Long. 4. 38. N. Lat. 50. 36.

KELLS, a fair and poſt-town of Ireland, in the county of Meath and province of Leinſter, 31 miles from Dublin. It is a borough likewiſe, and returns two members to parliament; patron earl of Bective. This place gives title of viſcount to the family of Cholmondeley. Near it is Headfort, the magnificent ſeat of Lord Bective. This town is pleaſantly ſituated on the river Blackwater, and has four fairs. It was anciently called *Kenanus*, and afterwards *Kenlis*. In former ages it was one of the moſt famous cities in the kingdom; and on the arrival of the Engliſh was walled and fortified with towers. In 1178 a caſtle was erected where the market-place now is; and oppoſite to the caſtle was a croſs of an entire ſtone, ornamented with baſs-relief figures and many curious inſcriptions in the ancient Iriſh character. Within a ſmall diſtance was the church of St Senan; and on the ſouth of the churchyard is a round tower which meaſures 99 feet from the ground, the roof ending in a point; and near the top were four windows oppoſite to the cardinal points. There was a celebrated monaſtery founded here in 550 for regular canons, and dedicated to the Virgin Mary. It owed its origin to St Columb, to whom the ſite of the abbey was granted by Dermod Mac Carval, or Dermod the ſon of Kervail king of Ireland. An epiſcopal ſee was afterwards erected here, which in the 13th century was united to that of Meath. A priory or hoſpital was alſo erected by Walter de Lacie, lord of Meath, in the reign of Richard I. for croſs-bearers or crouched friars following the order of St Auguſtin. There was likewiſe a perpetual chantry of three prieſts or chaplains in the pariſh-church of St Columb in Kells to celebrate maſs daily; one in the Rood chapel, another in St Mary's chapel, and a third in the chapel of St Catherine the virgin.

KELLS is alſo the name of a village, being a poſt and fair town in the county of Kilkenny, 64 miles from Dublin. It is an ancient place, ſituated on Kings river; and was noted for a priory of Auguſtines, built and richly endowed by Geoffroy Fitz-Roberts, who came

Kelly.

came into this kingdom with Strongbow. The prior of this place had the title of *lord ſpiritual*, and as ſuch ſat in the houſe of peers before the Reformation; the ruins only of this abbey now remain: a ſynod was held in it anno 1152, when John Paparo, legate from Rome, made one of the number of biſhops that were convened there at that time to ſettle the affairs of the church. The preſent church is built in the Gothic manner. Fairs held 13th July.

There is a third place of the above name, ſituated in the county of Antrim and province of Ulſter, 89 miles from Dublin, near which are the ruins of a church: this place is but a ſmall village, ſeated on a river of the ſame name, over which it has a bridge.

KELLY (Hugh), an author of conſiderable repute, was born on the banks of Killarney lake in Ireland in 1739. His father, a gentleman of good family, having reduced his fortune by a ſeries of unforeſeen misfortunes, was obliged to repair to Dublin that he might endeavour to ſupport himſelf by his perſonal induſtry. A tolerable ſchool education was all he could afford to his ſon; who was bound an apprentice to a ſtaymaker, and ſerved the whole of his time with diligence and fidelity. At the expiration of his indentures, he ſet out for London to procure a livelihood by his buſineſs; where he encountered all the difficulties a perſon poor and without friends could be ſubject to on his firſt arrival in town. Happening, however, to become acquainted with an attorney, he was employed by him in copyinga nd tranſcribing; an occupation which he proſecuted with ſo much aſſiduity, that he is ſaid to have earned about three guineas a-week, an income which, compared to his former gains, might be deemed affluent. Tired, however, of this drudgery, he ſoon after, about 1762, commenced author, and was intruſted with the management of the Lady's Muſeum, the Court Magazine, the Public Ledger, the Royal Chronicle, Owen's Weekly Poſt, and ſome other periodical publications, in which he wrote many original eſſays and pieces of poetry, which extended his reputation, and procured the means of ſubſiſtence for himſelf, his wife to whom he was then lately married, and a growing family. For ſeveral years after this period, he continued writing upon a variety of ſubjects, as the accidents of the times chanced to call for the aſſiſtance of his pen; and as during this period politics were the chief objects of public attention, he employed himſelf in compoſing many pamphlets on the important queſtions then agitated, the greater part of which are now buried in oblivion. Among theſe, however, was a Vindication of Mr Pitt's Adminiſtration, which Lord Cheſterfield makes honourable mention of in the ſecond volume of his letters. In 1767, the Babler appeared in two pocket volumes, which had at firſt been inſerted in Owen's Weekly Chronicle in ſingle papers; as did the Memoirs of a Magdalene, under the title of *Louiſa Mildmay*. About 1767 he was tempted by the ſucceſs of Churchill's Roſciad to write ſome ſtrictures on the performers of either theatre, in two pamphlets, intitled *Theſpis*, both which gave great offence to ſome of the principal perſons at each houſe. The talents for ſatire, which he diſplayed in this work, recommended him to the notice of Mr Garrick, who in the next year cauſed his firſt play of Falſe Delicacy to be acted at Drury-Lane. It was received with great applauſe; and from this time he continued to write for the ſtage with profit and ſucceſs, until the laſt period of his life. As his reputation increaſed, he began to turn his thoughts to ſome mode of ſupporting his family leſs precarious than by writing, and for that purpoſe entered himſelf a member of the Middle Temple. After the regular ſteps had been taken, he was called to the bar in 1774, and his proficiency in the ſtudy of the law afforded promiſing hopes that he might make a diſtinguiſhed figure in that profeſſion. His ſedentary courſe of life had, however, by this time injured his health, and ſubjected him to much affliction. Early in 1777 an abſceſs formed in his ſide, which after a few days illneſs put a period to his life. He was the author of ſix plays beſides that abovementioned.

Kelp, Kelſo.

KELP, in the glaſs-trade, a term uſed for a ſort of potaſhes made uſe of in many of the glaſs-works, particularly for the green glaſs. It is the calcined aſhes of a plant called by the ſame name; and in ſome places, of ſea-thongs or laces, a ſort of thick-leaved fucus or ſea-wreck.* This plant is thrown on the rocks and ſhores in great abundance, and in the ſummer months is raked together and dried as hay in the ſun and wind, and afterwards burnt to the aſhes called *kelp*. The proceſs of making it is thus: The rocks, which are dry at low water, are the beds of great quantities of ſea-weed; which is cut, carried to the beach, and dried: a hollow is dug in the ground three or four feet wide; round its margin are laid a row of ſtones, on which the ſea-weed is placed, and ſet on fire within, and quantities of this fuel being continually heaped upon the circle, there is in the centre a perpetual flame, from which a liquid like melted metal drops into the hollow beneath: when it is full, as it commonly is ere the cloſe of day, all heterogeneous matter being removed, the kelp is wrought with iron rakes, and brought to an uniform conſiſtence in a ſtate of fuſion. When cool, it conſolidates into a heavy dark-coloured alkaline ſubſtance, which undergoes in the glaſs-houſes a ſecond vitrification, and aſſumes a perfect tranſparency; the progreſs by which thus a parcel of ſea-weed, formerly the ſlimy bed of ſeals or dreary ſhelter of ſhell-fiſh, is converted into a cryſtal luſtre for an aſſembly-room, or a ſet of glaſſes for a convivial table, is a metamorphoſis that might be a ſubject for an entertaining tale.

KELSO, a town of Roxburghſhire in Scotland, pleaſantly ſituated on the river Tweed, in W. Long. 1. 20. N. Lat. 55. 38. Of this town Mr Pennant gives the following deſcription. It is built much after the manner of a Flemiſh town, with a ſquare and town-houſe. It contains about 2700 ſouls, has a very conſiderable market, and great quantities of corn are ſold here weekly by ſample. The abbey of Tyronenſians was a vaſt pile, and, to judge by the remains, of venerable magnificence. The walls are ornamented with falſe round arches, interſecting each other. Such interſections form a true Gothic arch; and may as probably have given riſe to that mode as the arched ſhades of avenues. The ſteeple of the church is a vaſt tower. This houſe was founded by David I. when earl of Cumberland. He firſt placed it at Selkirk, then removed it to Roxburgh, and finally, when he came to the crown, fixed it here in 1128. Its revenues were in money above 2000l. Scots a-year. The

abbot

* See *Fucus*.

abbot was allowed to wear a mitre and pontifical robes; to be exempt from epiſcopal juriſdiction, and permitted to be preſent at all general councils. The environs of Kelſo are very fine: the lands conſiſt of gentle riſings, incloſed with hedges, and extremely fertile. They have much reaſon to boaſt of their proſpects. From the Chalkheugh is a fine view of the forks of the river, Roxburgh-hill, Sir John Douglas's neat ſeat, and at a diſtance, Fleurus; and from Pinnicle-hill is ſeen a vaſt extent of country, highly cultivated, watered with long reaches of the Tweed, well wooded on each margin. Theſe borders ventured on cultivation much earlier than thoſe on the weſt and eaſt, and have made great progreſs in every ſpecies of rural economy. Turnips and cabbages for the uſe of cattle cover many large tracts; and potatoes appear in vaſt fields. Much wheat is raiſed in the neighbourhood, part of which is ſent up the frith of Forth, and part into England. The fleeces here are very fine. The wool is ſent into Yorkſhire, to Linlithgow, or into Aberdeenſhire, for the ſtocking manufacture; and ſome is woven here into a cloth called *plains*, and ſold into England to be dreſſed. Here is alſo a conſiderable manufacture of white leather, chiefly to ſupply the capital of Scotland. At Kelſo there is a fine ſtone-bridge of ſix arches over the Tweed near its confluence with the Teviot.

KEMPIS (Thomas à), a pious and learned regular canon, was born at the village of Kemp, in the dioceſe of Cologn, in 1380; and took his name from that village. He performed his ſtudies at Deventer, in the community of poor ſcholars eſtabliſhed by Gerard Groot; and there made a great progreſs in the ſciences. In 1399, he entered the monaſtery of the regular canons of Mount St Agnes, near Zwol, of which his brother was prior. Thomas à Kempis there diſtinguiſhed himſelf by his eminent piety, his reſpect for his ſuperiors, his charity to his brother canons, and his continual application to labour and prayer. He died in 1471, aged 70. The beſt editions of his works, which conſiſt of ſermons, ſpiritual treatiſes, and lives of holy men, are thoſe of Paris in 1649, and of Antwerp in 1607. The famous and well-known book *De Imitatione Chriſti*, which has been tranſlated into almoſt all the languages of the world, though it has almoſt always been numbered among the works of Thomas à Kempis, is alſo found printed under the name of *Gerſon;* and on the credit of ſome MSS. has been ſince aſcribed to the abbot Gerſon of the order of St Benedict. This has occaſioned a violent diſpute between the canons of St Auguſtine and the Benedictines: but while devout Chriſtians find ſpiritual comfort in the work, the name of the writer is of ſmall importance.

KEMPTEN, a free and imperial town of Germany, in Lower Suabia, and in Algow, and alſo in the territory of the abbot of Kempten, who is a prince of the empire, and has a voice in the diet. The inhabitants are Proteſtants; and it has been ſeveral times taken, but has always recovered its liberty. It is ſeated on the river Iller. E. Long. 10. 33. N. Lat. 47. 47.

Kempten, a territory in the circle of Suabia, in Germany, between the biſhopric of Augſburg and the barony of Walburg. It is about 17 miles long and broad; and has no conſiderable place but the towns of Kempten and Kauffbeuren, which are imperial.

KEN (Thomas), an eminent Engliſh biſhop in the 17th century, was bred at Wincheſter ſchool, whence he went to Oxford; and in 1669 was made a prebend of Wincheſter. In 1675, the year of the Jubilee, he travelled to Rome; and uſed to ſay, He had reaſon to give God thanks for his travels, having returned more confirmed of the purity of the reformed religion than he was before. He was appointed by king Charles II. to attend the lord Dartmouth at the demoliſhing of Tangier; and at his return was made chaplain to his majeſty, as he was ſome time after to the princeſs of Orange, then reſiding in Holland. In 1685 he was conſecrated biſhop of Bath and Wells. The month following he attended king Charles II. at his death; and gave cloſe attendance at the royal bed for three whole days and nights, watching proper intervals to ſuggeſt pious and proper thoughts on ſo ſerious an occaſion. In the following reign he zealouſly oppoſed the progreſs of Popery; and in June 1688, he, with five other biſhops and the archbiſhop of Canterbury, was committed priſoner to the Tower of London for ſubſcribing a petition to his majeſty againſt the declaration of indulgence. Upon the Revolution, however, he refuſed to take the oaths to king William and Queen Mary, on which account he was deprived of his biſhopric. Her Majeſty queen Anne beſtowed on him a yearly penſion of 200 l. to his death in 1710. He publiſhed ſeveral pious books. His charity was ſo great, that when he was biſhop of Bath and Wells, having received a fine of 4000 l. he gave a great part of it to the French Proteſtants.

KENDAL, a town of Weſtmoreland, ſeated in a valley, among hills, on the weſt ſide of the river Can or Ken, over which there are two ſtone bridges, and one of wood which leads to the caſtle now in ruins. It is a large handſome place; and has two long ſtreets, which croſs each other. The inhabitants have driven a trade with the cotton and woollen manufactory throughout England ever ſince the reign of Edw. III. and particular laws were enacted for regulating Kendal cloaths as early as Richard II. and Henry IV. It is of note alſo for the manufactory of cottons, druggets, ſerges, hats, worſted and yarn ſtockings, &c. Queen Elizabeth incorporated it with aldermen and burgeſſes; and king James I. with a mayor, recorder, town-clerk, 12 aldermen, 24 burgeſſes or common councilmen, and 2 attornies. There are 7 companies here, who have each their hall, viz. mercers, ſheermen, cordwainers, glovers, tanners, taylors, and pewterers. Here is an excellent town-hall lately repaired; and they enjoy a court of conſcience granted by George III. for debts under 40s. It has a large beautiful church, which ſtands on the other ſide of the brook called Blindbeck, out of the liberty of the town: a large neat and handſome building 180 feet long and 99 broad, with 5 ailes each parted by a row of 8 pillars, and a ſtrong ſquare ſteeple. Near is Abbot's-hall, the reſidence of the abbot when this church belonged to an abbey diſſolved by Henry VIII. In 1755, a new chapel was erected in the middle of the town, beſides which there are 12 chapels of eaſe belonging to it. The diſſenters and quakers have meeting-houſes. Here is a free grammar-ſchool well endowed; and alſo a charity-ſchool for 10 boys and 16 girls, who are all clothed as well as taught. Eaſtward of the town, on the oppoſite ſide of the river on a hill, from whence is a fine proſpect, ſtand the ruins of a caſtle, wherein was born Catharine Parr (the ſixth wife of Henry VIII.) By the late inland navigation, it has communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles in the counties of Lincoln, Nottingham, York, Lancaſter, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c. Here are kept the ſeſſions of the peace for this part of the county called the barony of Kendal; and there is a very great market on Saturday, with all kinds of proviſions and woollen-yarn, which the girls bring hither in large bundles. It has fairs on May 6, and November 8; and between them a great beaſt-market every fortnight. The river here, which runs half through the town in a ſtony channel, abounds with trout and ſalmon; and on the banks of it live the dyers and tanners.

KENNEL, a term uſed indifferently for a puddle, a water-courſe in the ſtreets, a houſe for a pack of hounds, and the pack or cry of hounds themſelves.

Mr Beckford, in his Eſſay on Hunting, is very particular in deſcribing a kennel for hounds; and a kennel he thinks indiſpenſably neceſſary for keeping thoſe animals in proper health and order. “It is true (ſays he) hounds may be kept in barns and ſtables; but thoſe who keep them in ſuch places can beſt inform you whether their hounds are capable of anſwering the purpoſes for which they are deſigned. The ſenſe of ſmelling is ſo exquiſite in a hound, that I cannot but ſuppoſe that every ſtench is hurtful to it. Cleanlineſs is not only abſolutely neceſſary to the noſe of the hound, but alſo to the preſervation of his health. Dogs are naturally cleanly; and ſeldom, if they can help it, dung where they lie. Air and freſh ſtraw are neceſſary to keep them healthy. They are ſubject to the mange; a diſorder to which poverty and naſtineſs will very much contribute. The kennel ſhould be ſituated on an eminence; its front ought to be to the eaſt, and the courts round it ought to be wide and airy to admit the ſunbeams at any time of the day. It is proper that it ſhould be neat without and clean within; and it is proper to be near the maſter's houſe, for obvious reaſons. It ought to be made large enough at firſt, as any addition to it afterwards may ſpoil it in appearance at leaſt.” Two kennels, however, in our author's opinion, are abſolutely neceſſary to the well-being of hounds: “When there is but one (ſays he), it is ſeldom ſweet; and when cleaned out, the hounds, particularly in winter, ſuffer both while it is cleaning and afterwards as long as it remains wet.”

When the feeder firſt comes to the kennel in a morning, he ſhould let out the hounds into the outer court; and in bad weather, ſhould open the door of the hunting kennel (that in which the hounds deſigned to hunt next day are kept), leſt want of reſt ſhould incline them to go into it. The lodging room ſhould then be cleaned out, the doors and windows of it opened, the litter ſhaken up, and the kennel made ſweet and clean before the hounds return to it again.—The floor of each lodging-room ſhould be bricked, and ſloped on both ſides to run to the centre, with a gutter left to carry off the water, that when they are waſhed they may ſoon be dry. If water ſhould remain through any fault of the floor, it muſt be carefully mopped up; for damps are always very prejudicial.

The kennel ought to have three doors; two in the front and one in the back; the laſt to have a lattice-window in it with a wooden ſhutter, which is conſtantly to be kept cloſed when the hounds are in, except in ſummer, when it ſhould be left open all the day.

At the back of Mr Beckford's kennel is a houſe thatched and furzed up on the ſides, big enough to contain at leaſt a load of ſtraw. Here ſhould be a pit ready to receive the dung, and a gallows for the fleſh. The gallows ſhould have a thatched roof, and a circular board at the poſts to prevent vermin from climbing up. He adviſes to incloſe a piece of ground adjoining to the kennel for ſuch dog-horſes as may be brought alive; it being ſometimes dangerous to turn them out where other horſes go, on account of the diſorders with which they may be infected. In ſome kennels a ſtove is made uſe of; but where the feeder is a good one, Mr Beckford thinks that a mop properly uſed will render the ſtove unneceſſary. “I have a little hay rick (ſays he) in the graſs-yard, which I think is of uſe to keep the hounds clean and fine in their coats. You will frequently find them rubbing themſelves againſt it. The ſhade of it is alſo uſeful to them in ſummer. If ticks at any time be troubleſome in your kennel, let the walls of it be well waſhed; if that ſhould not deſtroy them, the walls muſt then be white-waſhed.”

Beſides the directions already given concerning the ſituation of the kennel, our author recommends it to have a ſtream of water in its neighbourhood, or even running through it if poſſible. There ſhould alſo be moveable ſtages on wheels for the hounds to lie on. The ſoil ought at all events to be dry.

To KENNEL, a term applied by fox-hunters to a fox when he lies in his hole.

KENNET (Dr White), a learned Engliſh writer and biſhop of Peterborough, in the 18th century, bred at St Edmund-hall, Oxford; where he ſoon diſtinguiſhed himſelf by his vigorous application to his ſtudies, and by his tranſlations of ſeveral books into Engliſh, and other pieces which he publiſhed. In 1695 our author publiſhed his Parochial Antiquities. A ſermon preached by him on the 30th of January 1703 at Aldgate, expoſed him to great clamour. It was printed under the title of *A compaſſionate inquiry into the cauſes of the civil war*. In 1706, he publiſhed his Caſe of Impropriations, and two other tracts on the ſame ſubject. In 1706, he publiſhed the third volume of The Complete Hiſtory of England (the two former volumes compiled by Mr Hughes). In 1709, he publiſhed A Vindication of the Church and Clergy of England from ſome late reproaches rudely and unjuſtly caſt upon them; and A true Anſwer to Dr Sacheverel's Sermon. When the great point in Dr Sacheverel's trial, the change of the miniſtry, was gained, and very ſtrange addreſſes were made upon it, there was to be an artful addreſs from the biſhop and clergy of London, and they who would not ſubſcribe it were to be repreſented as enemies to the queen and the miniſtry. Dr Kennet fell under this imputation. He was expoſed to great odium as a low-church man, on account of his conduct and writings. When he was dean of Peterborough, a very uncommon method was taken to expoſe him by Dr Walton, rector of the church of White-chapel: for in the altar-piece of that church, which was intended for a repreſentation of Chriſt and his 12 apoſtles eating the paſſover and laſt ſupper, Judas the traitor was drawn ſitting in an elbow-chair, dreſſed in a black garment, with a great deal of the air of Dr Kennet's face. It was generally ſaid that the original ſketch was for a biſhop under Dr Walton's diſpleaſure; but the painter being apprehenſive of an action of *Scandalum Magnatum*, leave was given to drop the biſhop, and make the dean. This giving general offence, upon the complaint of others (for Dr Kennet never ſaw it, or ſeemed to regard it), the biſhop of London ordered the picture to be taken down. In 1713, he preſented the ſociety for propagating the goſpel with a great number of books, ſuitable to their deſign; publiſhed his *Bibliothecæ Americanæ Primordia*, and founded an antiquarian and hiſtorical library at Peterborough. In 1715, he publiſhed a ſermon, intitled *The Witchcraft of the preſent Rebellion*, and afterward ſeveral other pieces. In 1717, he was engaged in a diſpute with Dr William Nicholſon, biſhop of Carliſle, relating to ſome relations in the biſhop of Bangor's famous ſermon; and diſliked the proceedings of the convocation againſt that biſhop. Upon the death of Dr Cumberland biſhop of Peterborough, he was promoted to that ſee, to which he was conſecrated in 1718. He ſat in it more than 10 years, and died in 1728. He was an excellent philologiſt, a good preacher, whether in Engliſh or Latin, and well verſed in the hiſtories and antiquities of the Britiſh nation.

Kennet (Baſil), a learned Engliſh writer, and brother to the preceding, was educated in Corpus Chriſti college, in the univerſity of Oxford, where he became fellow. In 1706, he went over chaplain to the Engliſh factory at Leghorn; where he met with great oppoſition from the Papiſts, and was in danger from the inquiſition. He died in the year 1714. He publiſhed Lives of the Greek Poets; the Roman Antiquities; a volume of Sermons preached at Leghorn; A tranſlation into Engliſh of Puffendorf's Treatiſe of the Law of Nature and Nations. He was a man of moſt exemplary integrity, generoſity, piety, and modeſty.

KENNICOTT (Dr Benjamin), well known in the learned world for his elaborate edition of the Hebrew Bible and other valuable publications, was born at Totneſs in Devonſhire in the year 1718. With the rank and character of his parents we are entirely unacquainted; but it is certain they were unable to ſatisfy that thirſt of knowledge which they could not but diſcover in their ſon. Some opportunities of early improvement muſt, however, have been afforded him, or (which we ſometimes ſee) the natural vigour of his mind muſt have ſuperſeded the neceſſity of them. For in the year 1743, he wrote A Poem on the Recovery of the Hon. Mrs Eliz. Courtenay from her late dangerous illneſs; and this probably recommended him to the notice of thoſe gentlemen who afterwards ſent him to Oxford and ſupported him there. In judging of this performance, they may be ſuppoſed to have conſidered not ſo much its intrinſic merit, as the circumſtances under which it was produced. For though it might claim juſt praiſe as the fruit of youthful induſtry ſtruggling with obſcurity and indigence, as a poem it never riſes above mediocrity, and generally ſinks below it. But in whatever light theſe verſes were conſidered, the publication of them was ſoon followed by ſuch contributions as procured for the author the advantages of an academical education. In the year 1744 he entered at Wadham college; nor was it long before he diſtinguiſhed himſelf in that particular branch of ſtudy in which he afterwards became ſo eminent. His two diſſertations, On the Tree of Life, and the Oblations of Cain and Abel, came to a ſecond edition ſo early as the year 1747, and procured him the ſingular honour of a bachelor's degree conferred on him *gratis* by the Univerſity a year before the ſtatutable time. The diſſertations were gratefully dedicated to thoſe benefactors whoſe liberality had opened his way to the Univerſity, or whoſe kindneſs had made it a ſcene not only of manly labour, but of honourable friendſhip. With ſuch merit, and ſuch ſupport, he was a ſucceſsful candidate for a fellowſhip of Exeter college, and ſoon after his admiſſion into that ſociety, he diſtinguiſhed himſelf by the publication of ſeveral occaſional ſermons. In the year 1753 he laid the foundation of that ſtupendous monument of learned induſtry, at which the wiſe and the good will gaze with admiration, when prejudice, and envy, and ingratitude, ſhall be dumb. This he did by publiſhing his firſt diſſertation, On the ſtate of the Printed Hebrew Text, in which he propoſed to overthrow the then prevailing notion of its abſolute integrity. The firſt blow, indeed, had been ſtruck long before, by Cappellus, in his *Critica Sacra*, publiſhed after his death by his ſon, in 1650—a blow which Buxtorf, with all his abilities and dialectical ſkill, was unable to ward off. But Cappellus having no opportunity of conſulting MSS. though his arguments were ſupported by the authority of the Samaritan Pentateuch, of parallel paſſages, and of the ancient verſions, could never abſolutely prove his point. Indeed the general opinion was, that the Hebrew MSS. contained none or at leaſt very few and trifling variations from the printed text: and with reſpect to the Samaritan Pentateuch very different opinions were entertained. Thoſe who held the Hebrew verity, of courſe condemned the Samaritan as corrupt in every place where it deviated from the Hebrew: and thoſe who believed the Hebrew to be incorrect, did not think the Samaritan of ſufficient authority to correct it. Beſides, the Samaritan itſelf appeared to a very great diſadvantage; for no Samaritan MSS. were then known, and the Pentateuch itſelf was condemned for thoſe errors which ought rather to have been aſcribed to the incorrectneſs of the editions. In this diſſertation, therefore, Dr Kennicott, proved that there were many Hebrew MSS. extant, which though they had hitherto been generally ſuppoſed to agree with each other, and with the Hebrew text, yet contained many and important various readings: and that from thoſe various readings conſiderable authority was derived in ſupport of the ancient verſions. He announced the exiſtence of ſix Samaritan MSS. in Oxford only, by which many errors in the printed Samaritan might be removed; and he attempted to prove, that even from the Samaritan, as it was already printed, many paſſages in the Hebrew might undoubtedly be corrected. This work, as it was reaſonable to expect, was examined with great ſeverity

Kennicott.

verity both at home and abroad. In ſome foreign univerſities the belief of the Hebrew verity, on its being attacked by Capellus, had been inſiſted on as an article of faith—*Iſta Capelli ſententia adeo non approbata fuit fidei ſociis, ut potius Helvetii theologi, et ſpeciatim Genevenſes, anno 1678, peculiari canone caverint, ne quis in ditione ſua miniſter eccleſiæ recipiatur, niſi fateatur publice, textum Hebræum, ut hodie eſt in exemplaribus Maſoreticis, quoad conſonantes et vocales, divinum et authenticum eſſe,* (Wolfii Biblioth. Heb. tom. ii. 27). And in Britain this doctrine of the corrupt ſtate of the Hebrew text was oppoſed by Comings and Bate, two Hutchinſonians, with as much violence as if the whole truth of the revelation were at ſtake.

The next three or four years of Dr Kennicott's life were principally ſpent in ſearching out and examining Hebrew MSS. though he found leiſure not only to preach, but to publiſh ſeveral occaſional ſermons. About this time Dr Kennicott became one of the king's preachers at Whitehall; and in the year 1759 we find him vicar of Culham in Oxfordſhire. In January 1760 he publiſhed his ſecond diſſertation on the ſtate of the Hebrew Text; in which, after vindicating the authority and antiquity of the Samaritan Pentateuch, he diſarmed the advocates for the Hebrew verity of one of their moſt ſpecious arguments. They had obſerved that the Chaldee Paraphraſe having been made from Hebrew MSS. near the time of Chriſt, its general coincidence with the preſent Hebrew Text muſt evince the agreement of this laſt with the MSS. from which the paraphraſe was taken. Dr Kennicott demonſtrated the fallacy of this reaſoning, by ſhowing that the Chaldee Paraphraſe had been frequently corrupted, in order to reconcile it with the printed text; and thus the weapons of his antagoniſts were ſucceſsfully turned upon themſelves. He appealed alſo to the writings of the Jews themſelves on the ſubject of the Hebrew Text, and gave a compendious hiſtory of it from the cloſe of the Hebrew canon down to the invention of printing, together with a deſcription of 103 Hebrew MSS. which he had diſcovered in England, and an account of many others preſerved in various parts of Europe. A collation of the Hebrew MSS. was now loudly called for by the moſt learned and enlightened of the friends of biblical criticiſm; and in this ſame year (1760) Dr Kennicott emitted his propoſals for collating all the Hebrew MSS. prior to the invention of printing, that could be found in Great Britain and Ireland, and for procuring at the ſame time as many collations of foreign MSS. of note, as the time and money he ſhould receive would permit. His firſt ſubſcribers were the learned and pious Archbiſhop Secker, and the delegates of the Oxford preſs, who with that liberality which has generally marked their character, gave him an annual ſubſcription of 40 l. In the firſt year the money received was about 500 guineas, in the next it aroſe to 900, at which ſum it continued ſtationary till the tenth year, when it amounted to 1000. During the progreſs of the work the induſtry of our author was rewarded by a canonry of Chriſt Church. He was alſo preſented, though we know not exactly when, to the valuable living of Mynhenyote, in Cornwall, on the nomination of the Chapter of Exeter. In 1776 the firſt volume was publiſhed, and in 1780 the whole was completed. If now we conſider that above 600 MSS. were collated, and that the whole work occupied 20 years of Dr Kennicott's life, it muſt be owned that ſacred criticiſm is more indebted to him than to any ſcholar of any age. Within two years of his death, he reſigned his living in Cornwall, from conſcientious motives, on account of his not having a proſpect of ever again being able to viſit his pariſh. Although many good and conſcientious men may juſtly think, in this caſe, that his profeſſional labours carried on elſewhere might properly have intitled him to retain this preferment, and may apply this reaſoning in other caſes; yet a conduct ſo ſignally diſintereſted deſerves certainly to be admired and celebrated. Dr Kennicott died at Oxford, after a lingering illneſs, Sept. 18, 1783; and left a widow, who was ſiſter to the late Edward Chamberlayne, Eſq; of the treaſury. At the time of his death he was employed in printing *Remarks on Select Paſſages in the Old Teſtament;* which were afterwards publiſhed, the volume having been completed from his papers.

Keno, Kenrick.

KENO. See KINO.

KENRICK (William), an author of conſiderable abilities, was the ſon of a citizen of London, and brought up, it is, ſaid, to a mechanical employment. This, however, he ſeems early to have abandoned; and to have devoted his talents to the cultivation of letters, by which he ſupported himſelf during the reſt of a life which might be ſaid to have paſſed in a ſtate of warfare, as he was ſeldom without an enemy to attack or to defend himſelf from. He was for ſome time ſtudent at Leyden, where he acquired the title of J. U. D. Not long after his return to England, he figured away as a poet in Epiſtles Philoſophical and Moral, 1759, addreſſed to Lorenzo; an avowed defence of infidelity, written whilſt under confinement for debt, and with a declaration that he was "much leſs ambitious of the character of a poet than of a philoſopher." From this period he became a writer by profeſſion; and the Proteus ſhapes under which he appeared, it would be a fruitleſs attempt to trace. He was for a conſiderable time a writer in the Monthly Review; but quarrelling with his principal, began a New Review of his own. When our great Lexicographer's edition of Shakeſpeare firſt appeared in 1765, it was followed in a fortnight by a pamphlet, intitled, "A Review of Dr Johnſon's new Edition of Shakeſpeare, in which the ignorance or inattention of that editor is expoſed, and the poet defended from the perſecution of his commentators, 1765." This pamphlet was followed by an examination of it, and that by a Defence in 1766; in which year he produced his pleaſant comedy of Falſtaff's Wedding, at firſt intended to have been given to the public as an original play of Shakeſpeare retrieved from obſcurity, and is, it muſt be acknowledged, a happy imitation of that great dramatic bard. With the celebrated Engliſh Roſcius Dr Kenrick was at one time on terms of the ſtricteſt intimacy: but took occaſion to quarrel with him in print, in a mode too unmanly to be mentioned. In politics alſo he made himſelf not a little conſpicuous; particularly in the diſpute between his friends Wilkes and Horne. He was the original editor of The Morning Chronicle; whence being ouſted for neglect, he ſet up a new one in oppoſition. He tranſlated in a very able manner the Emilius and the Eloiſa of

Rouſſeau; the Elements of the Hiſtory of England by Millot (to injure, if poſſible, a tranſlation of the ſame work by Mrs Brooke); and produced ſeveral dramatic performances, together with an infinite variety of publications both original and tranſlated. To him alſo the public are indebted for the collection (imperfect as it is) of The Poetical Works of Robert Lloyd, M. A. 1774, 2 vols 8vo. Dr Kenrick died June 9. 1777.

KENSINGTON, a village of Middleſex, on the weſtern road from London, near 2 miles from Hide-Park-Corner. It is extremely populous; and beſides the palace, now neglected, contains many genteel houſes, and ſeveral boarding-ſchools. The palace which was the ſeat of the Lord Chancellor Finch afterwards Earl of Nottingham, was purchaſed by king William; who greatly improved it, and cauſed a royal road to be made to it, through St James's and Hide Parks, with lamp-poſts erected at equal diſtances on each ſide. Queen Mary enlarged the gardens. Her ſiſter Queen Ann improved what Mary had begun; and was ſo pleaſed with the place, that ſhe frequently ſupped during the ſummer in the green-houſe, which is a very beautiful one: but Queen Caroline completed the deſign by extending the gardens from the great road in Kenſington to Acton; by bringing what is called the Serpentine-River into them; and by taking in ſome acres out of Hide-Park, on which ſhe cauſed a mount to be erected, with a chair on it that could be eaſily turned round for ſhelter from the wind, ſince decayed. This mount is planted about with evergreens, and commands a fine view over the noble gardens, and the country ſouth and weſt. They were originally deſigned by *Kent*, and have lately been very much improved by *Brown*; and though they contain no ſtriking beauties, which their flat ſituation will not admit, yet they have many pleaſing parts, and afford much delight to the inhabitants of London, particularly to thoſe whoſe profeſſions will not allow of frequent excurſions to more diſtant places. Theſe gardens, which are three miles and a half in compaſs, are kept in great order. The palace indeed has none of that grandeur which ought to appear in the reſidence of a Britiſh monarch; but the royal apartments are noble, and ſome of the pictures good. It was at this place King William, Prince George of Denmark, Queen Ann, and King George II. died. The old church was pulled down in 1696, and a much better one built in its room. Part of this village, from the palace-gate to the Bell, is in the pariſh of St Margaret's, Weſtminſter.

KENT, one of the counties of England, ſituated at the ſouth-eaſt corner of the iſland, and from thence enjoying many advantages. The capacious æſtuary of the Thames waſhes its northern parts, as the ſea does the ſouth-eaſt; whence ſome with no great impropriety have ſtyled it a *peninſula*. In point of extent, this is the fifth ſhire in South Britain, little leſs in its dimenſions than the province of Holland; larger in ſize than the duchy of Juliers in Germany; and almoſt exactly equal to that of Modena in Italy. Kent is, with great appearance of truth, ſuppoſed to be ſo ſtyled from the ancient Britiſh word *kant*, ſignifying a *corner*, or, when applied to a country, an *head-land*. It is certain, that the Romans beſtowed the name of *Cantium* on the province, and on its moſt conſpicuous promontory the north Foreland; and from the diſtrict they inhabited, the people were called *Cantii*; which has prevailed even to our times, when *Kent*, and *the men of Kent*, are the common appellatives. It is however probable, that theſe Cantii were not the original inhabitants, but a latter colony from the oppoſite continent, eſtabliſhed here, like the Belgæ, not long before the Roman invaſion. At the time of Cæſar's coming, this ſpacious and fertile region was divided into four principalities, or, as they are, according to the manners of thoſe days, commonly called, *kingdoms*. It was his obſervation of theſe people, that they were particularly diſtinguiſhed by their civility and politeneſs; a character which their deſcendants have preſerved. When that wiſe people became maſters of the ſouthern parts of the iſland, this province received the moſt conſpicuous marks of their attention, as appears from the ſtations which they ſo prudently eſtabliſhed, while their government flouriſhed in its full vigour. The care they took of the ports on the ſea-coaſt as ſoon as it came to be in danger, and the ſeveral fortreſſes which they erected for the defence of their ſubjects againſt the ſudden attempts of barbarous invaders, are evidences of the ſame kind. Theſe forts, ſo prudently diſpoſed, and ſo well ſecured, were under the direction of a particular great officer, called *Littoris Saxonici Comes*, i. e. the count of the Saxon ſhore; which office ſeems to have been preſerved by the Britiſh monarchs who governed here, after the Romans quitted the iſle. The Saxon kings of Kent diſcharged this truſt in their legal capacity, from the middle of the fifth to the beginning of the ninth century. Under the northern princes, this poſt was again revived, though with a change of title, in the *Lord Warden of the cinque Ports*. Indeed, under all governments, the people of Kent have been eſpecially conſidered; as appears from their claim to the poſt of honour in the land-armies, and the privileges granted to their havens, in conſideration of their undertaking the defence of the Britiſh channel.

Campbell's Political Survey.

As to the climate of this county, it varies according to the ſituation of places. In the low flat lands, and eſpecially in the marſhes, the air is heavy, moiſt, and unhealthy; and yet not to ſuch a degree as it has been ſometimes repreſented; for, with a little care and caution, ſtrangers, as well as natives, quickly reconcile their conſtitutions to the temperature even of theſe parts, and live in them without much inconveniency or apparent danger. But, in reference to the reſt of the country, the air is as thin, pure, and wholeſome, as in any part of Britain. There is no region more happily or more beautifully diverſified in regard to ſoil, ſo that every kind thereof is, ſomewhere or other, to be met with in its bounds; and in no ſhire are any of theſe ſoils more fertile than they are in this. The Weald yields variety of fine timber, particularly of cheſnut; the middle part has very rich arable land, annually bearing every ſpecies of grain in immenſe plenty, and theſe excellent in their ſeveral ſorts. There are alſo many beautiful orchards, which produce a variety of fine fruits, and more eſpecially apples and cherries, which were introduced there from Flanders by one Richard Harris, who was the king's fruiterer, in the reign of Henry VIII. The flat country is renowned for its meadows; and Rumney-marſh has hardly its equal. We may from this conciſe deſcription very eaſily collect, that the natural products of Kent are numerous, and of great value. In the bowels of the earth they find, in ſeveral places, a rough hard ſerviceable ſtone for paving, which turns to ſome advantage; but not ſo much as their exquiſite fullers-earth, rich marl, and fine chalk, which are there in abundance. If we except iron-ore, indeed, they have no mines; but there are prodigious heaps of copperas-ſtone thrown on the coaſt. The iſle of Shepey, and all the adjacent ſhore as far as Reculver, is juſtly famous for its wheat. Thanet is in no leſs credit for its barley, or rather was ſo; for now it produces, through the painful induſtry and ſkilful huſbandry of its inhabitants, copious crops of good wheat as well as barley. Horſes, black cattle, and ſheep, they have in great numbers, and remarkable in point of ſize; and hop-grounds in all parts of the county, which turn to very conſiderable account. To which we may add, weld, or as ſome call it *dyers-weed*, which is a very profitable commodity, and of which there grows much in the neighbourhood of Canterbury; alſo madder, which is, or has been, occaſionally cultivated. The rivers and ſea-coaſts abound with fiſh of various kinds. The excellency of its oyſters on the eaſtern ſhore is celebrated by the Roman poets. Thoſe of Feverſham and Milton are not only in great eſteem at the London market, but are likewiſe ſent in great quantities to Holland.

The many rich commodities produced in that county, is the reaſon why moſt of their writers have repreſented it as in a manner void of manufactures; which, however, as appears upon a ſtrick and impartial examination, is very far from being the caſe. Of iron-works there were anciently many; and there are ſtill ſome, where kettles, bombs, bullets, cannon, and ſuch like, are made. At Deptford Sir Nicholas Criſpe had in his life-time a very famous copperas work; as, indeed, there that ingenious gentleman, one of the greateſt improvers and one of the moſt public-ſpirited perſons that nation ever bred, introduced ſeveral other inventions. Copperas was alſo formerly made, together with brimſtone, in the iſle of Shepey*. But the original and for many ages the principal manufacture of that county was broad cloth of different colours, eſtabliſhed chiefly at Cranbrook by King Edward III. who brought over Flemings to improve and perfect (the trade being introduced long before) his ſubjects in that important art. At this and other places it flouriſhed ſo much, that even at the cloſe of Queen Elizabeth's reign, and according to ſome accounts much later, the beſt for home conſumption, and the largeſt quantities for exportation, were wrought there; many fulling mills being erected upon almoſt every river, and the greateſt plenty of excellent fullers-earth affording them ſingular aſſiſtance; inſomuch that it is ſtill a tradition, that the yeomanry of this county, for which it has been ever famous, were moſtly the deſcendants of rich clothiers, who laid out the money acquired by their induſtry in the purchaſe of lands, which they tranſmitted, with their free and independant ſpirit, to their poſterity. The duke of Alva's perſecution of the Proteſtants in the Low Countries drove a multitude of Walloons over thither, who brought with them that ingenuity and application for which they had been always diſtinguiſhed. Theſe diligent and active people ſettled a manufactory of flannel or baize at Sandwich. By them the ſilk-looms were ſet up at Canterbury, where they ſtill ſubſiſt; and they alſo introduced the making of thread at Maidſtone, where it yet remains, and merits more notice and encouragement than hitherto it has met with.

Upon the river Dart, at the confluence of which with the Thames ſtands the town of Dartford, was ſet up, in the reign of Queen Elizabeth, the firſt mill for making white paper by Mr John Spilman, a German, upon whom, long after, King James conferred the honour of knighthood; but King Charles more ſenſibly beſtowed upon this Sir John Spilman a patent and a penſion of 200 l. a-year, as a reward of his invention, and for the ſupport of the manufacture. About the year 1590, Godfrey Box, a German, erected upon the ſame river the firſt ſlitting-mill which was ever uſed for making iron-wire; and alſo the firſt battery-mill for making copper-plates. Other new inventions, requiring the aſſiſtance of water, have been ſet up on other ſtreams; and a great variety of machines of this ſort ſtill ſubſiſt in different parts of this county. Amongſt theſe, we may reckon the making gunpowder in ſeveral places. That manufacture, however, which is now the glory of this county, and indeed of Britain, is ſhip-building; more eſpecially at the royal yards; as at Woolwich, which was ſettled by Henry VIII. and ſome conſiderable ſhips built there. At preſent, there is not only a moſt complete eſtabliſhment for the building and equipping men of war, a rope-walk, foundery, and magazines; but alſo many private docks, in which prodigious buſineſs is carried on, and multitudes of people are employed.

KENTISH-TOWN, a village of Middleſex, three miles north of London, near Hampſtead, much improved of late by ſeveral handſome houſes belonging to the citizens of London, &c. A new chapel has lately been erected there.

KENTUCKY, one of the United States of America, formerly a part of the ſtate of Virginia, but admitted into the union as an independent ſtate by act of congreſs, on the firſt day of June 1792.—This ſtate is ſituated between 36. 30. and 39. 30. degrees of north latitude, and between 8. and 15. degrees of weſt longitude from Philadelphia; being about 400 miles in length from north-eaſt to ſouth-weſt, and about 200 miles in breadth. It is bounded to the weſtward by the Ohio and Miſſiſſippi rivers, on the ſouth by a parallel of latitude which divides it from the territory ceded to the United States by North Carolina, to the eaſtward by the Cumberland mountain, and to the northward by the Great Sandy river. The Ohio river waſhes the north-weſtern ſide of the ſtate in its whole extent, except about thirty miles, which is bounded by the Miſſiſſippi. The principal rivers which water this fertile country, and empty themſelves into the Ohio, are Great Sandy, Licking, Kentucky, Salt, Green, Cumberland and Teneſſee. Theſe, with their ſeveral branches, interſect the country in almoſt every direction, and are navigable for flat-bottomed boats and batteaux during great part of the year.

The rapid ſettlement and population of this ſtate, and the progreſs in improvements and cultivation, notwithſtanding the united oppoſition of all the weſtern Indians, almoſt exceed belief. It was firſt explored in the years 1770 and 1771, by colonel Daniel Boone; and it was not till 1775 that the firſt family ſettled in this country, at that time a foreſt inhabited only by wild beaſts.

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* *Philoſoph. Tranſact.* n° xlii. p. 1056—1059.

Kentucky was firſt erected into a county in 1777 by the legiſlature of Virginia.—In 1792 it contained no leſs than fifteen populous counties, in which there are a number of flouriſhing towns and villages. The chief of theſe towns are Lexington, Frankfort, Louiſville, Bardſtown, Danville, Harrodſburg and Waſhington. The permanent ſeat of government of the ſtate is eſtabliſhed by law at Frankfort, which is ſituated upon the north bank of the Kentucky river.

By the cenſus taken in 1791, this ſtate was returned as containing only about 75,000 ſouls: but from the imperfect manner in which that enumeration was made, and from the number of emigrants who daily repair to that country, it cannot be doubted but that in 1792 the number of inhabitants amounted to 100,000.—Theſe people, collected from different ſtates and countries, of different cuſtoms, manners, religions, and political ſentiments, have not been long enough together to have acquired an uniform and diſtinguiſhing character: but they are in general more orderly and better informed than any people who have firſt ſettled a country. Among the ſettlers there are many perſons of fortune and abilities, and many genteel families who give dignity and reſpectability to the ſettlement. All religions that are conſiſtent with the peace of ſociety are upon an equal footing here. The moſt numerous ſects are the Preſbyterians, Baptiſts, and Methodiſts.

The inhabitants enjoy a happy temperature of climate, not being ſubjected to ſudden changes from heat to cold, or to the extremes of either. Snow ſeldom falls deep, or lies long; and the rivers are rarely frozen over. The winter, which generally begins about Chriſtmas, is never longer than three months, and ſeldom continues more than two. The climate is alſo remarkably healthy, except in a ſmall diſtrict adjoining the Rapids of the Ohio; and which includes the only ponds and marſhy grounds found in this country. In this ſtate is found a great variety of ſoil. Altho' it includes the largeſt body of the moſt fertile land in the United States, and ſuitable to the production of every kind of grain, plants, fruits, and vegetables common to ſuch climates, yet the eaſtern part of the ſtate, which includes the head waters of the Great Sandy, Kentucky, and Cumberland rivers, is ſo broken by mountains and hills unfit for cultivation, as to be of little value, and is called the wilderneſs. The rich lands are remarkably favourable to the growth of Indian-corn, wheat, rye, barley, oats, tobacco, hemp and flax; all of which are produced in greater quantities with the ſame labour than in any other part of the Union. Horſes, cattle, ſheep, hogs, and poultry of every kind are raiſed here in great numbers, and with very little trouble or expence, owing to the ſhort duration of the winters, and the great abundance of food. Buffaloe, elk, deer and bears, abound in the uninhabited parts of the country, but are rarely met with among the ſettlements. The rivers afford ſwans, wild-geeſe and ducks; alſo a variety of fiſh, the moſt eſteemed of which are the perch, pike, and carp. It is well known that cat-fiſh, the bauger de rio, of an extraordinary ſize are caught in the Ohio. The ſugar-maple tree grows in great abundance throughout the rich lands, from which ſugar of a good quality may be made in ſufficient quantities, it is ſuppoſed, for the conſumption of the inhabitants. Salt ſprings are already found in almoſt every part of the ſtate. From theſe ſprings, or licks, with proper management, ſalt may be made in ſufficient quantities for the conſumption of all the inhabitants the weſtern country could ſupport. Notwithſtanding the high price of labour, and the imperfect manner in which the buſineſs of making ſalt has been carried on, yet the average price of that neceſſary article at thoſe licks did not exceed one dollar a buſhel during the years 1791 and 1792. Various minerals are found here; ſuch as iron-ore, copper, ſulphur, lead, nitre, &c. Iron-ore is found in great plenty near the branches of Licking River, where iron-works are erected. Coal mines are alſo frequently met with here. Very little ſtone appears on the ſurface of the rich lands, yet this whole country, ſo far at leaſt, as has been hitherto diſcovered, lies upon a bed of limeſtone, which in general is found to be from three to fifteen feet below the ſurface. There is the greateſt plenty of marble found on the banks of the Kentucky river, particularly in the neighbourhood of Frankfort.

The inhabitants of this country have hitherto been ſupplied with goods tranſported by land from the ſea-port towns in the Atlantic ſtates to Pittſburg, and from thence brought down the Ohio; and the great number of emigrants who have annually arrived, has afforded a market for the ſurplus produce, except tobacco, of which conſiderable quantities have been exported to New Orleans: but it is reaſonable to expect, that the time is not very diſtant, when both the imports and exports of this ſtate will be made by the Ohio and Miſſiſippi. From various experiments it appears, that the navigation of thoſe rivers is not only practicable, but may be carried on to great advantage. Tobacco, hemp, flour, ſalt-beef, pork, bacon, butter, and cheeſe, will conſtitute the firſt articles of export, and though heavy and bulky may, with very little labour and expence, be ſent down the ſtream to market in flat-bottomed boats, which being too unwieldy to be brought back, may be ſold as plank. Fine goods only will be wanted in return; coarſe goods of every ſort neceſſary for home conſumption, will always be manufactured by the inhabitants. To import ſalt, iron, ſugar, and ſpirits, would be attended with much labour and expence, by reaſon of their great bulk and weight; but nature has ſuperſeded that neceſſity, thoſe important articles being the produce of the country.

In 1782 the legiſlature of Virginia erected this country into a ſeparate diſtrict, and eſtabliſhed therein a ſupreme court, conſiſting of three judges, with original juriſdiction in all legal matters ariſing with the diſtrict; only reſerving a right of appeal, in certain caſes, to the high court of appeals of the ſtate. This neceſſary meaſure contributed much to a due and prompt adminiſtration of juſtice; and thereby greatly promoted the good order and reſpectability of the ſociety. But notwithſtanding the accommodation thus afforded, ſo great were the inconveniences to which the inhabitants were neceſſarily ſubjected from their connection with Virginia, that they began to turn their views to a ſeparation, as the only meaſure which would give effectual relief from grievances, which became the more oppreſſive, in proportion as the population of the country increaſed. No cauſe of complaint exiſted againſt the government; for the conduct of the legiſlature with regard to this detached part of the ſtate had, on all occaſions, been marked with liberality. The inconveniences complained of, were confined to the effects of local ſituation. In order to tranſact buſineſs at the ſeat of government, it was neceſſary to travel to Richmond, a journey of 600 miles, and not only attended with great expence and fatigue, but alſo with danger, as more than 100 miles of the diſtance was through an uninhabited wilderneſs. Repreſentatives ſent to the aſſembly of the ſtate, had the ſame difficulties to encounter; and the local ſituation of the diſtrict required, in many inſtances, acts of legiſlation, which the majority of the legiſlature were not competent to judge of.

Theſe conſiderations, among others, ſuggeſted the neceſſity of a ſeparation; and in 1785 a convention was formed, by ſending deputies from the different counties, who met at Danville for the purpoſe of taking this important matter into conſideration. After due deliberation, it was determined to be expedient that Kentucky ſhould become independent, and that application ſhould be made to Virginia, for her conſent to the meaſure. This, on application being made, was generouſly granted; and an act paſſed declaring the conſent of the ſtate to the erection of the diſtrict of Kentucky into an independent ſtate, upon certain ſpecified conditions, which were referred to the convention of the propoſed ſtate; and being ratified by them, became a compact mutually binding. But delays, occaſioned by the change of the government of the United States, and by other unavoidable cauſes, prevented the admiſſion of the new ſtate into the Union, till the 4th day of February 1791; when an act was paſſed by congreſs, in which it is declared, "That upon the 1ſt day of June 1792, that the new ſtate, by the name and ſtile of the ſtate of Kentucky, ſhould be received and admitted into this Union, as a new and entire member of the United States of America."

To the end that no period of anarchy might happen, a convention choſen by the people for that purpoſe, aſſembled at Danville in 1792, and eſtabliſhed a conſtitution, or form of government for the new ſtate. The powers of the government are divided into three diſtinct departments; viz. legiſlative, executive, and judiciary. The legiſlature to conſiſt of a ſenate, and houſe of repreſentatives. The ſenate not to exceed 40 members; to be elected for four years by electors. The houſe of repreſentatives not to exceed 100 members, to be choſen annually, according to the number of qualified electors in the ſeveral counties. Electors to be choſen every fourth year, at the ſame time, in the ſame manner, and equal in number to the repreſentatives, and to act upon oath. The ſupreme executive power is veſted in a governor, to be choſen by the electors, at the ſame time, and in the ſame manner that they are directed to elect ſenators, to continue in office four years, and to receive a compenſation which ſhall neither be increaſed nor diminiſhed during that period. He has a qualified negative upon all bills, and reſolutions, which require the concurrence of both houſes. He is alſo to nominate, and with the advice of the ſenate, appoint all the officers of the government, whoſe appointments are not otherwiſe provided for by the conſtitution. The judicial power, both as to matter of law, and equity, is veſted in one ſupreme court, and in ſuch inferior courts as the legiſlature may eſtabliſh. The judges hold their offices during good behaviour, but for reaſonable cauſe, which ſhall not be ſufficient ground for impeachment, the governor may remove them, on the addreſs of two-thirds of both branches of the legiſlature. They receive for their ſervices, a compenſation fixed by law, which cannot be diminiſhed during their continuance in office. The firſt general aſſembly of the ſtate, met at Lexington on the fourth day of June 1792, at which time the government was organized, and its operations commenced.

This country was formerly claimed as well by the Northern, as by the Cherokee tribes of Indians; but their title (if they had any) was of ſuch a nature as to render it doubtful which ought to poſſeſs it. Hence this fertile ſpot became an object of contention between them, and a theatre of war; from which cauſe it was denominated by the Indians, the Bloody Grounds. The claim of the northern, or ſix nations of Indians, was purchaſed from them by commiſſioners appointed for that purpoſe, at the treaties of Lancaſter, and Fort Stanwix; and ſince 1768 they have not ſet up any title to this country. In 1775, colonel Richard Henderſon, a citizen of North Carolina, made a purchaſe of the ſame country from the Cherokees; and although it was contrary to the laws of the land for any private citizen to purchaſe lands of the Indians, ſtill he perſevered in his intention of eſtabliſhing a colony of his own; and actually took poſſeſſion of it with ſome of his followers. However, in 1778 the nature of his claim was inveſtigated by the legiſlature of Virginia, and although it could not be ſupported on any principle, he having acted in contempt of the ſtate, and the country having been previouſly purchaſed from the Cherokees by colonel Donaldſon, who acted on behalf of the ſtate, at the treaty of the Long-Iſland; yet the legiſlature, as an indemnification for the trouble and expence he had been at, made him a grant of a tract of land of twelve miles ſquare, at the mouth of Green River; and ſhortly after eſtabliſhed an office for the ſale of the reſidue of the lands in the country. But notwithſtanding the Indian claims were thus entirely extinguiſhed by fair purchaſe, the firſt ſettlers were not long permitted to occupy the country in peace. The war between Great Britain and the United States was then depending; at an early period of which, it became a part of Britiſh policy to employ the Indians as allies, and to direct their fury againſt the frontiers of the ſtates. The infant ſettlement of Kentucky, detached and ſeparated at that time from any other country, by a wilderneſs of near 200 miles, ſoon experienced all the horrors and devaſtations of an Indian war, and was frequently near being annihilated by the united attacks of the ſavages, ſtimulated to murder and rapine by emiſſaries from the government of Canada. But ſupported by ſeaſonable reinforcements of emigrants who continually repaired to the country, allured by the uncommon fertility of the ſoil, the inhabitants were enabled, not only to maintain their ground againſt the unceaſing efforts of the Indians, openly ſupported by the Britiſh, but alſo to undertake offenſive operations againſt the enemy.

Accordingly, in the latter end of 1778, that brave and enterpriſing officer general Clarke, at the head of a ſmall army of hardy woodſmen collected here, penetrated into the country north-weſt of the Ohio, and in the name of the ſtate of Virginia, took poſſeſſion of all the ſettlements of the French and Indians on the Miſſiſſippi, between the mouths of the Ohio and Illenois rivers. Leaving here the neceſſary garriſons, he marched acroſs the country to poſt St Vincennes on the Wabaſh river; where, with inferior numbers, and armed with rifles only, he had the addreſs to make himſelf maſter of a Britiſh garriſon, commanded by colonel Hamilton, which, though ſtrongly fortified, and well ſupplied with artillery, and every neceſſary, ſurrendered priſoners of war. Having eſtabliſhed a garriſon at this place, and having ſucceeded in detaching moſt of the Wabaſh and Illenois tribes of Indians from the Britiſh intereſt, this gallant officer returned to Kentucky, and at the head of the militia, carried on two ſucceſsful expeditions againſt the Shawaneſe, Delaware, and Mingoe tribes of Indians; defeated their combined forces in a general engagement; and burnt, and laid waſte, the greater number of their towns, which were ſituated on the Miami and Scioto rivers.

Theſe ſucceſsful enterpriſes ſaved the country, but did not put an end to the outrages of the Indians; nor did their depredations ceaſe with the war between Great Britain and the United States. Excited by a thirſt for blood, and the hope of plunder, and encouraged by the traders from Detroit and Niagara, they have continued, almoſt without intermiſſion, to haraſs the frontier ſettlers.—Whether the inhabitants are continually to be ſubjected to ſuch unprovoked depredations, or thoſe hoſtile tribes of ſavages to be totally extirpated, are queſtions which time muſt determine.

KEPLER (John), one of the greateſt aſtronomers of his age, was born at Wiel, in the country of Wirtemberg, in 1571. In the year 1595, he wrote an excellent book, which was printed at Tubingen the year following, under the title of *Prodromus diſſertationum de proportione orbium cæleſtium, deque cauſis cælorum numeri, magnitudinis, motuumque periodicorum genuinis et propriis, &c.* Tycho Brahe having ſettled in Bohemia, and obtained from the emperor all ſorts of conveniencies for the perfecting of aſtronomy, was ſo paſſionately deſirous of having Kepler with him, and wrote ſo many letters to him upon the ſubject, that he prevailed upon him to leave the univerſity of Gratz, and remove into Bohemia with his family and library in the year 1600. Kepler in his journey was ſeized ſo violently with the quartan ague, that he could not do Tycho Brahe all the ſervices of which he was before capable. He was even a little diſſatisfied with the reſervedneſs which Tycho Brahe ſhowed towards him; for the latter did not communicate to him all he knew; and as he died in 1601, he did not give time to Kepler to be very uſeful to him, or to receive any conſiderable advantage under him. From that time Kepler enjoyed the title of *Mathematician to the emperor* all his life; and gained more and more reputation by his works. The emperor Rodolphus ordered him to finiſh the tables of Tycho Brahe, which were to be called the *Rodolphine Tables.* Kepler applied himſelf to it vigorouſly: but unhappy are thoſe learned men who depend upon the good-humour of the intendants of the finances. The treaſurers were ſo ill-affected toward that author, that he could not publiſh theſe tables till 1627. He died at Ratiſbon, where he was ſoliciting the payment of the arrears of his penſion, in 1630.

The principal works of this great aſtronomer are, 1. *Prodromus diſſertationum* abovementioned, to which he has alſo given the title of *Myſterium Coſmographicum:* which he eſteemed more than any other of his works, and was for ſome time ſo charmed with it, that he ſaid he would not give up the honour of having invented what was contained in that book for the electorate of Saxony. 2. *Harmonia mundi,* with a defence of that treatiſe. 3. *De cometis, libri tres.* 4. *Epitome aſtronomiæ Copernicanæ.* 5. *Aſtronomia nova.* 6. *Chilias logarithmorum, &c.* 7. *Nova ſtereometria doliorum vinariorum, &c.* 8. *Dioptrice.* 9. *De vero natali anno Chriſti.* 10. *Ad Vitellionem Paralipomena, quibus Aſtronomiæ pars optica traditur, &c.* 11. *Somnium Lunariſve Aſtronomia;* in which he began to draw up that ſyſtem of comparative aſtronomy which was afterwards purſued by Kircher, Huygens, and Gregory. His death happened while the work was printing; upon which James Bartſchius his ſon-in law undertook the care of the impreſſion, but was alſo interrupted by death: and Lewis Kepler his ſon, who was then a phyſician at Konigſberg in Pruſſia, was ſo much ſtartled at theſe diſaſters, that it was with the utmoſt difficulty he could be prevailed upon to attempt to finiſh it, leſt it ſhould prove fatal to him: he completed the taſk, however, without receiving any perſonal injury.

KERATOPHYTUM, in natural hiſtory, a ſpecies of GORGONIA.—The keratophyta are called the *frutices coralloides,* or ſea-ſhrubs; and generally known among naturaliſts by the different appellations of *litophyta, lithoxyla,* and *keratophyta;* epithets tending to convey an idea of their compoſition, which at firſt view ſeems to conſiſt partly of a woody or horny, partly of a ſtony or calcareous ſubſtance, variouſly diſpoſed with reſpect to each other. Their general form approaches to that of ſhrubs, having a root like-baſe, by which they adhere to ſome ſolid ſupport in the ocean; and a ſtem or trunk, and branches differently diſpoſed; ſome riſing up in one or more different twigs, ſubdivided into ſmaller and ſeparate ramifications; while others have their ſmaller branches connected in ſuch a manner, as to form a curious net-like ſtructure: from this diverſity of figure they borrow the names of *ſea-fans, ſea-feathers,* &c. The ſeeming fibres of the baſe are, in reality, ſmall tubes, of which the whole ſhrub conſiſts: theſe tubes run up longitudinally into the trunk, and are alſo circularly diſpoſed about the centre of the trunk: the woody part, as naturaliſts have called it, thus formed, affords when burnt a ſtrong ſmell like burning horn; whence ſome have called it *the horny part.* Upon this part is ſuperinduced a kind of ſtony or calcareous coat, which covers both trunk and branches to their extremities. In this coat may be diſcovered regular orders of cells; or pores and viewed by the microſcope, it always appears to be organical body conſiſting of a regular congeries, like the cells in which animals have been formed or exiſted. Some of this kind of bodies have loſt their calcareous covering by the violence of the waves and other accidents. In ſome ſpecimens of an advanced growth, the calcareous tubes juſt mentioned ſend out little cells of animals of the polype kind, with proper openings to them all: theſe cells are diffuſed along the branches in ſome regular order, much in the ſame manner as they are in the corallines. From the cells the animals have been diſcovered extending themſelves, as well to procure food, as materials for the increaſe of this ſurpriſing ſtructure; and therefore there is no reaſon to doubt that they are animal productions.

A ſmall ſprig of the keratophyton ſtabelliforme, or warted ſea-fan, is repreſented in Plate CCL. The outſide is covered with a cruſt full of little lumps like warts; which, when diſſolved in vinegar, diſcover the contracted bodies of polypes, like claws, C and C1 are two views of one of the warts magnified; C2, is the appearance of the polype when the cretaceous matter is diſſolved; C3, repreſents the particles that compoſe the incruſtation, magnified.—D, repreſents a ſea-willow, or keratophyton dichotomum. On both edges of the flat branches are regular rows of little riſing cells in the calcareous part, with ſmall holes for an entrance to each. See Corallines.

KERCKRING (Theodore), a famous phyſician of the 17th century, was born at Amſterdam, and acquired great reputation by his diſcoveries and his works. He found out the ſecret of ſoftening amber without depriving it of its tranſparency; and made uſe of it in covering the bodies of curious inſects in order to preſerve them. He was a member of the Royal Society of London, and died in 1693 at Hamburg, where he had ſpent the greateſt part of his life, with the title of *reſident of the grand duke of Tuſcany.* His principal works are, 1. *Spicilegium anatomicum.* 2. *Anthropogeniæ ichnographia.* There is alſo attributed to him an anatomical work, printed in 1671 in folio.

KERI Cetib, are various readings in the Hebrew Bible: *keri,* ſignifies that which is read; and *cetib,* that which is written. For where any ſuch various readings occur, the wrong reading is written in the text, and that is called the *cetib;* and the true reading is written in the margin with ק under it, and called the *keri.* It is generally ſaid by the Jewiſh writers, that theſe corrections were introduced by Ezra; but it is moſt probable, that they had their original from the miſtakes of the tranſcribers after the time of Ezra, and the obſervations and corrections of the Maſorites. Thoſe Keri cetibs, which are in the ſacred books written by Ezra himſelf, or which were taken into the canon after his time, could not have been noticed by Ezra himſelf; and this affords a preſumption, that the others are of late date. Theſe words amount to about 1000; and Dr Kennicott, in his *Diſſertatio Generalis,* remarks, that all of them, excepting 14, have been found in the text of manuſcripts.

KERMAN, the capital city of a province of that name in Perſia, ſeated in E. Long. 56. 30. N. Lat. 30. 0. The province lies in the ſouth part of Perſia, on the Perſian gulph. The ſheep of this country, towards the latter end of the ſpring, ſhed their wool, and become as naked as ſuckling pigs. The principal revenue of the province conſiſts in theſe fleeces.

KERMES, in zoology, the name of an inſect produced in the excreſcences of a ſpecies of the oak. See Coccus.

Kermes Mineral, ſo called from its colour, which reſembles that of vegetable kermes, is one of the moſt important antimonial preparations, both with regard to its chemical phenomena and to its medicinal uſes.

The uſe of kermes-mineral was not eſtabliſhed in medicine before the beginning of this century. Some chemiſts, indeed, amongſt others Glauber and Lemeri, had before that time mentioned in their works ſeveral preparations of antimony which approach more or leſs to kermes; but theſe preparations being little known, were confounded with many others which are entirely neglected, although much praiſed by their authors.—The fame of kermes was occaſioned by friar Simon, apothecary to the Chartreux friars. He received this preparation from a ſurgeon called *La Ligerie,* who had procured it from a German apothecary who had been a ſcholar of the famous Glauber. Friar Simon, from the commendations given to this new remedy by La Ligerie, adminiſtered it to a Chartreux friar, who was dangerouſly ill of a violent peripneumony, by which the friar was ſuddenly, and as it had been miraculouſly, cured. From that time the friar apothecary publiſhed the virtue of his remedy. Several other remarkable cures were performed by means of kermes. The public believed in its medicinal qualities, and called it *powder of Chartreux;* becauſe it was prepared only in the apothecary's ſhop belonging to theſe monks. The reputation of kermes extended itſelf more and more; till at length the duke of Orleans, then regent of France, procured the publication of the proceſs by La Ligerie.

This proceſs conſiſts in boiling, during two hours, pulveriſed crude antimony in the fourth part of its weight of the liquor of nitre fixed by coals, and twice its weight of pure water: at the end of this time the liquor is to be decanted and filtrated, while boiling, through brown paper. It continues clear while it is boiling hot; but when it cools, it becomes turbid, acquires a red brick colour, and again becomes clear by the depoſition of a red ſediment, which is the kermes. The boiling may be thrice repeated, and each time the ſame quantity of water is to be added to the antimony, and a fourth part leſs of the liquor of fixed nitre. The ſeveral ſediments from theſe three boilings are to be added together, waſhed with clean water till the water acquires no taſte; and the kermes is then to be dried. La Ligerie directs, that aquavitæ ſhall be once or twice poured upon it and burnt, and the kermes dried again.

We now proceed to explain the nature of kermes, and the phenomena of its preparation.——Crude antimony is compoſed of regulus of antimony and common ſulphur, united naturally with each other, as in almoſt all metallic minerals. The fixed alkali with which the crude antimony is boiled, although it is diluted with much water, acts upon the ſulphur of the antimony, and forms with it liver of ſulphur; and as this compound is a ſolvent of all metallic matters, it diſſolves a certain quantity of the regulus of antimony. In this operation then a combination is formed of fixed alkali, of ſulphur, and of regulus of antimony. Of theſe three ſubſtances the fixed alkali only is ſoluble in water, and is the intermediate

mediate ſubſtance by which the ſulphur and regulus are ſuſpended in the water. But we are to obſerve, that the alkali becomes impregnated by this operation, and by boiling, with a larger quantity of regulus, and eſpecially of ſulphur, that can be ſuſpended in cold water; hence the decoction of kermes, which is clear, limpid, and colourleſs while boiling hot, becomes turbid and depoſits a ſediment while it cools. This compound, therefore, like certain ſalts, may be kept diſſolved in larger quantity by hot than by cold water, and much of it is therefore depoſited by cooling.

Further, while the kermes is precipitating, the whole antimoniated liver of ſulphur, which is diſſolved by the boiling liquor, may be divided into two parts; one of which, that is the kermes, being overcharged with the regulus, and particularly with the ſulphur, contains but a little alkali, which it draws along with it during its depoſition. The other part, as it contains much more alkali, remains diſſolved even in the cold liquor, by means of this larger quantity of alkali. All theſe propoſitions are to be explained and demonſtrated by the following obſervations.

Firſt, when the decoction of kermes is cold, and has formed all its ſediment, if, without adding any thing to it, it be heated till it boil, it again entirely rediſſolves the kermes; the ſediment diſappears; the liquor becomes clear, and by cold is again rendered turbid and depoſites ſediment as before. Thus the kermes may be made to precipitate and to rediſſolve as often as we pleaſe.

Secondly, by digeſting kermes in aqua regia, which diſſolves its alkali and regulus, the ſulphur is ſeparated pure. The acids of aqua regia form a nitre and a febrifugal ſalt of Sylvius with the alkali of the kermes; and if a certain quantity of kermes be melted with black flux after having deſtroyed its ſulphur by roaſting, a true regulus of antimony may be obtained from it.

Theſe experiments, which were made by Mr Geoffroy, and the detail of which is found in memoirs given to the Academy in the years 1734 and 1735, upon the analyſis of kermes, ſhow evidently the preſence of ſulphur, of fixed alkali, and of regulus of antimony, in this compound. From Mr Geoffroy's experiments we find, that 72 grains of kermes contain about 16 or 17 grains of regulus, 13 or 14 grains of alkaline ſalt, and 40 or 41 grains of common ſulphur.

Thirdly, by repeating the boiling of the liquor upon the antimony, more and more kermes will be formed each time by cooling, as at firſt; and this experiment may be repeated a great many times. Mr Geoffroy ſays, that he repeated it 78 times without any other addition than that of pure water to ſupply that which was loſt by evaporation; and that each time a conſiderable quantity of kermes was formed by cooling. This experiment proves, that the alkali tranſforms the antimony into kermes by overcharging itſelf with regulus and ſulphur, and at each precipitation the kermes does not retain and take with it but a very ſmall quantity of alkali.

Fourthly, if any acid be poured upon the liquor in which the kermes has been formed, and from which it has been entirely ſeparated by cooling, Mr Beaumè has obſerved, that this liquor is again rendered turbid, and that a ſecond ſediment is formed of a yellow reddiſh colour, which is nothing elſe than golden ſulphur of antimony; that is, regulus of antimony and ſulphur mixed together, but in very different proportions, and with very different ſtrengths of union, from thoſe in which they are found in the crude antimony.

After this precipitation, in the liquor a neutral ſalt is left, which is formed by the contained alkali and the precipitating acid. From this experiment we find, that in the liquor from which the kermes has been depoſited, a conſiderable quantity of antimoniated liver of ſulphur remains, which differs from kermes by containing a much larger proportion of alkali; ſo that it can keep diſſolved the regulus and ſulphur with which it is united, even when the liquor is cold.

In the proceſs for ſeveral antimonial preparations, a kermes, or compounds like it, are formed. This always happens when crude antimony is treated by fuſion with a quantity of alkaline ſalt, ſo that an antimoniated liver of ſulphur reſults from it, overcharged with regulus and ſulphur; that is, containing more of theſe two ſubſtances than it can keep diſſolved in cold water. If any of theſe combinations be boiled in water, a matter analogous to kermes is always depoſited by cooling. This happens, for inſtance, to the ſcoria of the regulus of antimony, and in an operation deſcribed by Mr Geoffroy to abridge the proceſs for making kermes by fuſion.

To make kermes by fuſion, Mr Geoffroy fuſes two parts of antimony with one part of alkaline ſalt; he powders this matter while yet hot, and keeps it during two hours in boiling water; he then filtrates it, and receives the liquor into more boiling water, from which, when it cools, about ſix gros of kermes is depoſited, when an ounce of antimony has been uſed. This method of making kermes is much more expeditious, but leſs perfect; for, as the author confeſſes, the kermes produced is not ſo fine and ſoft as that made in the ordinary method.

Mr Lemeri the elder mentions alſo, in his Treatiſe concerning Antimony, an operation from which his ſon pretends that kermes may be obtained. This operation conſiſts in digeſting, and afterwards boiling, powdered crude antimony in a very pure liquor of fixed nitre. This liquor, if it be in ſufficient quantity, is capable of diſſolving quickly and entirely powdered crude antimony; and we cannot doubt but that, by cooling, a conſiderable quantity of a ſubſtance very analogous to kermes will be produced. Neverthleſs, none of theſe ſhort methods of making kermes is directed by diſpenſatories, or by the beſt books for deſcribing the preparations of chemical remedies.

Kermes is uſed in medicine only; and from it ſingularly excellent effects may be produced, when adminiſtered by able phyſicians. In Kermes are united the exciting and evacuant virtues of the emetic preparations of antimony, with the tonic, dividing, aperitive, and reſolving properties of the liver of ſulphur; that is to ſay, that it is capable of anſwering two principal indications in the treatment of many acute and chronic diſeaſes. Properly managed, it may become an emetic, purgative, a diuretic, a ſudorific, or an expectorant, as is required, and it is always attenuating and reſolving. When ſeven or eight grains are taken at once, it chiefly acts upon the primæ viæ, generally as an emetic and as a purgative. A doſe of three or four grains is ſeldom emetic, and more frequently purgative. When taken in theſe quantities as an evacuant, a little of it paſſes alſo into the viæ ſecundæ & tertiæ. When it is adminiſtered in ſmaller doſes, it paſſes almoſt entirely into the lacteal, blood, and lymphatic veſſels. In theſe it occaſions ſuch ſpaſms and oſcillations as it does in the primæ viæ; ſo that it increaſes all ſecretions and excretions, but particularly thoſe of urine, ſweat, and expectoration, according to the doſe, to the nature of the diſeaſe, and to the diſpoſition of the patient. It produces very good effects in thoſe diſeaſes of the breaſt which proceed from fullneſs and obſtruction.

Kermes may be adminiſtered in linctuſes, in oily or in cordial potions, in any vehicle; or incorporated in a bolus, with other ſuitable remedies. One precaution, hitherto little obſerved, is very neceſſary; that is, not to join it with acid matters, if it is intended to act as kermes. Anti-acid and abſorbent ſubſtances ought to be joined with it, if the patient has an acid in the primæ viæ, or an aceſcent diſpoſition; for as theſe acids ſaturate the alkali by which the kermes is rendered an antimoniated liver of ſulphur, and by which alone it differs from golden ſulphur of antimony, they accordingly render the kermes entirely ſimilar to the golden ſulphur of antimony, the properties of which are very different from thoſe of kermes.

KERN, or Kerne, a term in the ancient Iriſh militia, ſignifying a *foot-ſoldier*.—Camden tells us, the armies of Ireland conſiſted of cavalry, called *galloglaſſes*; and infantry, lightly armed, called *kernes*.—The kernes bore ſwords and darts; to the laſt were fitted cords, by which they could recover them after they had been launched out.

Kernes, in our laws, ſignify idle perſons or vagabonds.

KERRY, a county of Ireland, in the province of Munſter, anciently called *Corrigia*, or "the rocky country," from *Cerrig* or *Carric*, "a rock." It is bounded by the Shannon which divides it from Clare on the north, by Limerick and Cork on the eaſt, by another part of Cork on the ſouth, and by the Atlantic Ocean on the weſt. The beſt town in it is Dingle, ſituated in a bay of the ſame name. It comprehends a great part of the territory formerly called *Deſmond*, and conſiſts of very different kinds of ſoil. The ſouth parts are plain and fertile, but the north full of high mountains, which, though remarkably wild, produce a great number of natural curioſities. It contains 636,905 Iriſh plantation acres, 84 pariſhes, 8 baronies, 3 boroughs, returns 8 members to parliament, and gives title of earl to the family of Fitzmaurice. It is about 57 miles long, 45 broad, and lies within N. Lat. 51. 30. and 52. 24.; the Longitude at the mouth of Kenmare river being 10° 35′ weſt, or 42′ 20″ difference of time with London. It is the fourth county as to extent in Ireland, and the ſecond in this province; but in reſpect to inhabitants and culture doth not equal many ſmaller counties. In it there are two epiſcopal ſees, which have been annexed to the biſhopric of Limerick ſince the year 1660, viz. Ardfert and Aghadoe. The ſee of Ardfert was anciently called the dioceſe of *Kerry*, and its biſhops were named biſhops of *Kerry*. Few mountains in Ireland can vie with thoſe in this county for height; during the greater part of the year their ſides are obſcured by fogs, and it muſt be a very ſerene day when their tops appear. Iron ore is to be had in great plenty in moſt of the ſouthern baronies. The principal rivers are the Blackwater, Feal, Gale and Brick, Caſhin, Mang, Lea, Fleſk, Laune, Carrin, Fartin, Inry, and Roughty, and the principal lake is Killarney. There are ſome good medicinal waters diſcovered in this county: particularly Killarney water, Iveragh, Spa, Felloſwell, Dingle, Caſtlemain, and Tralee-Spas, as alſo a ſaline ſpring at Maherybeg. Some rare and uſeful plants grow in Kerry, of which Dr Smith gives a particular account in his hiſtory of that county.

KERSEY, a kind of coarſe woollen cloth, made chiefly in Kent and Devonſhire in England.

KESITAH. This word is to be met with in Geneſis and in Job, and is tranſlated in the Septuagint and Vulgat "ſheep or lambs:" But the Rabbins and modern interpreters are generally of opinion, that keſitah ſignifies rather a piece of money. Bochart and Eugubinus are of opinion the Septuagint meant *minæ*, and not lambs; in Greek *becatonmnon*, εκατονμνων, inſtead of εκατον αμνων. Now a mina was worth 60 Hebrew ſhekels, and conſequently 6 l. 16 s. 10½ d. Sterling. M. de Pelletier of Rouen is of opinion, that keſitah was a Perſian coin, ſtamped on one ſide with an archer (*Keſitah* or *Keſeth* in Hebrew ſignifying "a bow") and on the other with a lamb; that this was a gold coin known in the eaſt by the name of a *daric*, and was in value about 12 livres and 10 d. French money. Several learned men, without mentioning the value of the keſitah, ſay it was a ſilver coin, the impreſſion whereof was a ſheep, for which reaſon the Septuagint and Vulgate tranſlate it by this name. Calmet is of opinion, that keſitah was a purſe of gold or ſilver. In the eaſt they reckon at preſent by purſes. The word *kiſta* in Chaldee ſignifies "a meaſure, a veſſel." And Euſtathius ſays, that kiſta is a Perſian meaſure. Jonathan and the Targum of Jeruſalem tranſlate *keſitah* "a pearl." (Gen. xxxiii. 19.; Job, xlii. 11). Or 9 l. Engliſh, ſuppoſing, as Dr Prideaux does, that a ſhekel is worth 3 s. A daric is a piece of gold, worth, as Dr Prideaux ſays, 25 s. Engliſh.

KESSEL, a town of Upper Guelderland, in the Netherlands, with a handſome caſtle. It is the chief town in the territory of the ſame name, and ſeated on the river Meuſe, between Ruremond and Venlo, it being about five miles from each. It was ceded to the king of Pruſſia by the treaty of Utrecht. E. Long. 6. 13. N. Lat. 41. 22.

Keſſel (John Van), an eminent painter, was born at Antwerp in 1626, and became exceedingly famous for painting thoſe particular objects which he delighted to repreſent; and not only excelled in fruits and flowers, but was likewiſe eminent for painting portraits. In this manner he reſembled Velvet Brueghel, and very near equalled him in his birds, plants, and flowers. The prodigious high prices for which he ſold his works, occaſioned the rich alone to be the purchaſers; and the king of Spain admired the performances of Van Keſſel to ſuch a degree, that he purchaſed as many of them as he could poſſibly procure, till at laſt he prevailed on that artiſt to viſit his court, where he was appointed painter to the queen, and was retained in her ſervice as long as ſhe lived. He painted portraits admirably, with a light free touch, and a tone of colour that very much reſembled Vandyck; nor are his works in that ſtyle conſidered in Spain as inferior to that great maſter. He died in 1708, aged 82.

KESSELDORF, a village of Germany, in the circle of Upper Saxony, three miles below Dreſden, remarkable for the battle gained by the king of Pruſſia over the Saxons, on the 15th of December 1745.

KESTREL, the Engliſh name of a hawk, called alſo the *ſtannel* and the *windhover*, and by authors the *tinnunculus* and *chencris*. It builds with us in hollow oaks, and feeds on partridges and other birds. See FALCO.

KESWICK, a town of Cumberland in England ſituated on the ſide of a lake in a fruitful plain, almoſt encompaſſed with mountains, called the *Terwent Fells*. It was formerly a town of good note, but is now much decayed. However, it is ſtill noted for its mines and miners, who have a convenient ſmelting-houſe on the ſide of the river Derwent, the ſtream of which is ſo managed as to make it work the bellows, hammers, and forge, as alſo to ſaw boards. There is a work-houſe here for employing the poor of this pariſh and that of Croſsthwait. W. Long. 3. 0. N. Lat. 54. 30.

KETCH, a veſſel equipped with two maſts, viz. the main-maſt and mizen-maſt, and uſually from 100 to 250 tons burden.—Ketches are principally uſed as yachts or as bomb-veſſels; the former of which are employed to convey princes of the blood, ambaſſadors, or other great perſonages, from one part to another; and the latter are uſed to bombard citadels, towns, or other fortreſſes. The bomb-ketches are therefore furniſhed with all the apparatus neceſſary for a vigorous bombardment; they are built remarkably ſtrong, as being fitted with a greater number of *riders* than any other veſſel of war; and indeed this reinforcement is abſolutely neceſſary to ſuſtain the violent ſhock produced by the diſcharge of their mortars, which would otherwiſe in a very ſhort time ſhatter them to pieces.

KETTLE, in the art of war, a term the Dutch give to a battery of mortars, becauſe it is ſunk under ground.

Kettle-Drums, are formed of two large baſins of copper or braſs, rounded at the bottom, and covered over with vellum or goat-ſkin, which is kept faſt by a circle of iron, and by ſeveral holes faſtened to the body of the drum, and a like number of ſcrews to ſcrew up and down, and a key for the purpoſe. The two baſins are kept faſt together by two ſtraps of leather which go through two rings, and are faſtened the one before and the other behind the pommel of the kettle-drum's ſaddle. They have each a banner of ſilk or damaſk, richly embroidered with the ſovereign's arms or with thoſe of the colonel, and are fringed with ſilver or gold; and, to preſerve them in bad weather, they have each a cover of leather. The drumſticks are of crab-tree or of any other hard wood, of eight or nine inches long, with two knobs on the ends, which beat the drum-head and cauſe the ſound. The kettle-drum with trumpets is the moſt martial ſound of any. Each Britiſh regiment of horſe has a pair.

Kettle-Drummer, a man on horſeback appointed to beat the kettle-drums, from which he takes his name. He marches always at the head of the ſquadron, and his poſt is on the right when the ſquadron is drawn up.

KETTLEWELL (John), a learned divine, born in 1653, was deſcended from an ancient family in the North-riding of Yorkſhire, bred in Edmund-Hall Oxford, and elected fellow of Lincoln-college. In 1675, he went into orders; but after the revolution was deprived of his living, on account of his refuſal to take the oaths to King William and Queen Mary. He died of a conſumption in 1695. He publiſhed ſeveral works, which were collected and reprinted together in 1718, in 2 vols folio. He was a man of great candour, meekneſs, piety, and charity.

KEVELS, in ſhip-building, a frame compoſed of two pieces of timber, whoſe lower ends reſt in a ſort of ſtep or foot, nailed to the ſhip's ſide, from whence the upper ends branch outward into arms or horns, ſerving to belay the great ropes by which the bottoms of the main-ſail and fore-ſail are extended.

KEW, a village of Surry in England, oppoſite to Old Brentford, 10 miles weſt from London. Here is a chapel of eaſe erected at the expence of ſeveral of the nobility and gentry in the neighbourhood, on a piece of ground that was given for that purpoſe by the late Queen Anne. Here the late Mr Molineux ſecretary to the late king, when prince of Wales, had a fine ſeat on the Green, which became the reſidence of the late prince and princeſs of Wales, who greatly improved both the houſe and gardens; now occupied by his preſent majeſty, who has greatly enlarged the gardens, and formed a junction with them and Richmond gardens. The gardens of Kew are not very large, nor is their ſituation by any means advantageous, as it is low and commands no proſpects. Originally the ground was one continued dead flat; the ſoil was in general barren, and without either wood or water. With ſo many diſadvantages it was not eaſy to produce any thing even tolerable in gardening; but princely munificence, guided by a director equally ſkilled in cultivating the earth and in the politer arts, overcame all difficulties. What was once a deſart is now an Eden. In 1758, an act paſſed for building a bridge acroſs the Thames to Kew-Green; and a bridge was built of eleven arches; the two piers and their dependent arches on each ſide next the ſhore, built of brick and ſtone; the intermediate arches entirely wood; the centre arch 50 feet wide, and the road over the bridge 30. But this bridge is to be taken down as ſoon as a very elegant one, now erecting cloſe by it is completed.

KEXHOLM, that part of Finland which borders upon Ruſſia. The lake Ladoga croſſes it, and divides it into two parts. By the treaty between Ruſſia and Sweden in 1721, the Swedes were obliged to abandon the beſt part to the Ruſſians. The country in general is full of lakes and marſhes, thinly inhabited, and badly cultivated. The lake abovementioned is 120 miles in length, and full of fiſh.

Kexholm, or *Carelgorod*, a town of Ruſſia, in a territory of the ſame name, not very large, but well fortified, and has a ſtrong caſtle. The houſes are built with wood. It formerly belonged to the Ruſſians, after which the Swedes had poſſeſſion of it for a whole century; but it was retaken by the Ruſſians in 1710. Near it is a conſiderable ſalmon fiſhery. It is ſeated on two iſlands on the north-weſt ſide of the lake

Ladoga, in E. Long. 30. 25. N. Lat. 61. 12. Near it is another town called *New-Kexholm*.

KEY, an inſtrument for the opening of locks. See Lock.

L. Molinus has a treatiſe of keys, *De clavibus veterum*, printed at Upſal: he derives the Latin name *clavis*, from the Greek κλειω *claudo*, "I ſhut;" or from the adverb *clam* "privately;" and adds, that the uſe of keys is yet unknown in ſome parts of Sweden.

The invention of keys is owing to one Theodore of Samos, according to Pliny and Polydore Virgil: but this muſt be a miſtake, the uſe of keys having been known before the ſiege of Troy; mention even ſeems made of them in the 19th chapter of Geneſis.

Molinus is of opinion, that keys at firſt only ſerved for the untying certain knots, wherewith they anciently ſecured their doors: but the Laconic keys, he maintains, were nearly akin in uſe to our own; they conſiſted of three ſingle teeth, and made the figure of an E; of which form there are ſtill ſome to be ſeen in the cabinets of the curious.

There was another key called βαλαναγρα, made in the manner of a male-ſcrew; which had its correſponding female in a bolt affixed to the door, *Key* is hence become a general name for ſeveral things ſerving to ſhut up or cloſe others. See the article Lock.

Key, or *Key-ſtone, of an Arch or Vault*, is the laſt ſtone placed a-top thereof; which being wider and fuller at the top than bottom, wedges, as it were, and binds all the reſt. The key is different in the different orders: in the Tuſcan and Doric it is a plain ſtone only projecting; in the Ionic it is cut and waved ſomewhat after the manner of conſoles; in the Corinthian and Compoſite it is a conſole enriched with ſculpture, foliages, &c.

Key is alſo uſed for eccleſiaſtical juriſdiction; particularly for the power of excommunicating and abſolving. The Romaniſts ſay, the pope has the power of the keys, and can open and ſhut Paradiſe as he pleaſes; grounding their opinion on that expreſſion of Jeſus Chriſt to Peter, "I will give thee the keys of the kingdom of heaven." In St Gregory we read, that it was the cuſtom heretofore for the popes to ſend a golden key to princes, wherein they incloſed a little of the filings of St Peter's chains kept with a world of devotion at Rome; and that theſe keys were worn in the boſom, as being ſuppoſed to contain ſome wonderful virtues.

Key is alſo uſed for an index or explanation of a cipher. See Cipher.

Keys of an Organ, Harpſichord, &c. thoſe little pieces in the fore-part of thoſe inſtruments, by means whereof the jacks play, ſo as to ſtrike the ſtrings. Theſe are in number 28 or 29. In large organs there are ſeveral ſets of the keys, ſome to play the ſecondary organ, ſome for the main-body, ſome for the trumpet, and ſome for the echoing trumpet, &c.; in ſome there are but a part that play, and the reſt are only for ornament. There are 20 ſlits in the large keys, which make half-notes. See the article Organ, &c.

Key, in muſic, a certain fundamental note or tone, to which the whole piece, be it in cantata, ſonata, concerto, &c. is accommodated, and with which it uſually begins but always ends.

Key, or *Quay*, a long wharf, uſually built of ſtone, by the ſide of a harbour or river, and having ſeveral ſtorehouſes for the convenience of lading and diſcharging merchant-ſhips. It is accordingly furniſhed with poſts and rings, whereby they are ſecured; together with cranes, capſterns, and other engines, to lift the goods into or out of the veſſels which lie along ſide.

The verb *cajare*, in old writers, according to Scaliger, ſignifies to *keep* in or *reſtrain*; and hence came our term *key* or *quay*, the ground where they are made being bound in with plank and poſts.

Keys are alſo certain ſunken rocks lying near the ſurface of the water, particularly in the Weſt-Indies.

KEYNSHAM, a town of Somerſetſhire, 116 miles from London. It is a great thoroughſare in the lower road between Bath and Briſtol. They call it proverbially *ſmoaking* Keynſham, and with equal reaſon they might call it *foggy*. It has a fine large church, a ſtone bridge of 15 arches over the Avon to Glouceſterſhire, and another over the river Chew. Its chief trade is malting. It has a charity-ſchool, a weekly market, and three fairs.

KEYSER's Pills, a celebrated mercurial medicine, the method of preparing which was purchaſed by the French government, and has ſince been publiſhed by M. Richard.

The firſt, and what, according to Mr Keyſer, is the moſt eſſential operation, conſiſts in ſeparating the mercury very exactly from all heterogeneous matter, by reducing it to an æthiops. This is effected by means of an hydraulic machine, a plan of which Mr Keyſer intended to have given to government before his death: but although he did not live to accompliſh his reſolution, his family ſtill offer to do it when deſired. According to the deſcription given by M. Richard, this machine conſiſts of a number of buckets, in which mercury is triturated with water, till the water acquires a black colour. This water, upon ſtanding, depoſits a ſediment, which, being dried by a proper heat, is the æthiops required.

The ſecond proceſs conſiſts in revivifying the mercury by diſtillation, in freeing it from all oily matters by means of quick-lime, in detaching this quick-lime by repeated waſhings, and afterwards in drying it by means of a ſand heat.

The third operation conſiſts in the reduction of the mercury purified by this proceſs to a red calx, by means of heat. In conducting this operation, Mr Keyſer adviſes, that the mercury be put into glaſs matraſſes, a ſmall quantity only in each. For the proper degree of heat, he directs thoſe who would practiſe the operation to conſult Lemery and other chemiſts.

The fourth operation is, the diſſolution of the calcined mercury, obtained by the former proceſs, in diſtilled vinegar, by means of triture. A pound of this mercury may be diſſolved in eight pints of vinegar, by rubbing it for an hour or two in a mortar, which ſhould be kept ſolely for that purpoſe. Care muſt alſo be taken that the vinegar be not diſtilled in a metallic but in a glaſs veſſel.

The fifth proceſs conſiſts in the intimate mixture of this vinegar, impregnated with mercury, with manna. Each pound of the vinegar containing about two ounces of mercury, will require two pounds of manna. They muſt be rubbed together upon marble ſtones till they acquire

acquire a uniform conſiſtence, which will be liquid to ſuch a degree as to paſs through a hair-cloth, for ſeparating the impurities of the manna. After being managed in this manner, it muſt be ſpread upon a marble ſlab, and left to dry there, without the aſſiſtance of fire, till it acquires ſuch a conſiſtence as not to run off upon the table being turned to its ſide. It muſt then be placed before the fire, and at the ſame time moved from one part of the ſtone to another, by means of a knife, furniſhed with a large pliant blade. By this means, it is perfectly prepared for forming the pills.

The ſixth and laſt proceſs conſiſts in the formation of the maſs thus prepared into pills. Theſe Mr Keyſer made to weigh either three grains or a grain and a half; the firſt for robuſt, the laſt for delicate conſtitutions.

To this account given for the preparation of theſe pills, Mr Keyſer has added ſome reflections, by way of ſupplement. He obſerves, that, by the purification of the mercury from diſtillation, a great quantity of heterogeneous matter is ſeparated from it. This, however, by no means frees it completely from all foreign matter. And, as mercury purified, upon being calcined and diſſolved in vegetable acid, is a much more powerful medicine than mercury calcined without purification, he concludes, that repeated purifications would render it ſtill more active.

Another remark which he gives, reſpects the diſſolution of the mercurius calcinatus in the diſtilled vinegar. He obſerves, that the mercury thus diſſolved may be made to unite with running mercury, and to form a very ſingular product. He formerly mentioned, that a pound of this mercurius calcinatus was to be diſſolved in eight pints of vinegar. If to this be added two pounds of running mercury, and the agitation continued, a ſubſtance will ariſe to the ſurface in the form of cream. This being removed by the aſſiſtance of a wooden ſpoon, more will continue to riſe as long as the agitation is continued. The cream being dried and incorporated with manna, in the proportion of one part of the cream to eight of manna, forms a very uſeful purgative, and is ſaid to be an effectual remedy againſt recent venereal complaints, particularly againſt chancres.

M. Richard concludes his account of Keyſer's pills with obſerving, that he conſiders it to be, without exception, the moſt effectual remedy for the venereal diſeaſe hitherto diſcovered. But before entering upon the detail, he remarks, that it is his opinion the proceſs may be much abridged, without diminiſhing the efficacy of the medicine. He judged it proper, however, to deliver to the public the method of preparing the pills in Mr Keyſer's own words; and he has not afterwards pointed out the improvements he propoſes.

KEYSLER (John George), a learned German antiquarian, was born at Thourneau in 1689. After ſtudying at the univerſity of Halle, he was appointed preceptor to Charles Maximilian and Chriſtian Charles, the young counts of Giech Buchau; with whom he travelled through the chief cities of Germany, France, and the Netherlands, gaining great reputation among the learned as he went along, by illuſtrating ſeveral monuments of antiquity, particularly ſome fragments of Celtic idols lately diſcovered in the cathedral of Paris. Having acquitted himſelf of this charge with great honour, he procured in 1716 the education of two grandſons of Baron Bernſtorff firſt miniſter of ſtate to his Britannic majeſty as elector of Brunſwick Lunenburg. However, obtaining leave in 1718 to viſit England, he was elected a fellow of the Royal Society for a learned eſſay *De Dea Nehelennia numine veterum Walachorum topico:* he gave alſo an explanation of the ancient monument on Saliſbury plain called *Stone-henge*, with a Diſſertation on the Conſecrated Miſletoe of the Druids. Which detached eſſays, with others of the ſame kind, he publiſhed on his return to Hanover, under the title of *Antiquitates ſelectæ Septentrionales et Celticæ*, &c. He afterwards made the grand tour with the young barons, and to this tour we owe the publication of his travels; which were tranſlated into Engliſh, and publiſhed in 1756, in 4 vols 4to. Mr Keyſler on his return ſpent the remainder of his life under the patronage of his noble pupils, who committed their fine library and muſeum to his care, with a handſome income. He died in 1743.

KIAM, a great river of China which takes its riſe near the weſtern frontier, croſſes the whole kingdom eaſtward, and falls into the bay or gulph of Nanking, a little below that city.

KIANG-SI, a province of China, bounded on the north by that of Kiang-nan, on the weſt by Hou-quang, on the ſouth by Quang-tong, and on the eaſt by Fo-kein and Tche-kiang. The country is extremely fertile; but it is ſo populous, that it can ſcarcely ſupply the wants of its inhabitants: on this account they are very economical; which expoſes them to the ſarcaſms and raillery of the Chineſe of the other provinces: however, they are people of great ſolidity and acuteneſs, and have the talent of riſing rapidly to the dignities of the ſtate. The mountains are covered with ſimples; and contain in their bowels mines of gold, ſilver, lead, iron, and tin: the rice it produces is very delicate, and ſeveral barks are loaded with it every year for the court. The porcelain made here is the fineſt and moſt valuable of the empire. This province contains 13 cities of the firſt claſs, and 78 of the ſecond and third.

KIANG-Nan, a province of China, and one of the moſt fertile, commercial, and conſequently one of the richeſt, in the empire. It is bounded on the weſt by the provinces of Ho-nan and Hou-quang; on the ſouth by Tche-kiang and Kiang-ſi; and on the eaſt by the gulph of Nanking; the reſt borders on the province of Chan-tong. The emperors long kept their court in this province; but reaſons of ſtate having obliged them to move nearer to Tartary, they made choice of Pe-king for the place of their reſidence. This province is of vaſt extent; it contains fourteen cities of the firſt claſs, and ninety-three of the ſecond and third. Theſe cities are very populous, and there is ſcarcely one of them which may not be called a place of trade. Large barks can go to them from all parts; becauſe the whole country is interſected by lakes, rivers, and canals, which have a communication with the great river Yang-tſe-kiang, which runs through the middle of the province. Silk-ſtuffs, laquer-ware, ink, paper, and in general every thing that comes from Nanking, as well as from the other cities of the province, are much more eſteemed, and fetch a higher price than thoſe brought from the neighbouring provinces. In the village of Chang-hai alone, and the villages dependent on it, there are reckoned to be more than 200,000 weavers of common cotton cloths. The manufacturing of theſe cloths gives employment to the greater part of the women.—In ſeveral places on the ſea coaſt there are found many ſalt-pits, the ſalt of which is diſtributed all over the empire. In ſhort this province is ſo abundant and opulent, that it brings every year into the emperor's treaſury about 32,000,000 taels (or ounces of ſilver), excluſive of the duties upon every thing exported or imported. The people of this country are civil and ingenious, and acquire the ſciences with great facility: hence many of them become eminent in literature, and riſe to offices of importance by their abilities alone. This province is divided into two parts, each of which has a diſtinct governor. The governor of the eaſtern part reſides at Sou-tcheou-fou, that of the weſtern at Ngan-king-fou. Each of theſe governors has under his juriſdictions ſeven *fou* or cities of the firſt claſs.

KIBURG, a town of the canton of Zurich in Switzerland, with a caſtle; ſeated on the river Theoff, in E. Long. 8. 50. N. Lat. 47. 20.

KID, in zoology, the name by which young goats are called. See Goat.

KIDDER (Dr Richard), a learned Engliſh biſhop, was born in Suſſex, and bred at Cambridge. In 1689, he was inſtalled dean of Peterborough; and in 1691, was nominated to the biſhopric of Bath and Wells, in the room of Dr Thomas Ken, who had been deprived for not taking the oaths to king William and queen Mary. He publiſhed, 1. The young man's duty. 2. A demonſtration of the Meſſiah, 3 vols 8vo. 3. A commentary on the five books of Moſes, 2 vols 8vo; and ſeveral other pious and valuable tracts. He was killed with his lady in his bed by the fall of a ſtack of chimneys, at his houſe in Wells, during the great ſtorm in 1703. The biſhop, in the diſſertation prefixed to his commentary on the five books of Moſes, having reflected upon Monſieur Le Clerc, ſome letters paſſed between them in Latin, which are publiſhed by Le Clerc in his *Bibliotheque Choiſie*.

KIDDERMINSTER, or Kedderminster, a town of Worceſterſhire, ſeated under a hill on the river Stour, not far from the Severn, 128 miles from London. It is a large town of 1180 houſes, with about 6000 inhabitants who carry on an extenſive trade in weaving in various branches. In 1735 a carpet manufactory was eſtabliſhed with ſucceſs, ſo as to employ in 1772 above 250 looms; and there are upwards of 700 looms employed in the ſilk and worſted. Above 1600 hands are employed as ſpinners, &c. in the carpet looms only in the town and neighbourhood; upwards of 1400 are employed in preparing yarn, which is uſed in different parts of England in carpeting; and it is ſuppoſed not leſs than 2000 are employed in the ſilk and worſted looms in the town and neighbourhood. The ſilk manufacture was eſtabliſhed in 1755. The town is remarkably healthy, and has alſo an extenſive manufacture of quilting in the loom in imitation of Marſeilles quilting. Here is a Preſbyterian meeting houſe; and they have a handſome church, two good free-ſchools, a charity-ſchool, and two alms-houſes, &c. The town is governed by a bailiff, 12 capital burgeſſes, 25 common councilmen, &c. who have a town-hall. It formerly ſent members to parliament. By the late inland navigation, it has communication by the junction of the Severn canal with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles, in the counties of Lincoln, Nottingham, York, Lancaſter, Weſtmoreland, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c. This pariſh extends to Bewdley-bridge, has a weekly market, and three fairs. W. Long. 2. 15. N. Lat. 52. 28.

KIDDERS, thoſe that badge or carry corn, dead victuals, or other merchandiſe, up and down to ſell; every perſon being a common badger, kidder, lader, or carrier, &c. ſays the ſtat. 5. Eliz. cap. 12. And they are called *kiddiers*, 13. Eliz. cap. 25.

KIDDLE, or Kidel, (*Kidellus*), a dam or wear in a river with a narrow cut in it, for the laying of pots or other engines to catch fiſh.

The word is ancient; for in Magna Charta, cap. 24. we read, *Omnes kidelli deponantur per Thameſiam & Medweyam, & per totam Angliam, niſi per coſteram maris.* And by king John's charter, power was granted to the city of London, *de kidellis amovendis per Thameſiam & Medweyam.* A ſurvey was ordered to be made of the wears, mills, ſtanks, and kidells, in the great rivers of England, 1. Hen. IV. Fiſhermen of late corruptly call theſe dams *kettles;* and they are much uſed in Wales and on the ſea-coaſts of Kent.

KIDDINGTON, a town of Oxfordſhire, four miles from Woodſtock, and 12 from Oxford. It is ſituated on the Glym river, which divides the pariſh in two parts, viz. Over and Nether Kiddington, in the latter of which ſtands the church. This pariſh was given by King Offa in 780 to Worceſter priory. Here King Ethelred had a palace; in the garden of the manor-houſe is an antique font brought from Edward the Confeſſor's chapel at Iſlip, wherein he received baptiſm. In Hill-wood near this place is a Roman encampment in extraordinary preſervation, but little noticed.

KIDNAPPING, the forcible abduction or ſtealing away of man, woman or child, from their own country, and ſending them into another. This crime was capital by the Jewiſh law: "He that ſtealeth a man and ſelleth him, or if he be found in his hand, ſhall ſurely be put to death *." So likewiſe in the civil law, the offence of ſpiriting away and ſtealing men and children, which was called *plagium*, and the offenders *plagiarii*, was puniſhed with death. This is unqueſtionably a very heinous crime, as it robs the ſtate of its ſubjects, baniſhes a man from his country, and may in its conſequences be productive of the moſt cruel and diſagreeable hardſhips; and therefore the common law of England has puniſhed it with fine, impriſonment, and pillory. And alſo the ſtatute 11 and 12 W. III. c. 7. though principally intended againſt pirates, has a clauſe that extends to prevent the leaving of ſuch perſons abroad as are thus kidnapped or ſpirited away; by enacting, that if any captain of a merchant-veſſel ſhall (during his being abroad) force any perſon on ſhore, or wilfully leave him behind, or refuſe to bring home all ſuch men as he carried out, if able and deſirous to return, he ſhall ſuffer three months impriſonment.

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† *Exod.* xxi. 16.

KIDNEYS, in anatomy. See there. n° 101.

Kidney-Bean. See Phaseolus.

KIEL, a city of Germany, in the duchy of Holſtein, in the circle of Lower Saxony, and the reſidence of the duke of Holſtein Gottorp. It has a caſtle, and a univerſity founded in 1665; and there is a very celebrated fair held here. It is ſeated at the bottom of a bay of the Baltic Sea called *Killerwick*, at the mouth of the river Schwentin, in E. long. 10. 17. N. Lat. 54. 26.

KIGGELARIA, in botany: A genus of the decandria order, belonging to the diœcia claſs of plants; and in the natural method ranking under the 37th order, *Columniferæ*. The male calyx is quinquepartite; the corolla pentapetalous; there are five trilobous glandules; the antheræ are perforated at top: the female calyx and corolla as in the male: there are five ſtyles; the capſule unilocular, quinquevalved, and polyſpermous. There is but one ſpecies, viz. the Africana. It hath an upright woody ſtem, and purpliſh branches, growing 15 or 18 feet high: oblong, ſawed, alternate leaves; and diœcious, greeniſh white flowers, in cluſters from the ſides of the branches; ſucceeded by globular rough fruit, the ſize of cherries, containing the ſeeds, which ſeldom ripen here. As this is a native of warm climates, it muſt be conſtantly kept in a ſtove in Britain. It is propagated by ſeeds layers, or cuttings, though moſt readily by ſeeds.

KIGHLEY, a town in the weſt riding of Yorkſhire, ſix miles to the ſouth eaſt of Skipton in Craven. It ſtands in a valley ſurrounded with hills at the meeting of two brooks, which fall into the river Are one mile below it. Every family is ſupplied with water brought to or near their doors in ſtone troughs from a never failing ſpring on the weſt ſide of it. The pariſh is ſix miles long and two broad, and is 60 miles from the eaſt and weſt ſeas; yet at the weſt end of it near Camel-Croſs is a riſing ground, from which the ſprings on the eaſt ſide of it run to the eaſt ſea, and thoſe on the weſt to the weſt ſea. By the late inland navigation, this town has a communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles, in the counties of Lincoln, Nottingham, Lancaſter, Weſtmoreland, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c.

KILARNEY. See Killarney.

KILBEGGAN, a poſt, fair, and borough town of Ireland, in the county of Weſt Meath and province of Leinſter, 44 miles from Dublin. It returns two members to parliament; patronage in the Lambert family. It is ſeated on the river Broſna, over which there is a bridge. There was here a monaſtery founded in 1200, and dedicated to the Virgin Mary, and inhabited by monks from the Ciſtertian abbey of Melefont. The fairs are two.

KILDA (St), one of the Hebrides or weſtern iſlands of Scotland. It lies in the Atlantic ocean, about 58. 30. N. Lat.; and is about three Engliſh miles in length from eaſt to weſt, and its breadth from ſouth to north not leſs than two. The ground of St Kilda, like much the greateſt part of that over all the Highlands, is much better calculated for paſture than tillage.—Reſtrained by idleneſs, a fault or vice much more pardonable here than in any other part of Great Britain, or diſcouraged by the form of government under which they live, the people of the iſland ſtudy to rear up ſheep, and to kill wild-fowl, much more than to engage deeply in the more toilſome buſineſs of huſbandry.—All the ground hitherto cultivated in this iſland lies round the village. The ſoil is thin, full of gravel, and of conſequence very ſharp. This, though naturally poor, is, however, rendered extremely fertile, by the ſingular induſtry of very judicious huſbandmen: theſe prepare and manure every inch of their ground, ſo as to convert it into a kind of garden. All the inſtruments of agriculture they uſe, or indeed require, according to their ſyſtem, are a ſpade, a mall, and a rake or harrow. After turning up the ground with a ſpade, they rake or harrow it very carefully, removing every ſmall ſtone, every noxious root or growing weed that falls in their way, and pound down every ſtiff clod into duſt. It is certain that a ſmall number of acres well prepared in St Kilda, in this manner, will yield more profit to the huſbandman than a much greater number when roughly handled in a hurry, as is the caſe in the other weſtern iſles. The people of St Kilda ſow and reap much earlier than any of their neighbours on the weſtern coaſt of Scotland. The heat of the ſun, reflected from the hills and rocks into a low valley facing the ſouth-eaſt, muſt in the ſummer time be quite intenſe; and however rainy the climate is, the corn muſt for theſe reaſons grow very faſt and ripen early.

The harveſt is commonly over at this place before the beginning of September; and ſhould it fall out otherwiſe, the whole crop would be almoſt deſtroyed by the equinoctial ſtorms. All the iſlanders on the weſtern coaſts have great reaſon to dread the fury of autumnal tempeſts: theſe, together with the exceſſive quantities of rain they have generally throughout ſeven or eight months of the year, are undoubtedly the moſt diſadvantageous and unhappy circumſtances of their lives.

Barley and oats are the only ſorts of grain known at St Kilda; nor does it ſeem calculated for any other. Fifty bolls of the former, old Highland meaſure, are every year brought from thence to Harris; and all the weſtern iſlands hardly produce any thing ſo good of the kind. Potatoes have been introduced among that people only of late, and hitherto they have raiſed but ſmall quantities of them. The only appearance of a garden in this whole land, ſo the natives call their principal iſland in their own language, is no more than a very inconſiderable piece of ground, which is incloſed and planted with ſome cabbages. On the eaſt ſide of the iſland, at the diſtance of a quarter of a mile from the bay, lies the village, where the whole body of this little people (the number amounting in 1764 to no more than 88) live together like the inhabitants of a town or city. It is certain that the inhabitants were much more numerous formerly than at preſent; and the iſland, if under proper regulations, might eaſily ſupport 300 ſouls. Martin, who viſited it about the end of the laſt century, found 180 perſons there: but about the year 1730, one of the people coming to the iſland of Harris, was ſeized with the ſmall-pox and died. Unluckily his clothes were carried away by one of his relations next year; and thus was the infection communicated, which made ſuch havock, that only four grown perſons were left alive. Their houſes are built in two rows, regular and facing one another; with a tolerable cauſeway in the middle, which they call the *ſtreet*. Theſe habitations are made and contrived in a very uncommon manner. Every one of them is flat in the roof, or nearly ſo, much like the houſes of ſome oriental nations. That from any one of theſe the St Kildans have borrowed their manner of building, no man of ſenſe will entertain a ſuſpicion. They have been taught this leſſon by their own reaſon, improved by experience. The place in which their lot has fallen is peculiarly ſubject to violent ſqualls and furious hurricanes: were their houſes raiſed higher than at preſent, they believe the firſt winter-ſtorm would bring them down about their ears. For this reaſon the precaution they take in giving them roofs much flatter than ordinary ſeems to be not altogether unneceſſary. The walls of theſe habitations are made of a rough gritty kind of ſtones, huddled up together in haſte, without either lime or mortar, from eight to nine feet high. In the heart of the walls are the beds, which are overlaid with flags, and large enough to contain three perſons. In the ſide of every bed is an opening, by way of door, which is much too narrow and low to anſwer that purpoſe. All their dwelling-houſes are divided into two apartments by partition-walls. In the diviſion next the door, which is much the largeſt, they have their cattle ſtalled during the whole winter-ſeaſon; the other ſerves for kitchen, hall, and bed-room.

It will be readily expected, that a race of men and women bred at St Kilda muſt be a very ſlovenly generation, and every way inelegant. It is indeed impoſſible to defend them from this imputation. Their method of preparing a ſort of manure, to them indeed of vaſt uſe, proves that they are very indelicate. After having burnt a conſiderable quantity of dried turf, they ſpread the aſhes with the niceſt care over the floor of that apartment in which they eat and ſleep. Theſe aſhes, ſo exactly laid out, they cover with a rich friable ſort of earth; over this bed of earth they ſcatter a proportionable heap of that duſt into which peats are apt to crumble away: this done, they water, tread, and beat the whole compoſt into a hard floor, on which they immediately make new fires very large, and never extinguiſhed till they have a ſufficient ſtock of new aſhes on hand. The ſame operations are repeated with a never-failing punctuality, till they are juſt ready to ſow their barley; by that time the walls of their houſes are ſunk down, or to ſpeak more properly, the floors riſen about four or five feet.

To have room enough for accumulating heaps of this compoſt one above another, the ancient St Kildians had ingenuity enough to contrive their beds within the linings of their walls; and it was for the ſame reaſon they took care to raiſe theſe walls to an height far from being common in the other weſtern iſlands. The manure produced in this way muſt undoubtedly be good; though probably rather ſharp than of long duration, as it is ſcattered in ſmall quantities upon the ſurface of the ground. Be that as it will, thoſe who practice this art are abundantly laviſh in its praiſes. They call it a *commodity ineſtimably precious*; and one may venture to affirm, that a genuine St Kildian would ſcruple to barter it away for all the diamonds in Braſil and Golconda.

It is certain that cleanlineſs muſt contribute greatly to health, and of courſe longevity; but in ſpite of that inſtance of indelicacy now given, and many more which might have been added, the people of this iſland are not more ſhort-lived than other men. Their total want of thoſe articles of luxury, which have ſo natural a tendency to deſtroy the conſtitution of the human body, and their moderate exerciſes, will, together with ſome other circumſtances, keep the balance of llfe equal enough between them and thoſe who are abſolute ſtrangers to ſlovenlineſs.

Beſides the dwelling-houſes already deſcribed, there are a prodigious number of little cells diſperſed over all the iſland; which conſiſt entirely of ſtones, without any the ſmalleſt help of timber. Theſe cells are from 12 to 18 feet in length, and a little more than ſeven in height. Their breadth at the foundation is nearly equal to the height. Every ſtone hangs above that immediately below, not perpendicularly, but inclines forward, ſo as to be nearer the oppoſite ſide of the grotto, and thus by imperceptible degrees till the two higheſt courſes are near enough to be covered by a ſingle flag at the top. To hinder the rain from falling down between the interſtices above, the upper part of the building is overlaid with turf, which looks like a fine green ſward while new. The inhabitants ſecure their peats, eggs, and wild-fowl, within theſe ſmall repoſitories: every St Kildian has his ſhare of them, in proportion to the extent of land he poſſeſſes, or the rent he pays to the ſteward. From the conſtruction of theſe cells, and the toil they muſt have coſt before they could have been finiſhed, it ſeems plain, that thoſe who put them together, were, if not more ingenious than their neighbours in the adjacent iſlands, at leaſt more induſtrious than their own ſucceſſors.

The St Kilda method of catching wild-fowl is very entertaining. The men are divided into fowling-parties, each of which conſiſts generally of four perſons diſtinguiſhed by their agility and ſkill. Each party muſt have at leaſt one rope about 30 fathoms long; this rope is made out of a ſtrong raw cow-hide, ſalted for that very purpoſe, and cut circularly into three thongs all of equal length; theſe thongs being cloſely twiſted together, form a three-fold cord, able to ſuſtain a great weight, and durable enough to laſt for about two generations: to prevent the injuries it would otherwiſe receive from the ſharp edges of the rocks, againſt which they muſt frequently ſtrike, the cord is lined with ſheep-ſkins, dreſſed in much the ſame manner.

This rope is a piece of furniture indiſpenſably neceſſary, and the moſt valuable implement a man of ſubſtance can be poſſeſſed of in St Kilda. In the teſtament of a father, it makes the very firſt article in favour of his eldeſt ſon: ſhould it happen to fall to a daughter's ſhare, in default of male heirs, it is reckoned equal in value to the two beſt cows in the iſland.

By the help of ſuch ropes, the people of the greateſt proweſs and experience here traverſe and examine rocks prodigiouſly high. Linked together in couples, each having either end of the cord faſtened about his waiſt, they go frequently through the moſt dreadful precipices: when one of the two deſcends, his colleague plants himſelf on a ſtrong ſhelf, and takes care to have ſuch ſure footing there, that if his fellow-adventurer makes a falſe ſtep, and tumbles over, he may be able to ſave him.

The following anecdote of a ſteward of St Kilda's deputy will give the reader a ſpecimen of the dangers they undergo, and at the ſame time of the uncommon ſtrength of the St Kildians. This man, obſerving his colleague loſe his hold, and tumbling down from above, placed himſelf ſo firmly upon the ſhelf where he ſtood, that he ſuſtained the weight of his friend, after falling the whole length of the rope. Undoubtedly theſe are ſtupendous adventures, and equal to any thing in the feats of chivalry. Mr Macauly gives an inſtance of the dexterity of the inhabitants of St Kilda in catching wild-fowl, to which he was an eye-witneſs. Two noted heroes were drawn out from among all the ableſt men of the community: one of them fixed himſelf on a craggy ſhelf; his companion went down 60 fathoms below him; and after having darted himſelf away from the face of a moſt alarming precipice hanging over the ocean, he began to play his gambols; he ſung merrily, and laughed very heartily: after having performed ſeveral antic tricks, and given all the entertainment his art could afford, he returned in triumph, and full of his own merit, with a large ſtring of fowls about his neck, and a number of eggs in his boſom. This method of fowling reſembles that of the Norwegians, as deſcribed by biſhop Pontoppidan.

KILDARE, a town of Ireland, and capital of a county of the ſame name, is ſituated 28 miles ſouth-weſt of Dublin. It returns two members to parliament, patron the duke of Leinſter; and is governed by a ſovereign, recorder, and two portrieves. The church of Kildare was very early erected into a cathedral with epiſcopal juriſdiction, which dignity it retains to this day; the cathedral, however, has been for ſeveral years neglected, and at preſent is almoſt in ruins. St Brigid founded a nunnery at Kildare, which afterwards came into the poſſeſſion of the regular canons of St Auguſtin: this ſaint died 1ſt February 523, and was interred here; but her remains were afterwards removed to the cathedral church of Down. In the year 638, *Aod Dubh* or *Black Hugh* king of Leinſter abdicated his throne, and took on him the Auguſtinian habit in this abbey; he was afterwards choſen abbot and biſhop of Kildare, and died on the 10th May. In 756, Eiglitigin the abbot, who was alſo biſhop of Kildare, was killed by a prieſt as he was celebrating maſs at the altar of St Brigid; ſince which time no prieſt whatſoever was allowed to celebrate maſs in that church in the preſence of a biſhop. In 1220 Henry de Loundres archbiſhop of Dublin put out the fire called *inextinguiſhable*, which had been preſerved from a very early time by the nuns of St Brigid. This fire was however relighted, and continued to burn till the total ſuppreſſion of monaſteries. Here was alſo a Grey abbey on the ſouth ſide of the town, erected for friars of the Franciſcan order, or, as they were more generally called, *Grey friars*, in the year 1260, by Lord William de Veſey; but the building was completed by Gerald Fitzmaurice, Lord Offaley. A conſiderable part of this building yet remains, which appears not to have been of very great extent. A houſe for white friars was likewiſe founded in this town by William de Veſey in 1290; the round tower here is 130 feet high, built of white granite to about 12 feet above the ground, and the reſt of common blue ſtone. The pedeſtal of an old croſs is ſtill to be ſeen here; and the upper part of a croſs lies near it on the ground.—Fairs are held here on 12th February, Eaſter Tueſday, 12th May, and 19th September. The fairs held here are four.

KILDARE, a county of Ireland, in the province of Leinſter, which is 37 miles in length and 20 in breadth; and is bounded on the eaſt by Dublin and Wicklow, on the weſt by King and Queen's county, on the north by Eaſt-Meath, and on the ſouth by Catherlogh. It is a fine arable country, well watered by the Barrow, Liffey, and other rivers, and well inhabited and cultivated, containing 228,590 Iriſh plantation acres, 100 pariſhes, 10 baronies, 4 boroughs, and returns 10 members to parliament. The chief town is of the ſame name, and gave title of earl to the noble family of Fitzgerald. It was anciently called *Chilledair*, i. e. "the wood of oaks," from a large foreſt which comprehended the middle part of this county; in the centre of this wood was a large plain, ſacred to heathen ſuperſtition, and at preſent called the *Curragh of Kildare*; at the extremity of this plain, about the commencement of the 6th century, St Brigid, one of the heathen veſtals, on her converſion to the Chriſtian faith, founded, with the aſſiſtance of St Conlæth, a church and monaſtery, near which, after the manner of the Pagans, St Brigid kept the ſacred fire in a cell, the ruins of which are ſtill viſible.

KILDERKIN, a liquid meaſure, containing two firkins.

KILIAN (Lucas), an eminent engraver, was a native of Augſburg in Germany, and flouriſhed at the beginning of the 17th century. In what ſchool he learned the art is uncertain; but his ſtyle of engraving bears no ſmall reſemblance in many particulars to that of Henry Goltzius, and of John Muller his diſciple. It appears, however, that he went to Italy in order to complete his ſtudies, where he engraved ſeveral plates from the pictures of the great Italian maſters.

KILIANUS (Cornelius), a native of Brabant, diſtinguiſhed himſelf as an excellent corrector of the preſs at the printing-houſe of Plantin for 50 years. He likewiſe wrote ſeveral books which are eſteemed. His Apology for Correctors againſt authors, an epigram of 18 verſes, is a proof of his abilities in Latin poetry.

KILKENNY, a county of Ireland, in the province of Leinſter, bounded on the ſouth by the county of Waterford, on the north by the Queen's county, on the weſt by the county of Tipperary, on the eaſt by the counties of Wexford and Catherlogh, and on the north-weſt by Upper Oſſory. The greateſt length of this county from north to ſouth is 38 miles, the breadth from eaſt to weſt 18; and it contains 10 baronies. It is one of the moſt healthful, pleaſant, and populous counties of Ireland. It contains 287,650 Iriſh plantation acres, 96 pariſhes, 9 baronies, and 7 boroughs, and returns 16 members to parliament. Gilbert Clare, Earl of Glouceſter and Hereford, marrying Iſabella, one of the daughters and co-heireſſes of William earl Marſhal, received as her dower the county of Kilkenny.

KILKENNY, the capital of a county of the ſame name in Ireland, ſituated in the province of Leinſter, 57 miles ſouth-weſt of Dublin. It takes its name from the cell or church of Canic, who was an eminent hermit in this country; and is one of the moſt elegant cities in the kingdom. It is the ſeat of the biſhop of Oſſory, which was tranſlated from Agabo in Oſſory, about the end of Henry II.d's reign, by biſhop O'Dullany. The city is pleaſantly ſituated on the Nore, a navigable river that diſcharges itſelf into the harbour of Waterford. It is ſaid of Kilkenny, that its air is without fog, its water without mud, its fire without ſmoke, and its ſtreets paved with marble. The two latter are indeed matter of fact; for they have in the neighbourhood a kind of coal that burns from firſt to laſt without ſmoke, and pretty much reſembles the Welſh coal. Moſt of the ſtreets alſo are actually paved with a very good ſort of black marble; of which they have large quarries near the town, which takes a fine poliſh, and is beautifully intermixed with white granite. The air too is good and healthy, though not remarkably clearer than in many other parts of the kingdom. The city is governed by a mayor, recorder, aldermen, and ſheriffs. It compriſes two towns, viz. Kilkenny ſo called, and Iriſh-town, each of which ſends two members to parliament, and both together are computed to contain about 20,000 inhabitants. This city was once of great conſequence, as may be ſeen by the venerable ruins yet remaining of churches, monaſteries, and abbeys, which even now in their dilapidated ſtate exhibit ſuch ſpecimens of exquiſite taſte in architecture as may vie with any modern improvements; and the remains of its gates, towers, and walls, ſhow it to have been a place of great ſtrength. Here too at different times parliaments were held, in which ſome remarkable ſtatutes were paſſed. It has two churches, and ſeveral catholic chapels; barracks for a troop of horſe and four companies of foot; a market is held twice in the week, and there are ſeven fairs in the year.—Iriſh-town is more properly called the borough of *St Canice*, vulgarly *Kenny;* the patronage of which is in the biſhop of Oſſory. The cathedral, which ſtands in a ſequeſtered ſituation, is a venerable Gothic pile, built above 500 years; and cloſe to it is one of thoſe remarkable round towers which have ſo much engaged the attention of travellers. The biſhop's palace is a handſome building, and communicates by a covered paſſage with the church. The caſtle was firſt built in 1195, on the ſite of one deſtroyed by the Iriſh in 1173. The ſituation in a military view was moſt eligible: the ground was originally a conoid, the elliptical ſide abrupt and precipitous, with the river running rapidly at its baſe: here the natural rampart was faced with a wall of ſolid maſonry 40 feet high; the other parts were defended by baſtions, curtains, towers, and outworks; and on the ſummit the caſtle was erected. This place, as it now ſtands, was built by the anceſtors of the dukes of Ormond: here the Ormond family reſided; and it is now in the poſſeſſion of Mr Butler, a deſcendant of that illuſtrious race. The college originally founded by the Ormond family is rebuilt in a ſtyle of elegance and convenience. The tholſel and market-houſe are both good buildings; and over the latter is a ſuit of rooms, in which, during the winter and at races and aſſizes times, aſſemblies are held. There are two very fine bridges of cut marble over the Nore; John's Bridge particularly is light and elegant. The Ormond family built and endowed a free ſchool in this city. Here are the ruins of the three old monaſteries, called *St John's St Francis's*, and the *Black abbey:* belonging to the latter are the remains of ſeveral old monuments, almoſt buried in the ruins; and the courts of the others are converted into barracks. The manufactures chiefly carried on here are, coarſe woollen cloths, blankets of extraordinary fine quality, and conſiderable quantities of ſtarch. In the neighbourhood alſo are made very beautiful chimney-pieces of that ſpecies of ſtone already mentioned, called *Kilkenny marble:* they are cut and poliſhed by water, a mill for that purpoſe (the only one of its kind perhaps in Europe) being invented by the late Mr Colles. The Kilkenny coal-pits are within nine miles of the town. This city came by marriage into the ancient family of Le Deſpencer. It was incorporated by charter from King James I. in 1609. The market-croſs of Kilkenny continued an ornament to the city until 1771, when it was taken down; the date on it was MCCC. Sir James Ware mentions Biſhop Cantwell's rebuilding the great bridge of Kilkenny, thrown down by an inundation about the year 1447. It appears alſo that St John's bridge fell down by a great flood in 1564; and on 2d October 1763, by another like circumſtance, Green's bridge near the cathedral fell.—The borough of St Canice, or Iriſh-town, always enjoyed very ancient preſcriptive rights. A cloſe roll of 5 Edward III. A. D. 1376, forbids the magiſtrates of Kilkenny to obſtruct the ſale of victuals in the market of Iriſh-town, or within the croſs, under the pretence or cuſtom for murage: and leſt the ample grants made to Kilkenny might be interpreted ſo as to include Iriſh-town, the corporation of the latter ſecured their ancient rights by letters-patent 15 Edward IV. A. D. 1474. Theſe renew their former privileges, and appoint a portrieve to be choſen every 21ſt September, and ſworn into office on the 11th October. The portrieve's priſon was at Troy-gate. Whenever the mayor of Kilkenny came within Water-gate, he dropt down the point of the city-ſword, to ſhow he claimed no pre-eminence within the borough.

KILLALOE, a biſhop's ſee in the county of Clare and province of Munſter, in Ireland, 86 miles from Dublin, otherwiſe *Lounia.* It was anciently written *Kill-da-Lua*, i. e. "the church of Lua," from *Lua*, or *Molua*, who about the beginning of the 6th century founded an abbey near this place. At Killaloe is a bridge over the Shannon of 19 arches; and here is a conſiderable ſalmon and eel fiſhery. There are many ancient buildings in and about this town. The cathedral is a Gothic edifice in form of a croſs, with the ſteeple in the centre, ſupported by four arches; it was built by Donald king of Limerick in 1160. There is a building near it, once the oratory of St Molua; and there is another of the ſame kind in an iſland on the Shannon, having marks of ſtill higher antiquity. The ſee houſe of the biſhop is at Clarisford, near to Killaloe. Adjoining to the cathedral are yet ſome remains of the mauſoleum of Brien Boru.

KILLARNEY, a poſt-town of Ireland in the county of Kerry and province of Munſter, ſeated near a fine lake called *Lough Lean*, or Lake of Killarney. It is diſtant 143 miles from Dublin, and has two fairs. Within a mile and a half of this place are the ruins of the cathedral of Aghadoe, an ancient biſhopric united to Ardfret; and within four miles of the ruins of Agliſh church. At this town is the ſeat and gardens of lord Kenmore.

The beautiful lake of Killarney is divided properly into three parts, called the *lower*, *middle*, and *upper* lake. The northern or lower lake is ſix miles in length and from three to four in breadth, and the town is ſituated on its northern ſhore. The country on this and the eaſtern boundary is rather of a tame character; but is here and there diverſified with gentle ſwells, many of which afford delightful proſpects of the lake, the iſlands, and ſurrounding ſcenery. The ſouthern ſhore is compoſed of immenſe mountains, riſing abruptly from the water, and covered with woods of the fineſt timber. From the centre of the lake the view of this range is aſtoniſhingly ſublime, preſenting to the eye an extent of foreſt ſix miles in length, and from half a mile to a mile and a half in breadth, hanging in a robe of rich luxuriance on the ſides of two mountains, whoſe bare tops riſing above the whole form a perfect contraſt to the verdure of the lower region. On the ſide of one of theſe mountains is O'Sullivan's caſcade, which falls into the lake with a roar that ſtrikes the timid with awe on approaching it. The view of this ſheet of water is uncommonly fine, appearing as if it were deſcending from an arch of wood, which overhangs it about 70 feet in height from the point of view. Coaſting along this ſhore affords an almoſt endleſs entertainment, every change of poſition preſenting a new ſcene; the rocks hollowed and worn into a variety of forms by the waves, and the trees and ſhrubs burſting from the pores of the ſapleſs ſtone, forced to aſſume the moſt uncouth ſhapes to adapt themſelves to their fantaſtic ſituations. The iſlands are not ſo numerous in this as in the upper lake; but there is one of uncommon beauty, viz. Innisfallen, nearly oppoſite to O'Sullivan's caſcade: It contains 18 Iriſh acres. The coaſt is formed into a variety of bays and promontories, ſkirted and crowned with arbutes, holly, and other ſhrubs and trees; the interior parts are diverſified with hills, and dales, and gentle declivities, on which every tree and ſhrub appears to advantage: the ſoil is rich even to exuberance; and trees of the largeſt ſize incline acroſs the vales, forming natural arches, with ivy entwining in the branches, and hanging in feſtoons of foliage. The promontory of Mucruſs, which divides the upper from the lower lake, is a perfect land of enchantment; there is a road carried through the centre of the promontory, which unfolds all the interior beauties of the place. Amongſt the diſtant mountains, Turk appears an object of magnificence; and Mangerton's loſtier, though leſs intereſting ſummit, rears itſelf above the whole. The paſſage to the upper lake is round the extremity of Mucruſs, which confines it on one ſide, and the approaching mountains on the other. Here is the celebrated rock called the *eagle's neſt*, which produces wonderful echoes. A French horn ſounded here, raiſes a concert ſuperior to 100 inſtruments; and the report of a ſingle cannon is anſwered by a ſucceſſion of peals reſembling the loudeſt thunder, which ſeems to travel the ſurrounding ſcenery, and die away among the diſtant mountains. The upper lake is four miles in length, and from two to three in breadth; and is almoſt ſurrounded by mountains, from which deſcend a number of beautiful caſcades. The iſlands in this lake are numerous, and afford an amazing variety of pictureſque views.—The centre lake, which communicates with the upper, is but ſmall in compariſon with the other two, and cannot boaſt of equal variety. The ſhores, however, are in many places indented with beautiful bays, ſurrounded with dark groves of trees, ſome of which have a moſt pictureſque appearance when viewed from the water. The eaſtern boundary is formed by the baſe of Mangerton, down the ſteep ſide of which deſcends a caſcade viſible for 150 yards: this fall of water is ſupplied by a circular lake near the ſummit of the mountain, called the *Devil's Punch Bowl;* which, on account of its immenſe depth, and the continual overflow of water, is conſidered as one of the greateſt curioſities in Killarney.—Mr Smith ſeems to think, that one of the beſt proſpects this admired lake affords, is from a riſing ground near the ruined cathedral of Aghadoe.

The lake of Killarney is otherwiſe called *Lough Lane*, or *Loch Lean*, from its being ſurrounded by high mountains. Nennius ſays, that theſe lakes were encompaſſed by four circles of mines; the firſt of tin, the ſecond of lead, the third of iron, and the fourth of copper. In the ſeveral mountains adjacent to the lakes are ſtill to be ſeen the veſtiges of the ancient mines of iron, lead, and copper; but tin has not as yet been diſcovered here. Silver and gold are ſaid by the Iriſh antiquaries to have been found in the early ages: but this is ſomewhat doubtful, eſpecially in any conſiderable quantity, though ſome ſilver probably was extracted from the lead ore, and ſmall quantities of gold might have been obtained from the yellow copper ore of Mucruſs. However, in the neighbourhood of theſe lakes were found in the early ages, as well as at preſent, pebbles of ſeveral colours, which taking a beautiful poliſh, the ancient Iriſh wore in their ears, girdles, and different articles of their dreſs and furniture.

KILLAS, a genus of ſtones belonging to the argillaceous claſs, found chiefly in Cornwall in England. Its texture is either lamellar or coarſely granular; the ſpecific gravity from 2630 to 2666. It contains 60 parts of ſiliceous earth, 25 of argillaceous, 9 of magneſia, and 6 of iron. The greeniſh kind contains more iron, and gives a green tincture to the nitrous acid.

KILLICRANKIE, a noted paſs of Perthſhire in Scotland. It is formed by the lofty mountains impending over the water of Garrie, which ruſhes through in a deep, darkſome, and horrid channel, beneath. In the laſt century this was a paſs of much danger and difficulty; a path hanging over a tremendous precipice threatened deſtruction to the leaſt falſe ſtep of the traveller: at preſent a fine road formed by the ſoldiery lent by government, and encouraged by an additional 6d. per day, gives an eaſy acceſs to the remote Highlands; and the two ſides are joined by a fine arch.

Near the north end of this paſs, in its open and unimproved ſtate, was fought in the year 1689 the battle of Killicrankie, between the adherents of James II. under Viſcount Dundee, and of William III. under General Mackay. Dundee's army was very much inferior to that of Mackay's. When he came in ſight of the latter, he found them formed in eight battalions ready for action. They conſiſted of 4500 foot, and two troops of horſe. The Highlanders under Dundee amounted to little more than half that number. Theſe he ranged inſtantly in order of battle. Maclean, with his tribe, formed the right wing. The Macdonalds of Sky, under their chieſtains eldeſt ſon, formed the left. The Camerons, the Macdonald's of Glengary, the followers of Clanronald, and a few Iriſh auxiliaries, were in the centre. A troop of horſe were placed behind under Sir William Wallace. The officers ſent by James from Ireland were diſtributed through all the line. His whole army ſtood in ſight of the enemy for ſeveral hours on the ſteep ſide of a hill, which faced the narrow plain where Mackey had formed his line. Dundee wiſhed for the approach of night; a ſeaſon ſuited for either victory or flight.

At five of the clock in the afternoon, a kind of ſlight ſkirmiſh began between the right wing of the Highlanders and the left of the enemy. But neither army wiſhing to change their ground, the firing was diſcontinued for three hours. Dundee in the mean time flew from tribe to tribe, and animated them to action. At eight of the clock he gave the ſignal for battle, and charged the enemy in perſon at the head of the horſe. The Highlanders in deep columns ruſhed ſuddenly down the hill. They kept their ſhot till they were within a pike's length of the enemy; and having fired their muſkets, fell upon them ſword in hand. Mackay's left wing could not for a moment ſuſtain the ſhock. They were driven by the Macleans with great ſlaughter from the field. The Macdonalds on the left of the Highlanders were not equally ſucceſsful. Colonel Haſtings' regiment of foot ſtood their ground. They even forced the Macdonald's to retreat. Maclean, with a few of his tribe, and Sir Evan Cameron at the head of his clan, fell ſuddenly on the flank of this gallant regiment, and forced them to give way. The ſlaughter ended not with the battle. Two thouſand fell in the field and in the flight. The tents, baggage, artillery, and proviſions of the enemy, and even king William's Dutch ſtandard, which was carried by Mackay's regiment, fell into the hands of the Highlanders. The victory was now complete. But the Highlanders loſt their gallant leader. Perceiving the unexpected reſiſtance of Colonel Haſtings' regiment, and the confuſion of the Macdonald's, Dundee rode rapidly to the left wing. As he was raiſing his arm, and pointing to the Cameron's to advance, he received a ball in his ſide. The wound proved mortal; and with Dundee fell all the hopes of king James at that time.

KILLIGREW (William), eldeſt ſon of Sir Robert Killigrew knight, was born in 1605. He was gentleman-uſher of the privy-chamber to king Charles I. and on the reſtoration to Charles II. When the latter married the princeſs Catharine of Portugal, he was created vice-chamberlain; in which ſtation he continued 22 years, and died in 1693. He was the author of four plays, which, though now thrown aſide, were much applauded by the poets of that time, particularly by Mr Waller; and in the decline of life he publiſhed ſome pious reflections on the inſtability of human happineſs, when our views are not directed to a future ſtate.

Killigrew (Thomas), brother of the former, was born in 1611; and in proceſs of time diſtinguiſhed himſelf by his uncommon natural parts. He was page of honour to king Charles I. and groom of the bed-chamber to Charles II. with whom he ſuffered many years exile; during which he applied his leiſure hours to the ſtudy of poetry, and to the compoſition of ſeveral plays. After the reſtoration he continued in high favour with the king, and had frequently acceſs to him when he was denied to the firſt peers in the realm; and being a man of great wit and livelineſs of parts, and having from his long intimacy with that monarch, and being continually about his perſon during his troubles, acquired a freedom and familiarity with him, which even the pomp of majeſty afterwards could not check in him, he ſometimes, by way of jeſt, which King Charles was ever fond of, if genuine, even though himſelf was the object ot the ſatire, would adventure bold truths which ſcarcely any one beſides would have dared even to hint at. One ſtory in particular is related of him, which if true is a ſtrong proof of the great lengths he would ſometimes proceed in his freedoms of this kind, which is as follows:—When the king's unbounded paſſion for women had given his miſtreſs ſuch an aſcendant over him, that, like the effeminate Perſian monarch, he was much fitter to have handled a diſtaff than to wield a ſceptre, and for the converſation of his concubines utterly neglected the moſt important affairs of ſtate, Mr Killigrew went to pay his majeſty a viſit in his private apartments, habited like a pilgrim who was bent on a long journey. The king, ſurpriſed at the oddity of his appearance, immediately aſked him what was the meaning of it, and whither he was going? "To hell," bluntly replied the wag. "Prithee (ſaid the king), what can your errand be to that place?" "To fetch back Oliver Cromwell (rejoined he), that he may take ſome care of the affairs of England, for his ſucceſſor takes none at all."—Several more ſtories are related of him, which are not barren of humour.—Killigrew died in 1682, and was buried in Weſtminſter-abbey.

Killigrew (Anne), "a Grace for beauty, and a Muſe for wit," as Mr Wood ſays, was the daughter of Dr Henry Killigrew, brother of the two foregoing, and was born a little before the reſtoration. She gave early indications of genius, and became eminent in the arts both of poetry and painting. She drew the duke of York and his ducheſs to whom ſhe was maid of honour, as well as ſeveral other portraits and hiſtory-pieces; and crowned all her other accompliſhments with unblemiſhed virtue and exemplary piety. Mr Dryden ſeems quite laviſh in her praiſe, though Wood aſſures us he has ſaid no more of her than ſhe was equal if not ſuperior to. This amiable young woman died of the ſmall-pox in 1685; and the year after her poems were publiſhed in a thin 4to volume.

KILLILEAGH, a town of Ireland, in the county of Down and province of Ulſter, 80 miles from Dublin; otherwiſe written *Killyleagh*. It is the principal town in the barony of Duffrin; and ſeated on an arm of the lake of Strangford, from which it is ſupplied with a great variety of fiſh. The family of the Hamilton's created firſt Lords Clanbois, and afterwards Earls of Clanbraſſil, had their ſeat and reſidence here in a caſtle ſtanding at the upper end of the great ſtreet; at the lower end of the ſtreet is a little ſafe bay, where ſhips lie ſheltered from all winds; in the town are ſome good houſes, a decent market houſe, a horſe barrack, and a Preſbyterian meeting-houſe. On an eminence a ſmall diſtance from the town is a handſome church built in the form of a croſs. This place ſuffered much in the calamitous year 1641. It is now thriving, and the linen manufacture carried on in it, and fine thread made, for which it has a great demand. It returns two members to parliament, patronage in the Blackwood family; and holds three fairs. The celebrated naturaliſt and eminent phyſician Sir Hans Sloan was born here 16th April 1660. and his father Alexander Sloan was at the head of that colony of Scots which King James I. ſettled in the place. This town was incorporated by that king at the inſtance of the firſt earl of Clanbois.

KILLOUGH (otherwiſe PORT ST ARNE), a port-town of Ireland, ſituated in the county of Down and province of Ulſter, 76 miles from Dublin. It lies north of St John's Point, and has a good quay, where ſhips lie very ſafe. The town is agreeably ſituated; the ſea flowing all along the banks of the houſes, where ſhips ride in full view of the inhabitants. There is here a good church, and a horſe barrack. They have good fiſhing in the bay; but the principal trade of the place conſiſts in the exportation of barley, and the importation of ſuch commodities as are conſumed in the adjacent country. A manufacture of ſalt is alſo carried on with great advantage. The fairs held here are five. At a ſmall diſtance from the town is a charter working-ſchool for the reception of 20 children, which was ſet on foot by the late Mr Juſtice Ward. There is a remarkable well here called *St Scordin's well*, and highly eſteemed for the extraordinary lightneſs of its water. It guſhes out of a high rocky bank, cloſe upon the ſhore, and is obſerved never to diminiſh its quantity in the drieſt ſeaſon. There is alſo a mineral ſpring near the ſchool, the waters of which the inhabitants affirm to be both purgative and emetic. At a ſmall diſtance from the town near the ſea is a rock in which there is an oblong hole, from whence at the ebbing and flowing of the tide a ſtrange noiſe is heard ſomewhat reſembling the ſound of a huntſman's horn. In an open field about a quarter of a mile from the town towards St John's point there is a very curious cave, which has a winding paſſage two feet and an half broad, with three doors in it beſides the entrance, and leading to a circular chamber three yards in diameter, where there is a fine limpid well. The cave is about 27 yards long.

KILLOUGH-Harbour is tolerably ſafe and commodious; a ſmall degree of caution, however, is neceſſary in ſailing into it; for a rock ſtands in the middle of the entrance, covered at half flood, commonly called the *water-rock*. Either to the eaſt or weſt of this rock is a ſecure paſſage, the inlet lying ſouth by eaſt and north by weſt. On the weſt ſide of the rock open to Coney-iſland is a ſtrong quay, and a baſon for ſhips, where they are defended from all winds, within which the harbour on both ſides affords good anchorage for veſſels of 150 tons. At the end of the quay the channel is 400 yards wide. The bay of Killough is formed by Rin-ſad at the Long-point to the eaſt, and St John's-point to the weſt, as the inner harbour is by a peninſula called *Coney-iſle* from the number of rabbits thereon, and not *Cane iſle* as Sir William Petty has it. An impetuous ſea runs on all this coaſt in ſtorms and ſpring tides.

KILLYBEGS, a borough and fair town in the county of Donegal and province of Ulſter, 123 miles from Dublin. It is ſituated on the north ſide of Donegal bay; but is a place of no great trade, though it has a harbour ſpacious enough to contain a large fleet: it has a bold and ample opening to the ſea on the ſouth, and is ſecured within by the ſhelter of high lands ſurrounding it; ſo that veſſels may enter it at any time of the tide, there being from 5 to 8 fathom water. The herring fiſhery is the moſt conſiderable of any carried on here; but the town is likely to increaſe in trade and conſequence. It returns two members to parliament, patronage in the Connyngham family. It has two fairs.

KILMAINHAM, a town of Ireland, ſituated about half a mile from Dublin. It has a ſeſſion-houſe and handſome gaol; and here the quarter ſeſſions are held for the county of Dublin, and knights of the ſhire elected for that county. This place was ſometimes the ſeat of government before Dublin Caſtle was converted to that purpoſe; and though now much decayed, it gives title of baron to the family of Wenman. An ancient priory was founded here, and a houſe for knights hoſpitalers of St John of Jeruſalem.

KILMALLOCK, a town of Ireland, in the county of Limerick and province of Munſter, 16 miles from the city of Limerick, and 107 from Dublin.—This town makes a conſpicuous figure in the military hiſtory of Ireland. In the 16th century it was a populous place; and the remains of the wall, which entirely ſurrounded the town, and of ſeveral large houſes, are ſtill to be ſeen. Edward VI. granted a charter to it with many privileges, as did Queen Elizabeth another, dated 24th April 1514. In 1598, it was inveſted by the Iriſh forces,, when the earl of Ormond haſtened to its relief, and arrived in time to raiſe the ſiege: here was alſo ſome conteſt during the grand rebellion in 1641 and 1642. By an inquiſition 11 Aug. 22 Eliz. it appears that there had been an abbey in Kilmallock called *Flaciſpaghe*; on which a ſtone houſe was erected. In the cathedral church are the remains of a monument erected over the Verdon family, one of whom repreſented this town in parliament in 1613. Kilmallock returns two members to parliament; patron Silver Oliver, Eſq. This place once gave title of viſcount to one of the Sarsfield family.

KILMARNOCK, a populous and flouriſhing town of Ayrſhire in Scotland, noted for its manufacture of carpets, milled hoſiery, and Scotch bonnets. It gave the title of earl to the noble family of Boyd, reſiding in this neighbourhood. This title was forfeited by the late earl, who, by engaging in the rebellion of 1745, was deprived of his honours, and loſt his life on the ſcaffold. His ſon, however, who ſerved in the king's army, afterwards ſucceeded to the earldom of Errol, a title much more ancient and honourable.

KILMORE, a biſhop's ſee in the county of Cavan and province of Ulſter in Ireland. It was called in former ages *Clunes*, or *Clunis*, i. e. the "ſequeſtered place; and is ſituated near Loch Ern. St Fedlimid founded this biſhopric in the ſixth century; it was afterwards removed to an obſcure village called *Triburna;* where it continued until the year 1454, when Andrew Mac Brady biſhop of Triburna erected a church on the ſite of that founded by St Fedlimid, to whoſe memory it was dedicated, and denominated *Kilmore*, or "the great church." At preſent there are neither cathedral, chapter, nor canons, belonging to this ſee; the ſmall pariſh church contiguous to the epiſcopal houſe ſerving for the purpoſe of a cathedral.

KILN, a ſtove uſed in the manufacture of various articles. A fabric formed for admitting heat, in order to dry or burn materials placed in it to undergo ſuch operations.

KILWORTH, a town of Ireland, ſituated in the county of Cork and province of Munſter, 108 miles from Dublin. It is a thriving place, with a good church, at the foot of a large ridge of mountains called *Kilworth mountains*, through which a good turnpike road is carried from Dublin to Cork: below the town runs the river Funcheon, which is well ſtored with ſalmon and trout, and diſcharges itſelf a mile ſouth of this into the Blackwater. Near Kilworth is a good glebe and vicarage houſe. At this place is Moorpark, the ſuperb ſeat of Lord Mountcaſhel; and adjoining to his lordſhip's improvements ſtands the caſtle of Clough-leagh, boldly, ſituated on the river Funcheon, which has ſtood ſeveral ſieges. Six fairs are held here.

KIMBOLTON, a town of Huntingdonſhire, ſeated in a bottom; and noted for the caſtle of Kimbolton, the ſeat of the duke of Mancheſter. W. Long. 0. 15. N. Lat. 52. 18.

KIMCHI (David), a Jewiſh rabbi, famous as a commentator on the Old Teſtament, lived at the cloſe of the 12th and beginning of the 13th centuries. He was a Spaniard by birth, ſon of rabbi Joſeph Kimchi, and brother of rabbi Moſes Kimchi, both men of eminent learning among the Jews: but he exceeded them both, being the beſt Hebrew grammarian the Jews ever had. He wrote a Grammar and Dictionary of that language; out of the former of which Buxtorf made his *Theſaurus linguæ Hebreæ*, and his *Lexicon linguæ Hebreæ* out of the latter. His writings have been held in ſuch eſtimation among the Jews, that no one can arrive at any reputation in letters and theology without ſtudying them.

KINCARDINESHIRE. See MEARNS.

KINDRED, in law, perſons related to one another, whereof the law reckons three degrees or lines, *viz.* the deſcending, aſcending, and collateral line. See CONSANGUINITY and DESCENT.

On there being no kindred in the deſcending line, the inheritance paſſes in the collateral one.

KING, a monarch or potentate who rules ſingly and ſovereignly over a people.—Camden derives the word from the Saxon *cyning*, which ſignifies the ſame; and that from *can* "power," or *ken* "knowledge," wherewith every monarch is ſuppoſed to be inveſted. The Latin *rex*, the Scythian *reix*, the Punic *reſch*, the Spaniſh *rey*, and French *roy*, come all, according to Poſtel, from the Hebrew ראש, *roſch*, "chief, head."

Kings were not known amongſt the Iſraelites till the reign of Saul. Before him they were governed at firſt by elders as in Egypt; then by princes of God's appointment, as Moſes and Joſhua; then by judges till the time of Samuel; and laſt of all by kings. See JUDGES.

Moſt of the Grecian ſtates were governed at firſt by kings, who were choſen by the people to decide differences and execute a power which was limited by laws. They commanded armies, preſided over the worſhip of the Gods, &c. This royalty was generally hereditary; but if the vices of the heir to the crown were odious to the people, or if the oracle had ſo commanded, he was cut off from the right of ſucceſſion; yet the kings were ſuppoſed to hold their ſovereignty by the appointment of Jupiter. The enſign of majeſty was the ſceptre, which was made of wood adorned with ſtuds of gold, and ornamented at the top with ſome figure; commonly that of an eagle, as being the bird of Jove.

Rome alſo was governed at firſt by kings, who were elected by the people, with the approbation of the ſenate and concurrence of the augurs. Their power extended to religion, the revenues, the army, and the adminiſtration of juſtice. The monarchial form of government ſubſiſted 244 years in Rome, under ſeven kings, the laſt of whom was Tarquinius Superbus. See ROME.

Among the Greeks the king of Perſia had anciently the appellation of the *great king;* the king of France had that of the *moſt Chriſtian king;* and the king of Spain has that of *Catholic king*. The king of the Romans is a prince choſen by the emperor, as a coadjutor in the government of the empire.

The kings of England, by the Lateran council, under Pope Julius II. had the title of *Chriſtianiſſimus* conferred on them; and that of *defender of the faith* was added by pope Leo X. though it had been uſed by them ſome time before. The title of *grace* was firſt given to their kings about the time of Henry IV. and that of *majeſty* firſt to Henry VIII. before which time the kings were called *grace*, *highneſs*, &c.—In all public inſtruments and letters, the king ſtyles himſelf *nos* "we;" though till the time of king John he ſpoke in the ſingular number.

The definition of *king* above given, is according to the general acceptation of the term. It will not therefore ſtrictly apply to the ſovereign of Britain; and ſtill leſs of late to that of France, formerly one of the moſt abſolute, now the moſt degraded of princes, without power and without conſequence. In Britain, a happy mean prevails. The power of the king is indeed ſubject to great limitations: but they are the limitations of wiſdom, and the ſources of dignity; being ſo far from diminiſhing his honour, that they add a glory to his crown: For while other kings are abſolute monarchs over innumerable multitudes of ſlaves, the king of Britain has the diſtinguiſhed glory of governing a free people, the leaſt of whom is protected by the laws: he has great prerogatives, and a boundleſs power in doing good; and is at the ſame time only reſtrained from acting inconſiſtently with his own happineſs, and that of his people.

To underſtand the royal rights and authority in Britain,

tain, we muſt conſider the king under ſix diſtinct views. 1. With regard to his title. 2. His royal family. 3. His councils. 4. His duties. 5. His prerogative. 6. His revenue.

I. His title. For this, ſee *Hereditary Right*, and Succession.

II. His Royal family. See *Royal Family*.

III. His councils. See Council.

IV. His duties. By the conſtitution, there are certain duties incumbent on the king; in conſideration of which, his dignity and prerogative are eſtabliſhed by the laws of the land; it being a maxim in the law, that protection and ſubjection are reciprocal. And theſe reciprocal duties are what Sir William Blackſtone apprehends were meant by the convention in 1688, when they declared that king James had broken the original contract between king and people. But however, as the terms of that original contract were in ſome meaſure diſputed, being alleged to exiſt principally in theory, and to be only deducible by reaſon and the rules of natural law, in which deduction different underſtandings might very conſiderably differ; it was, after the revolution, judged proper to declare theſe duties expreſsly, and to reduce that contract to a plain certainty. So that, whatever doubts might be formerly raiſed by weak and ſcrupulous minds about the exiſtence of ſuch an original contract, they muſt now entirely ceaſe; eſpecially with regard to every prince who hath reigned ſince the year 1688.

The principal duty of the king is, To govern his people according to law. *Nec regibus infinita aut libera poteſtas*, was the conſtitution of their German anceſtors on the continent. And this is not only conſonant to the principles of nature, of liberty, of reaſon, and of ſociety; but has always been eſteemed an expreſs part of the common law of England, even when prerogative was at the higheſt. "The king (ſaith Bracton, who wrote under Henry III.) ought not to be ſubject to man; but to God, and to the law: for the law maketh the king. Let the king therefore render to the law, what the law has inveſted in him with regard to others; dominion, and power; for he is not truly king, where will and pleaſure rules, and not the law." And again: "The king hath a ſuperior, namely God; and alſo the law, by which he was made a king." Thus Bracton; and Forteſcue alſo, having firſt well diſtinguiſhed between a monarchy abſolutely and deſpotically regal, which is introduced by conqueſt and violence, and a political or civil monarchy, which ariſes from mutual conſent (of which laſt ſpecies he aſſerts the government of England to be), immediately lays it down as a principle, that "the king of England muſt rule his people according to the decrees of the laws thereof; inſomuch that he is bound by an oath at his coronation to the obſervance and keeping of his own laws." But to obviate all doubts and difficulties concerning this matter, it is expreſsly declared by ſtatute 12 and 13 W. III. c. 2. "that the laws of England are the birthright of the people thereof; and all the kings and queens who ſhall aſcend the throne of this realm ought to adminiſter the government of the ſame according to the ſaid laws, and all their officers and miniſters ought to ſerve them reſpectively according to the ſame: and therefore all the other laws and ſtatutes of this realm, for ſecuring the eſtabliſhed religion, and the rights and liberties of the people thereof, and all other laws and ſtatutes of the ſame now in force, are by his majeſty, by and with the advice and conſent of the lords ſpiritual and temporal, and commons, and by authority of the ſame, ratified and confirmed accordingly."

And as to the terms of the original contract between king and people, theſe, it is apprehended, are now couched in the coronation-oath, which by the ſtatute 1 W. & M. ſt. 1. c. 6. is to be adminiſtered to every king and queen who ſhall ſucceed to the imperial crown of theſe realms, by one of the archbiſhops or biſhops of the realm, in the preſence of all the people; who on their parts do reciprocally take the oath of allegiance to the crown. This coronation-oath is conceived in the following terms:

" *The arch biſhop or biſhop ſhall ſay*, Will you ſolemnly promiſe and ſwear to govern the people of this kingdom of Britain, and the dominions thereto belonging, according to the ſtatutes in parliament agreed, and the laws and cuſtoms of the ſame?—*The king or queen ſhall ſay*, I ſolemnly promiſe ſo to do.

" *Archbiſhop or biſhop.* Will you to your power cauſe law and juſtice, in mercy, to be executed in all your judgments?—*King or queen.* I will.

" *Archbiſhop or biſhop.* Will you to the utmoſt of your power maintain the laws of God, the true profeſſion of the goſpel and the Proteſtant reformed religion eſtabliſhed by the law? And will you preſerve unto the biſhops and clergy of this realm, and to the churches committed to their charge, all ſuch rights and privileges as by law do or ſhall appertain unto them, or any of them?—*King or queen.* All this I promiſe to do.

" *After this the king or queen, laying his or her hand upon the holy goſpel, ſhall ſay*, The things which I have here before promiſed, I will perform and keep: ſo help me God. *And then ſhall kiſs the book.*"

This is the form of the coronation-oath, as it is now preſcribed by the laws; the principal articles of which appear to be at leaſt as ancient as the Mirror of Juſtices, and even as the time of Bracton: but the wording of it was changed at the revolution, becauſe (as the ſtatute alleges) the oath itſelf had been framed in doubtful words and expreſſions, with relation to ancient laws and conſtitutions at this time unknown. However, in what form ſoever it be conceived, this is moſt indiſputably a fundamental and original expreſs contract; though, doubtleſs, the duty of protection is impliedly as much incumbent on the ſovereign before coronation as after: in the ſame manner as allegiance to the king becomes the duty of the ſubject immediately on the deſcent of the crown, before he has taken the oath of allegiance, or whether he ever takes it at all. This reciprocal duty of the ſubject will be conſidered in its proper place. At preſent we are only to obſerve, that in the king's part of this original contract are expreſſed all the duties which a monarch can owe to his people, viz. to govern according to law; to execute judgment in mercy; and to maintain the eſtabliſhed religion. And with reſpect to the latter of theſe three branches, we may farther remark, that by the act of union, 5 Ann. c. 8. two preceding ſtatutes are recited and confirmed; the one of the parliament of Scotland, the other of the parliament of England: which enact; the former, that every king at his acceſſion ſhall take and ſubſcribe an oath, to preſerve the Proteſtant religion, and preſbyterian church-government in Scotland; the latter, that at his coronation he ſhall take and ſubſcribe a ſimilar oath, to preſerve the ſettlement of the church of England within England, Ireland, Wales, and Berwick, and the territories thereunto belonging.

V. His prerogative. See PREROGATIVE.

VI. His revenue. See REVENUE.

Having in the preceding articles chalked out all the principal outlines of this vaſt title of the law, the ſupreme executive magiſtrate, or the king's majeſty, conſidered in his ſeveral capacities and points of view; it may not be improper to take a ſhort comparative review of the power of the executive magiſtrate, or prerogative of the crown, as it ſtood in former days, and as it ſtands at preſent. And we cannot but obſerve, that moſt of the laws for aſcertaining, limiting, and reſtraining this prerogative, have been made within the compaſs of little more than a century paſt; from the petition of right in 3 Car. I. to the preſent time. So that the powers of the crown are now to all appearance greatly curtailed and diminiſhed ſince the reign of king James I. particularly by the abolition of the ſtar-chamber and high-commiſſion courts in the reign of Charles I. and by the diſclaiming of martial law, and the power of levying taxes on the ſubject, by the ſame prince: by the diſuſe of foreſt laws for a century paſt: and by the many excellent proviſions enacted under Charles II.; eſpecially the abolition of military tenures, purveyance, and pre-emption; the *habeas corpus* act; and the act to prevent the diſcontinuance of parliaments for above three years: and ſince the revolution, by the ſtrong and emphatical words in which their liberties are aſſerted in the bill of rights, and act of ſettlement; by the act for triennial, ſince turned into ſeptennial elections; by the excluſion of certain officers from the houſe of commons; by rendering the ſeats of the judges permanent, and their ſalaries independent: and by reſtraining the king's pardon from obſtructing parliamentary impeachments. Beſides all this, if we conſider how the crown is impoveriſhed and ſtripped of all its ancient revenues, ſo that it greatly depends on the liberality of parliament for its neceſſary ſupport and maintenance, we may perhaps be led to think that the balance is inclined pretty ſtrongly to the popular ſcale, and that the executive magiſtrate has neither independence nor power enough left, to form that check upon the lords and commons which the founders of the conſtitution intended.

But, on the other hand, it is to be conſidered, that every prince, in the firſt parliament after his acceſſion, has by long uſage a truly royal addition to his hereditary revenue ſettled upon him for his life; and has never any occaſion to apply to parliament for ſupplies, but upon ſome public neceſſity of the whole realm. This reſtores to him that conſtitutional independence, which at his firſt acceſſion ſeems, it muſt be owned, to be wanting. And then with regard to power, we may find perhaps that the hands of government are at leaſt ſufficiently ſtrengthened; and that a Britiſh monarch is now in no danger of being overborne by either the nobility or the people. The inſtruments of power are not perhaps ſo open and avowed as they formerly were, and therefore are the leſs liable to jealous and invidious reflections; but they are not the weaker upon that account. In ſhort, the national debt and taxes (beſides the inconveniences before mentioned), have alſo in their natural conſequences thrown ſuch a weight of power into the executive ſcale of government, as we cannot think was intended by their patriotic anceſtors; who glorioully ſtruggled for the abolition of the then formidable parts of the prerogative, and by an unaccountable want of foreſight eſtabliſhed this ſyſtem in their ſtead. The entire collection and management of ſo vaſt a revenue, being placed in the hands of the crown, have given riſe to ſuch a number of new officers, created by and removeable at the royal pleaſure, that they have extended the influence of government to every corner of the nation. Witneſs the commiſſioners, and the multitude of dependents on the cuſtoms, in every port of the kingdom; the commiſſioners of exciſe, and their numerous ſubalterns, in every inland diſtrict; the poſt maſters and their ſervants, planted in every town, and upon every public road; the commiſſioners of the ſtamps, and their diſtributors, which are fully as ſcattered and fully as numerous; the officers of the ſalt duty, which, though a ſpecies of exciſe, and conducted in the ſame manner, are yet made a diſtinct corps from the ordinary managers of that revenue; the ſurveyors of houſes and windows; the receivers of the land-tax; the managers of lotteries; and the commiſſioners of hackney-coaches; all which are either mediately or immediately appointed by the crown, and removeable at pleaſure without any reaſon aſſigned: theſe, it requires but little penetration to ſee, muſt give that power, on which they depend for ſubſiſtence, an influence moſt amazingly extenſive. To this may be added the frequent opportunities of conferring particular obligations, by preference in loans, ſubſcriptions, tickets, remittances, and other money-tranſactions, which will greatly increaſe this influence; and that over thoſe perſons whoſe attachment, on account of their wealth, is frequently the moſt deſirable. All this is the natural, though perhaps the unforeſeen, conſequence of erecting their funds of credit, and, to ſupport them, eſtabliſhing perpetual taxes: the whole of which is entirely new ſince the reſtoration in 1660; and by far the greateſt part ſince the revolution in 1688. And the ſame may be ſaid with regard to the officers in their numerous army, and, the places which the army has created. All which put together give the executive power ſo perſuaſive an energy with reſpect to the perſons themſelves, and ſo prevailing an intereſt with their friends and families, as will amply make amends for the loſs of external prerogative.

But though this profuſion of officers ſhould have no effect on individuals, there is ſtill another newly acquired branch of power; and that is, not the influence only, but the force of a diſciplined army: paid indeed ultimately by the people, but immediately by the crown; raiſed by the crown, officered by the crown, commanded by the crown. They are kept on foot, it is true, only from year to year, and that by the power of parliament: but during that year, they muſt by the nature of the conſtitution, if raiſed at all, be at the abſolute diſpoſal of the crown. And there need but few words to demonſtrate how great a truſt is thereby repoſed in the prince by his people: A truſt that is more than equivalent to a thouſand little troubleſome prerogatives.

Add to all this, that beſides the civil liſt, the immenſe revenue of almoſt ſeven millions ſterling, which is annually paid to the creditors of the public, or carried to the ſinking fund, is firſt depoſited in the royal exchequer, and thence iſſued out to the reſpective offices of payment. This revenue the people can never refuſe to raiſe, becauſe it is made perpetual by act of parliament; which alſo, when well conſidered, will appear to be a truſt of great delicacy and high importance.

Upon the whole, therefore, it ſeems clear, that whatever may have become of the *nominal*, the real power of the crown has not been too far weakened by any tranſactions in the laſt century. Much is indeed given up; but much is alſo acquired. The ſtern commands of prerogative have yielded to the milder voice of influence: the ſlaviſh and exploded doctrine of non reſiſtance has given way to a military eſtabliſhment by law; and to the diſuſe of parliaments has ſucceeded a parliamentary truſt of an immenſe perpetual revenue. When, indeed, by the free operation of the ſinking fund, the national debts ſhall be leſſened; when the poſture of foreign affairs, and the univerſal introduction of a well planned and national militia, will ſuffer the formidable army to be thinned and regulated; and when (in conſequence of all) the taxes ſhall be gradually reduced; this adventitious power of the crown will ſlowly and imperceptibly diminiſh, as it ſlowly and imperceptibly roſe. But till that ſhall happen, it will be the eſpecial duty, of good ſubjects and good Engliſhmen, to reverence the crown, and yet guard againſt corrupt and ſervile influences from thoſe who are intruſted with its authority; to be loyal, yet free; obedient, and yet independent; and above every thing, to hope that they may long, very long, continue to be governed by a ſovereign, who, in all thoſe public acts that have perſonally proceeded from himſelf, hath manifeſted the higheſt veneration for the free conſtitution of Britain; hath already in more than one inſtance remarkably ſtrengthened its outworks; and will therefore never harbour a thought, or adopt a perſuaſion, in any the remoteſt degree detrimental to public liberty.

King *at Arms*, or *of Arms*, is an officer of great antiquity, and anciently of great authority, whoſe buſineſs is to direct the heralds, preſide at their chapters, and have the juriſdiction of armoury.

In England there are three kings of arms, viz. garter, clarencieux, and norroy.

Garter, principal King *at Arms*, was inſtituted by Henry V. His buſineſs is to attend the knights of the garter at their aſſemblies, to marſhal the ſolemnities at the funerals of the higheſt nobility, and to carry the garter to kings and princes beyond the ſea; on which occaſion he uſed to be joined in commiſſion with ſome principal peer of the kingdom. See Garter.

Clarencieux King *at Arms*, is ſo called from the duke of Clarence, to whom he firſt belonged. His office is to marſhal and diſpoſe the funerals of all the inferior nobility, as baronets, knights, eſquires, and gentlemen, on the ſouth ſide of the Trent. See Clarencieux.

Norroy King *at Arms*, is to do the ſame on the north ſide of the river Trent.

Theſe two laſt are alſo called *provincial heralds*, in regard they divide the kingdom between them into provinces. By charter, they have power to viſit noblemens families, to ſet down their pedigrees, diſtinguiſh their arms, appoint perſons their arms, and with garter to direct the other heralds.

Anciently the kings at arms were created and ſolemnly crowned by the kings of England themſelves; but of later days, the earl marſhal has a ſpecial commiſſion at every creation to perſonate the king.

Lyon King *at Arms*, for Scotland, is the ſecond king at arms for Great Britain; he is inveſted and crowned with great ſolemnity. To him belongs the publiſhing the king's proclamations, marſhalling funerals, reverſing arms, &c. See Lyon.

King (Dr John), a learned Engliſh biſhop in the 17th century, bred at Weſtminſter-ſchool, and afterward at Chriſt-church Oxford. He was appointed chaplain to queen Elizabeth. In 1605 he was made dean of Chriſt-church, and was for ſeveral years vice-chancellor of Oxford. In 1611 he was advanced to the biſhopric of London. Beſides his *Lectures upon Jonah*, delivered at York, he publiſhed ſeveral ſermons. King James I. uſed to ſtyle him *the king of preachers;* and lord chief juſtice Coke often declared, that *he was the beſt ſpeaker in the ſtar-chamber in his time.* He was ſo conſtant in preaching after he was a biſhop, that, unleſs he was hindered by want of health, he omitted no Sunday whereon he did not viſit ſome pulpit in London or near it. Soon after his death, the Papiſts reported, that he died a member of their church. But the falſity of this ſtory was ſufficiently expoſed by his ſon Mr Henry King, in a ſermon at St Paul's croſs ſoon after; by biſhop Godwin in the *Appendix* to his *Commentarius de præſulibus Angliæ*, printed in 1622: and by Mr John Gee, in his book, intitled, *The foot out of the ſnare.*

King (Dr Henry), biſhop of Chicheſter, eldeſt ſon of the former, was born in 1591, and educated at Oxford. He became an eminent preacher, and chaplain to king James I. and Charles I. In 1638 he was made dean of Rocheſter; and in 1641 was advanced to the ſee of Chicheſter. Upon the breaking out of the civil wars, and the diſſolution of epiſcopacy, he was treated with great ſeverity by the friends to the parliament; but recovered his biſhopric at the reſtoration. This worthy prelate, who had a moſt amiable character, died in 1669; and was interred at his cathedral of Chicheſter, where a monument was erected to his memory. He publiſhed, 1. The pſalms of David turned into metre. 2. Poems, elegies, parodoxes, and ſonnets. 3. Several ſermons, and other works.

King (Dr William), a facetious Engliſh writer in the beginning of the 18th century, was well deſcended, being allied to the noble families of Clarendon and Rocheſter. He was elected a ſtudent of Chriſt-church from Weſtminſter-ſchool in 1681, aged 18. He afterward entered upon the law line, and took the degree of doctor of civil law. He ſoon acquired a conſiderable reputation as a civilian, and was in great practice.

tice. He attended the earl of Pembroke, lord lieutenant of Ireland, into that kingdom, where he was appointed judge advocate, ſole commiſſioner of the prizes, keeper of the records, vicar-general to the lord primate of Ireland; was countenanced by perſons of the higheſt rank, and might have made a fortune. But ſo far was he from heaping up riches, that he returned to England with no other treaſure than a few merry poems and humorous eſſays, and retired to his ſtudents place at Chriſt-church. He died on Chriſtmas-day in 1712, and was interred in the Cloiſters of Weſtminſter-abbey. His writings are pretty numerous. The principal are, 1. *Animadverſions on a pretended account of Denmark*, wrote by Mr Moleſworth, afterwards lord Moleſworth. The writing of theſe procured Dr King the place of ſecretary to princeſs Anne of Denmark. 2. Dialogues of the dead. 3. The art of love, in imitation of Ovid *De arte amandi*. 4. A volume of poems. 5. Uſeful tranſactions. 6. An hiſtorical account of the heathen gods and heroes. 7. Several tranſlations.—As to the character of Dr King, he naturally hated buſineſs, eſpecially that of an advocate; but made an excellent judge when appointed one of the court of delegates. His chief pleaſure conſiſted in trifles; and he was never happier than when he thought he was hid from the world. Yet he loved company, provided they were ſuch as tallied with his humour. He would ſay a great many ill-natured things, but never do one. He was made up of tenderneſs and pity, and tears would fall from him on the ſmalleſt occaſion. His education had been ſtrict, and he was naturally of a religious diſpoſition.

King (Dr William), archbiſhop of Dublin in the 18th century, was deſcended from an ancient family in the north of Scotland, but born in the county of Antrim in the north of Ireland. In 1674 he went into prieſts orders. In 1679 he was promoted by his patron, Dr Parker, archbiſhop of Dublin, to the chancellorſhip of St Patrick. In 1687 Peter Manby, dean of Londonderry, having publiſhed at London, in 4to, a pamphlet intitled *Conſiderations which obliged* Peter Manby *dean of Londonderry to embrace the Catholic religion*, our author immediately wrote an anſwer. Mr Manby, encouraged by the court, and aſſiſted by the moſt learned champions of the church of Rome, publiſhed a reply under this title, *A reformed catechiſm, in two dialogues concerning the Engliſh reformation*, &c. *in reply to Mr King's anſwer*, &c. Our author ſoon rejoined in *A vindication of the anſwer*. Mr Manby dropped the controverſy; but diſperſed a looſe ſheet of paper, artfully written, with this title, *A letter to a friend, ſhowing the vanity of this opinion, that every man's ſenſe and reaſon are to guide him in matters of faith*. This Dr King refuted in *A vindication of the Chriſtian religion and reformation, againſt the attempts of a letter*, &c. In 1689 he was twice confined in the tower by order of king James II. and the ſame year commenced doctor of divinity. In 1690, upon king James's retreat to France after the battle at the Boyne, he was advanced to the ſee of Derry. In 1692 he publiſhed at London in 4to, *The ſtate of the Proteſtants of Ireland under the late king James's government*, &c. "A hiſtory (ſays biſhop Burnet), as truly as it is finely written." He had by him at his death atteſted vouchers of every particular fact alleged in this book, which are now in the hands of his relations. However, it was ſoon attacked by Mr Charles Leſly. In 1693 our author finding the great number of Proteſtant diſſenters, in his dioceſe of Derry, increaſed by a vaſt addition of colonies from Scotland, in order to perſuade them to conformity to the eſtabliſhed church, publiſhed *A diſcourſe concerning the inventions of men in the worſhip of God*. Mr Joſeph Boyſe, a diſſenting miniſter, wrote an anſwer. The biſhop anſwered Mr Boyſe. The latter replied. The biſhop rejoined. In 1702 he publiſhed at Dublin, in 4to. his celebrated treatiſe *De origine mali*. Mr Edmund Law, M. A. fellow of Chriſt's-college in Cambridge, afterward publiſhed a complete tranſlation of this, with very valuable notes, in 4to. In the ſecond edition he has inſerted, by way of notes, a large collection of the author's papers on the ſame ſubject, which he had received from his relations after the publication of the former edition. Our author in this excellent treatiſe has many curious obſervations. He aſſerts and proves that there is more moral good in the earth than moral evil. A ſermon by our author, preached at Dublin in 1709, was publiſhed under the title of *Divine predeſtination and foreknowledge conſiſtent with the freedom of man's will*. This was attacked by Anthony Collins, Eſq; in a pamphlet intitled, "*A vindication of the divine attributes*; in ſome remarks on the archbiſhop of Dublin's ſermon intitled, *Divine predeſtination*, &c." He publiſhed likewiſe, *A diſcourſe concerning the conſecration of churches; ſhowing what is meant by dedicating them, with the grounds of that office*. He died in 1720.

King (Dr William), late principal of St Mary's hall, Oxford, ſon of the reverend Peregrine King, was born at Stepney in Middleſex, in the year 1685. He was made doctor of laws in 1715, was ſecretary to the duke of Ormond, and earl of Arran, as chancellors of the univerſity; and was made principal of St Mary's hall on the death of Dr Hudſon in 1719. When he ſtood candidate for member of parliament for the univerſity, he reſigned his office of ſecretary, but enjoyed his other preferment, and it was all he did enjoy to the time of his death. Dr Clark, who oppoſed him, carried the election; and after this diſappointment, he in the year 1727 went over to Ireland, where he is ſaid to have written an epic poem, called *The Toaſt*, which was a political ſatire, printed and given away to his friends, but never ſold. On the dedication of Dr Radcliff's library in 1749, he ſpoke a Latin oration in the theatre at Oxford, which was received with the higheſt acclamations; but it was otherwiſe when printed, he being attacked in ſeveral pamphlets on account of it. Again, at the memorable conteſted election in Oxfordſhire 1755, his attachment to the old intereſt drew on him the reſentment of the new, and he was libelled in newſpapers and pamphlets, againſt which he defended himſelf in an *Apology*, and warmly retaliated on his adverſaries. He wrote ſeveral other things, and died in 1762. He was a polite ſcholar, an excellent orator, an elegant and eaſy writer, and eſteemed by the firſt men of his time for his learning and wit.

King (Peter), lord high chancellor of Great Britain, was deſcended of a good family of that name in Somerſetſhire, and ſon to an eminent grocer and ſalter in the city of Exeter in Devonſhire. He was born at Exeter in 1669, and bred up for ſome years to his father's buſineſs; but his inclination to learning was ſo ſtrong, that he laid out all the money he could ſpare in books, and devoted every moment of his leiſure hours to ſtudy: ſo that he became an excellent ſcholar before the world ſuſpected any ſuch thing; and gave the public a proof of his ſkill in church hiſtory, in his *Inquiry into the conſtitution, diſcipline, unity, and worſhip of the primitive church, that flouriſhed within the firſt 300 years after Chriſt*, London, 1691, in 8vo. This was written with a view to promote the ſcheme of a comprehenſion of the diſſenters. He afterwards publiſhed the ſecond part of the *Inquiry into the conſtitution*, &c.; and having deſired, in his preface, to be ſhown, either publicly or privately, any miſtakes he might have made, that requeſt was firſt complied with by Mr Edmund Elys; between whom and our author there paſſed ſeveral letters upon the ſubject, in 1692, which were publiſhed by Mr Elys in 1694, 8vo, under the title of *Letters on ſeveral ſubjects*. But the moſt formal and elaborate anſwer to the *Inquiry* appeared afterwards, in a work intitled, *Original draught of the primitive church*.

His acquaintance with Mr Locke, to whom he was related, and who left him half his library at his death, was of great advantage to him: by his advice, after he had ſtudied ſome time in Holland, he applied himſelf to the ſtudy of the law; in which profeſſion his learning and diligence made him ſoon taken notice of. In the two laſt parliaments during the reign of King William, and in five parliaments during the reign of Queen Anne, he ſerved as burgeſs for Beer-Alſton in Devonſhire. In 1702, he publiſhed at London, in 8vo, without his name, his *Hiſtory of the apoſtle's creed*, with critical obſervations on its ſeveral articles; which is highly eſteemed. In 1708, he was choſen recorder of the city of London; and in 1710, was one of the members of the houſe of commons at the trial of Dr Sacheverell. In 1714, he was appointed lord chief juſtice of the common-pleas; and the April following, was made one of the privy-council. In 1715, he was created a peer, by the title of *Lord King, baron of Ockham in Surry*, and appointed lord high chancellor of Great Britain; in which poſt he continued till 1733, when he reſigned; and in 1734 died at Ockham in Surry.

King's-Bench. See BENCH (*Kings*).

King-Bird. See PARADISEA.

King's-Fiſher. See ALCEDO.

Books of KINGS, two canonical books of the Old Teſtament, ſo called, becauſe they contain the hiſtory of the kings of Iſrael and Judah from the beginning of the reign of Solomon down to the Babyloniſh captivity, for the ſpace of near 600 years. The firſt book of kings contains the latter part of the life of David, and his death; the flouriſhing ſtate of the Iſraelites under Solomon, his building and dedicating the temple of Jeruſalem, his ſhameful defection from the true religion, and the ſudden decay of the Jewiſh nation after his death, when it was divided into two kingdoms: the reſt of the book is taken up in relating the acts of four kings of Judah and eight of Iſrael. The ſecond book, which is a continuation of the ſame hiſtory, is a relation of the memorable acts of 16 kings of Judah, and 12 of Iſrael, and the end of both kingdoms, by the carrying of the 10 tribes captive into Aſſyria by Salmanaſſar, and the other two into Babylon by Nebuchadnezzar.

It is probable that theſe books were compoſed by Ezra, who extracted them out of the public records, which were kept of what paſſed in that nation.

King's-County, a county of the province of Leinſter in Ireland, taking its name from king Philip of Spain, huſband to queen Mary. It is bounded on the north by Weſt Meath; on the ſouth by Tipperary and Queen's-county, from which it is divided by the Barrow; and part of Tapperary and Galway on the weſt, from which it is ſeparated by the Shannon. It is a fine fruitful country, containing 257,510 Iriſh plantation acres, 56 pariſhes, 11 baronies, and two boroughs, and returns ſix members to parliament. It is about 47 miles long and 17 broad, and the chief town is Phillipſtown.

King's Evil, or *Scrophula*. See MEDICINE-*Index*.

KING-TE-TCHING, a famous village belonging to the diſtrict of Jao-tcheou-fou, a city of China in the province of Kiang-ſi. This village, in which are collected the beſt workmen in porcelain, is as populous as the largeſt cities of China. It is reckoned to contain a million of inhabitants, who conſume every day more than ten thouſand loads of rice. It extends a league and a half along the banks of a beautiful river, and is not a collection of ſtraggling houſes intermixed with ſpots of ground; on the contrary, the people complain that the buildings are too crowded, and that the long ſtreets which they form are too narrow: thoſe who paſs through them imagine themſelves tranſported into the midſt of a fair, where nothing is heard around but the noiſe of porters calling out to make way. Proviſions are dear here, becauſe every thing conſumed is brought from remote places; even wood, ſo neceſſary for their furnaces, is actually tranſported from the diſtance of an hundred leagues. This village, notwithſtanding the high price of proviſions, is an aſylum for a great number of poor families, who could not ſubſiſt any where elſe. Children and invalids find employment here, and even the blind gain a livelihood by pounding colours. The river in this place forms a kind of harbour about a league in circumference: two or three rows of barks placed in a line ſometimes border the whole extent of this vaſt baſon.

KINGDOM, the territories or extent of country ſubject to a king.

KINGDOMS, in natural hiſtory. Moſt naturaliſts and chemiſts divide all natural bodies into three great claſſes, which they call *kingdoms*. Theſe are the *mineral*, the *vegetable*, and the *animal* kingdoms.

This great and firſt diviſion is founded on this conſideration, that any plant or vegetable which is produced, which grows, which is organiſed, which contains a ſeed, and which produces its like, ſeems to be a being very diſtinct and different from a ſtone or a metal, in which we at moſt obſerve only a regular arrangement of parts, but not a true organization, and which contains no ſeed by which it is capable of reproduction; and another foundation of this diviſion is, that an animal differs no leſs from a ſingle plant, by ſenſation, by the uſe of its ſenſes, and by the power of voluntary motion which it poſſeſſes, while theſe qualities do not belong to any thing which is merely vegetable.

But notwithſtanding theſe ſo diſtinctive marks, philoſophers pretend, that this diviſion of natural bodies into claſſes is only ideal. They affirm, that, by obſerving nature attentively, we may perceive, that all her productions are connected together by an uninterrupted chain; and that by ſurveying the ſeveral beings, we muſt be convinced, that any one being differs very little from ſome other two between which it ſeems to be placed; ſo that we may deſcend from the moſt perfect animal to the rudeſt mineral by inſenſible degrees, and without finding any interval from which a diviſion might be made. The opinions of naturaliſts are therefore divided upon this ſubject; and each opinion ſeems to be founded upon obſervations, analogies, and reaſonings, more or leſs concluſive.

If we avoid inveſtigating extremes, however, the diſtinctive marks muſt be acknowledged ſufficiently obvious to juſtify the triple diviſion abovementioned, and to diſcriminate the individuals of each.

For a general view of the operations or conduct of nature in thoſe her three kingdoms, ſee the article NATURE. For a particular conſideration of them—(in the animal kingdom), ſee ZOOLOGY, ANIMAL, BRUTE, BIRD, ORNITHOLOGY, INSECT, ENTOMOLOGY, ICHTHYOLOGY, FISH, *COMPARATIVE Anatomy*, and the different animals under their reſpective names;—(in the vegetable kingdom), BOTANY, PLANT, AGRICULTURE, VEGETATION, DEFOLIATION, FRONDESCENTIA, GEMMATIO, FRUIT, LEAF, GERMINATION, &c. and the different plants under their reſpective names;—(in the mineral kingdom), MINERALOGY, METALLURGY, and the different ſtones and metals under their reſpective names.

In what remains of this article we ſhall conſider natural bodies only in a chemical view; that is to ſay, relatively to the ſeveral principles which we obtain in the analyſis of thoſe bodies. In the decompoſition of all beings truly living, organiſed, and containing within themſelves a ſeed by which they may be reproduced, ſuch as vegetables and animals, we always obtain an inflammable, fat, or oily ſubſtance; and on the contrary, we do not find the ſmalleſt trace of this principle in any ſubſtance purely mineral, not even in ſulphur, which is the moſt inflammable of all theſe ſubſtances. On the other ſide, if we carefully examine and compare with each other the analogous principles obtained from the three kingdoms; ſuch as the ſaline ſubſtances obtained in the analyſis of animals, vegetables, and minerals; we ſhall eaſily perceive, that all the ſaline matter which comes from the vegetable or animal kingdoms is altered by oil, while all the ſaline matter which comes from the mineral kingdom is entirely free from oil.

We ought to obſerve here, that becauſe any matter is found in one or more individuals of any kingdom, we muſt not therefore conclude, that it belongs to the kingdom of ſuch individuals; for we may be convinced, from a ſlight obſervation of nature, that by a thouſand combinations, and particular circumſtances, ſubſtances of quite different claſſes or kingdoms are daily found mixed and confounded together. Thus, for example, within the earth, and even at great depths, that is, in the region appropriated to minerals, ſometimes ſubſtances are found evidently oily, ſuch as all bitumens: but we at the ſame time can prove, and all the obſervations of natural hiſtory prove, that theſe oily ſubſtances are only accidentally within the earth, and that they proceed from the vegetable or animal bodies which have been buried in the earth by ſome of thoſe great revolutions which have happened from time to time upon the ſurface of our globe. Alſo in decompoſing ſeveral vegetables and animals, ſalts are obtained; ſuch as common ſalt, Glauber's ſalt, and others, which contain nothing oily, and which are conſequently matters evidently mineral. But, on the other ſide, we are certain that theſe mineral ſalts are extraneous to the animals and vegetables in which they are found; that they are only introduced into theſe living bodies, becauſe they happen to be mixed with the matters which have been applied to them as aliments, and that they ought not to be numbered amongſt their principles. The proof of this is, that not only the quantity of theſe mineral ſalts is not uniform in animals and vegetables; but alſo, that not a particle of ſuch ſalts is contained in ſome plants and animals equally ſtrong and healthy, and of the ſame ſpecies as thoſe in which theſe ſalts have generally been obſerved.

In the ſecond place, we obſerve, that oils do only exiſt in the proximate principles of vegetables and animals; that is, in thoſe of their principles which enter immediately into their compoſition, when thoſe principles have not been altered by further decompoſitions, and conſequently when they ſtill preſerve their animal or vegetable character; for by a natural putrefaction continued during a long time, or by chemical operations, not only the materials of which animal and vegetable bodies are formed may be deprived entirely of oil, but alſo this oil may itſelf be entirely deſtroyed or decompoſed. Theſe ſubſtances in that ſtate contain nothing by which they can be diſtinguiſhed from minerals. The earths, for example, of vegetables and animals, when they are deprived, by a ſufficient calcination of all inflammable matter, have been thought to become entirely ſimilar to the calcareous and argillaceous earths found within the globe, and which may be conſidered as mineral ſubſtances, although probably they have been formerly a part of animal and vegetable bodies. See BONES.

Hence we conclude, that, when we conſider natural bodies in a chemical view, we ought to divide them into two great claſſes. The firſt claſs is of ſubſtances inanimate, unorganized, and the principles of which have a degree of ſimplicity which is eſſential to them: theſe are minerals. The other claſs contains all thoſe bodies which not only have been diſtinctly organiſed, but which alſo contain an oily matter, which is no where to be found in ſubſtances which have not made part of animate bodies, and which, by combining with all the other principles of theſe animate bodies, diſtinguiſhes theſe principles from thoſe of minerals by a leſs degree of ſimplicity. This ſecond claſs contains vegetables and animals. We ought alſo to remark, that the oil contained in vegetable and animal ſubſtances, renders them ſuſceptible of fermentation properly ſo called, which cannot by any means take place in any mineral.

We ſhall now proceed to examine, if, by comparing the principles obtained in the decompoſition of vegetables with thoſe obtained in the decompoſition of animals, we can find ſome eſſential character by which theſe two kingdoms may be chemically diſtinguiſhed, in the ſame manner as we have ſeen that both of them may be diſtinguiſhed from minerals. From experiments we indeed learn, that the principles of vegetables differ evidently enough from thoſe of animals; that in general the ſaline principles of the former are acid, and are transformable in great meaſure into fixed alkali by incineration, while the principles of the latter are volatile alkalis, or eaſily changeable into theſe; that vegetables are much farther removed from putrefaction than animals; laſtly, that oils truly animal have a character different from vegetable oils, and are in general more attennuated, or at leaſt more diſpoſed to be attenuated and volatiliſed. But we muſt at the ſame time confeſs, that theſe differences are not clear and deciſive, like thoſe betwixt theſe two kingdoms and the mineral kingdom: for we do not find any eſſential principle, either in animals or in vegetables, which is not alſo to be found in the other. In ſome plants, chiefly the cruciform, as much volatile alkali, as little fixed alkali, and as much diſpoſition to putrify, are found as in animal-matters: and thence we conclude, that if theſe two great claſſes of natural bodies differ chemically from each other, this difference proceeds only from the quantities or proportions of their ſeveral principles and properties, and not from any thing diſtinct and peculiar; nor is it ſimilar to the manner in which both vegetable and animal ſubſtances differ from minerals, namely, by containing an oil, and poſſeſſing a fermentable quality. Beſides the degrees of the chemical differences betwixt theſe three great claſſes of natural bodies are found to be the ſame, in whatever manner we conſider them or compare them together. See CHEMISTRY, *paſſim*.

KINGHORN, a parliament town in the county of Fife in Scotland, on the Frith of Forth, directly oppoſite to Leith. Here is a manufacture of thread-ſtockings knit by the women; the men, being chiefly mariners, are employed in coaſting ſhips, in the fiſhery, or the paſſage boats from hence to Leith, from which the town of Kinghorn derives conſiderable advantage. This place gives a ſecond title to the earl of Strathmore.

KINGSBRIDGE, a town of Devonſhire, 217 miles from London. It is a pretty place, with a harbour for boats, a free ſchool, a market, and a fair. This is a chapel of eaſe to Cheſton, and has a bridge over the Salcomb to Dodbrook.

KINGSCLERE, a pleaſant town of Hampſhire in England, ſituated on the Oxford road from Baſingſtoke. It is 56 miles from London, and was once the ſeat of the Saxon kings. It has a market and two fairs.

KINGSFERRY, in Kent, England, the common way from the main land into the iſle of Shepey; where a cable of about 140 fathom in length, faſtened at each end acroſs the water, ſerves to get the boat over by hand. For the maintenance of this ferry and keeping up the highway leading to it through the marſhes for above one mile in length, and for ſupporting a wall againſt the ſea, the land-occupiers tax themſelves yearly one penny *per* acre for freſh marſh-land, and one penny for every 10 acres of ſalt marſh-land. Here is a houſe for the ferry-keeper, who is obliged to tow all travellers over free, except on theſe four days viz. Palm-Monday, Whit-Monday, St James's-day, and Michaelmas-day, when a horſeman pays two-pence and a footman one penny. But on Sunday, or after eight o'clock at night, the ferry keeper demands ſix-pence of every horſeman, and two-pence of every footman, whether ſtrangers or the land-occupiers.

KINGSTON UPON THAMES, a town of Surry in England, ſituated 13 miles from London. It takes its name from having been the reſidence of many of the Saxon kings, ſome of whom were crowned here on a ſtage in the market-place. It has a wooden bridge of 20 arches over the Thames, which is navigable here by barges. There is another bridge here of brick, over a ſtream that comes from a ſpring in a cellar four miles above the town, and forms ſuch a brook as to drive two mills not above a bow-ſhot from it and from each other. It is generally the place for the ſummer-aſſizes of this county, there being a gallows on the top of the hill that overlooks it. It is a populous, trading, well-built town, and in the reigns of King Edward II. and III. ſent members to parliament. It has a free-ſchool; an alms houſe built in 1670 for ſix men and ſix women, and endowed with lands to the value of 80l. a year; and a charity ſchool for 30 boys, who are all clothed. Here is a ſpacious church with eight bells, adjoining to which, on the north ſide, was formerly a chapel dedicated to St Mary, in which were the pictures of three of the Saxon kings that were crowned here, and alſo that of King John, who gave the inhabitants of this town their firſt charter of incorporation. But theſe were all deſtroyed by the fall of this chapel in 1730. Here is a good market for corn, &c. and three fairs.

KINGSTON upon Hull, a town in the eaſt riding of Yorkſhire, 173 miles from London. Its common name is ſimply *Hull*. It is ſituated at the conflux of the rivers Hull and Humber, and near the place where the latter opens into the German Ocean. It lies ſo low, that by cutting the banks of the Humber the country may be laid under water for five miles round. Towards the land it is defended by a wall and a ditch, with the farther fortification of a caſtle, a citadel, and a block houſe. A dock was begun here, but after great expence left unfiniſhed.—A new cut has been lately made to Hull by Weighton. The town is large and populous, containing two churches, ſeveral meeting-houſes, a free-ſchool, a charity ſchool, and ſome hoſpitals. Among the latter is one called *Trinity-houſe*, in which are maintained many diſtreſſed ſeamen, both of Hull and other places, that are members of its port. It is governed by 12 elder brethren and ſix aſſiſtants; out of the former are choſen annually two wardens, and out of the younger brethren two ſtewards; they determine queſtions between maſters and ſeamen, and other ſea matters. A handſome infirmary has lately been erected without the town to the north. Here are alſo an exchange and a cuſtom-houſe, and over the Hull a ſtone bridge conſiſting of 14 arches. A good harbour was made here by Richard II. This town has not only the moſt conſiderable inland traffic of any port in the north of England, but a foreign trade ſuperior to any in the kingdom, excepting the ports of London, Briſtol, Liverpool, and Yarmouth.

By means of the many large rivers that fall into the Humber, it trades to almoſt every part of Yorkſhire, as well as to Lincolnſhire, Nottinghamſhire, Staffordſhire, Derbyſhire, and Cheſhire; the commodities of which counties are brought hither, and exported to Holland, Hamburgh, France, Spain, the Baltic, and other parts of Europe. In return for thoſe, are imported iron, copper, hemp, flax, canvas, Ruſſia linen and yarn, beſides wine, oil, fruit, and other articles. Such quantities of corn are alſo brought hither by the navigable rivers, that Hull exports more of this commodity than London. The trade of Hull with London, particularly for corn, lead, and butter, and with Holland and France, in times of peace, for thoſe commodities, as well as for cloth, kerſeys, and other manufactures of Yorkſhire, is ſo conſiderable as to employ not only ſingle veſſels, but fleets; the Hull fleets to London being generally from 50 to 60 ſail, and in time of war frequently 100 ſail or upwards. The mayor of Hull has two ſwords, one given by King Richard II. the other by Henry VIII. but only one is borne before him at a time, alſo a cap of maintenance, and an oar of lignum vitæ as a badge of his admiralty juriſdiction within the limits of the Humber. This town gave title of earl to Robert Pierpoint of Holme Pierpoint, viſcount Newark, created in the 4th of Charles I. Being unfortunately ſlain in croſſing the Humber in 1643, he was ſucceeded by his ſon Henry, created marquis of Dorcheſter in 1645, only for life; who dying in 1680, without male iſſue, was ſucceeded in the earldom by Robert, grandſon of his younger brother William Pierpoint of Thoreſby; who dying unmarried in 1682, left this honour to William his brother and heir; and he alſo dying without iſſue in 1690, it deſcended to his brother Evelyn, who was further advanced to the honours of marquis of Dorcheſter in 1706 and duke of Kingſton in 1715; and dying in 1725 was ſucceeded by his grandſon Evelyn laſt duke of Kingſton, who died in 1773, and the title became extinct.

Kingston, a town of Ireland, in the province of Leinſter and capital of King's county. W. Long. 7. 20. N. Lat. 53. 15. It is otherwiſe called *Philips-Town*.

Kingston, a town of Jamaica, ſeated on the north ſide of the bay of Port-Royal. It was founded in the year 1693, when the repeated deſolations by earthquake and fire had driven the inhabitants from Port-Royal. It extends a mile from north to ſouth, and about as much from eaſt to weſt, on the harbour. It contains about 3000 houſes, beſides negro-houſes and warehouſes. The number of white inhabitants is about 8000; of free people, of colour, 1500; and of ſlaves, about 14,000. It is the county-town, where the aſſizes are held, in January, April, July, and October, and laſt about a fortnight. It is a place of good trade; and is much reſorted to by merchants and ſeamen, becauſe moſt of the ſhips come to load and unload their cargoes here. W. Long. 76. 32. N. Lat. 17. 40.

KINGTON, or Kyneton, a pretty large town in Herefordſhire, 146 miles from London. It is ſituated on the river Arrow, and is inhabited chiefly by clothiers, who drive a conſiderable trade in narrow cloth. It has a charity-ſchool, a market, and three fairs. The markets on Wedneſday before Eaſter, Whitſuntide, and Chriſtmas, are ſo conſiderable for corn, cattle, leather, home made linen and woollen cloth, and all ſorts of proviſions, that they are more like fairs.

KINNOR, or Chinnor. See Chinnor.

KINO, in the materia medica, a gum reſin. This drug was firſt recommended to the attention of medical practitioners by Dr Fothergill, as being a very uſeful vegetable aſtringent: and in the hands of other practitioners it has been ſo far found to anſwer the character he gave of it, that it is now in very common uſe. It has a conſiderable reſemblance to the catechu: but is much more of a reſinous nature, and of a leſs firm texture: it is alſo redder and more aſtringent; its watery ſolution more decompoſable by acids; and its ink leſs permanent. Its colouring and aſtringent matter are more perfectly taken up by ſpirit than by water, though water readily enough extracts a conſiderable ſhare of both. It is uſed as an aſtringent in diarrhœa, hæmorrhages, &c. In proof-ſpirit it forms an elegant tincture: and it is a principal ingredient in the *pulvis ſtypticus*, and ſome other officinal compoſitions.

KINROSS, the county-town of Kinroſsſhire in Scotland, ſituated in W. Long. 3. 7. N. Lat. 56. 15. on the weſt ſide of Lochleven, a freſh water lake about 10 miles in compaſs, abounding with pike, trout, perch, and water fowl. The manufactures are linen and ſome cutlery ware. The houſe of Kinroſs, an elegant ancient ſtructure, ſtands on the north ſide of the town. Kinroſs ſends a member to parliament by turns with Clackmannan. In the lake are two iſlands; on one of which appear the ruins of a priory, heretofore poſſeſſed by the Culdees; the other is famous for the caſtle in which Queen Mary was impriſoned by her rebellious ſubjects.

KINSALE, a town of the county of Cork in Ireland, ſituated at the mouth of the river Ban or Bandon, 136 miles from Dublin. It is reckoned the third town in the kingdom, and inferior only to Cork in point of trade. It is neat, well built, and wealthy: is governed by a ſovereign and recorder, and returns two members to parliament, patronage in the Southwell family. It is defended by a ſtrong fort built by king Charles II. called *Charles's Fort*; and on the oppoſite ſhore there are two well built villages, called *Cove* and *Scilly*. In the town and liberties are 6 pariſhes, 30 plough-lands, and therein 6846 acres. The barracks hold 12 companies of foot, beſides a regiment at Charles's fort. In the centre of the town is a good market-houſe, and near it a ſtrong built priſon; and there are ſcattered up and down the ruins of ſeveral monaſteries and religious houſes. It has two fairs. In time of war Kinſale is a place of much buſineſs being then frequented by rich homeward bound fleets and ſhips of war, for which reaſon moſt of the houſes are then let at double rents. The harbour is very commodious, and perfectly ſecure; ſo large that the Engliſh and Dutch Smyrna fleets have anchored in it at the ſame time. There is a dock and yard for repairing ſhips of war, and a crane and gun wharf for landing and ſhipping heavy artillery. Ships may ſail into or out of this harbour, keeping in the middle of the channel, with the utmoſt ſafety. Within the haven on the weſt ſide lies a great ſhelf, which ſhoots a great way off from the land; but leaves an ample paſſage by the ſide of it, in which, as in all the reſt of the harbour, it is many fathoms deep. Lord Kinſale has the ancient privilege of keeping his hat on in the king's preſence. Kinſale gives the title of *baron* to the very ancient family of Courcy, lineally deſcended from John de Courcy earl of Ulſter, who from him have the privilege to be covered in the preſence of the king of England.

KINTORE, a royal borough of Aberdeenſhire in Scotland, ſituated on the river Don, in W. Long. 2. 5. N. Lat. 57. 38. It gives the title of *earl* to a branch of the noble family of Keith, but in other reſpects is inconſiderable.

KINTYRE. See CANTIRE.

KIOF, or KIOW, a conſiderable town of Poland, and capital of the Ukrain in the palatinate of the ſame name, with an archbiſhop's ſee and a caſtle. It belongs to Ruſſia, and carries on a conſiderable trade. It is divided into the Old and New Town, and ſeated on the river Nieper, in E. Long. 31. 51. N. Lat. 50. 12.

KIPPING (Henry), in Latin *Kippingius*, a learned German Lutheran born at Boſtock; where, after having received the degree of maſter of arts, he was met by ſome ſoldiers who preſſed him into the ſervice. This, however, did not prevent his following his ſtudies. One day while he was upon duty, holding his muſket in one hand and the poet Statius in the other, a Swediſh counſellor, who perceived him in that attitude, came up to him, entered into diſcourſe with him, and then taking him to his houſe made him his librarian, and procured him the under-rectorſhip of the college of Bremen, where he died in 1678. He wrote many works in Latin; the principal of which are, 1. A treatiſe on the antiquities of the Romans. 2. Another on the works of Creation. 3. Several diſſertations on the Old and New Teſtament, &c.

KIRCH (Chriſtian Frederic), of Berlin, a celebrated aſtronomer, was born at Guben in 1694, and acquired great reputation in the obſervatories of Dantzic and Berlin. Godfrey Kirch his father, and Mary his mother, acquired conſiderable reputation by their aſtronomical obſervations. This family correſponded with all the learned ſocieties of Europe, and their aſtronomical works are in high repute.

KIRCHER (Athanaſius), a famous philoſopher and mathematician, was born at Fulde in 1601. In 1618 he entered into the ſociety of the Jeſuits, and taught philoſophy, mathematics, the Hebrew and Syriac languages, in the univerſity of Wirtſburg, with great applauſe till the year 1631. He went to France on account of the ravages committed by the Swedes in Franconia, and lived ſome time at Avignon. He was afterwards called to Rome, where he taught mathematics in the Roman college, collected a rich cabinet of machines and antiquities, and died in 1680.

KIRCHMAN (John), an eminent German divine, was born at Lubec in 1575. He ſtudied in ſeveral places of Germany; in 1602 was made profeſſor of poetry at Roſtock, and in 1613 rector of the univerſity at Lubec. He exerciſed this laſt employment with an extraordinary application during the reſt of his life, and died in 1643. He wrote ſeveral works; the moſt eſteemed of which are, 1. *De funeribus Romanorum.* 2. *De annulis liber ſingularis.*

KIRIATHAIM, (anc. geog.), one of the towns built by the Reubenites; reckoned to the tribe of Reuben (Joſhua, xiii.), 12 miles to the weſt of Midaba. The ancient reſidence of the giants called *Emim*.

KIRIATH ARBA. See HEBRON.

KIRIATH-Baal, or *Cariath-baal*, called alſo *Kiriath-jearim*, "the city of the woods;" one of the cities of the Gibeonites belonging to the tribe of Judah, nine miles from Aelia, in the road to Dioſpolis. It was alſo called *Baala* (Joſhua). The ark of the covenant, after its recovery from the Philiſtines, ſtood for ſome time in this city (1 Sam. vii).

KIRK, a Saxon term, ſignifying the ſame with church.

KIRK-Seſſions, the name of a petty eccleſiaſtical judicatory in Scotland. Each pariſh, according to its extent, is divided into ſeveral particular diſtricts, every one of which has its own elder and deacon to overſee it. A conſiſtory of the miniſters, elders, and deacons of a pariſh, form a kirk-ſeſſion.—Theſe meet once a week, the miniſter being their moderator, but without a negative voice. It regulates matters relating to public worſhip, elections, catechiſing, viſitations, &c. It judges in matters of leſs ſcandal; but greater, as adultery, are left to the preſbytery; and in all caſes an appeal lies from it to the preſbytery. Kirk ſeſſions have likewiſe the care of the poor and poor's funds.

KIRKALDY, a town of the county of Fife in Scotland, two miles to the north-eaſt of Kinghorn. It is a royal borough, the ſeat of a preſbytery, and gives the title of *baron* to the earl of Melvill. The town is populous, well built, and extends a mile in length from eaſt to weſt, enjoying a tolerable ſhare of trade by exporting its own produce and manufactures of corn, coal, linen, and ſalt. W. Long. 3. 0. N. Lat. 56. 8.

KIRKBY LONSDALE, a town of Weſtmoreland, 253 miles from London. It is a large place, with a woollen manufactory, and a market on Tueſday.

KIRKBY-Steven, or *Stephen's-Church*, a town of Weſtmoreland, 257 miles from London, ſtands on the river Eden near Sedbergh and Aſgarth. The church is a large building with a lofty tower; in it are ſeveral old monuments. Here is a good free ſchool that has two exhibitions. The town is noted for the manufactory of yarn ſtockings; and it has a market and a fair.

KIRKBY-Thore, a town of Weſtmoreland, ſtands alſo on the river Eden, north-weſt of Appleby, 267 miles from London. A horn of a mooſe-deer was found here a few years ſince, at the depth of four feet from the ſurface of the earth; and ſeveral other antiquities have been dug up or taken out of a well, diſcovered at the end of the town near the bridge. Below it are the vaſt ruins of an ancient town, where Roman coins and urns are frequently dug up. The people call it Whely-caſtle, 300 yards in length, and 150 in breadth, with three entrances on each ſide, with bulwarks before them. At a little diſtance from thence Roman urns are found containing bones and aſhes. The old military-way runs through it, called the *Maiden-way*, becauſe it began at Maiden-caſtle in Stainmore in Yorkſhire, north riding.

KIRKCUDBRIGHT, beginning at the middle of Dumfries-ſhire in Scotland, makes a conſiderable part of Galloway, of which the earls of Nithſdale were hereditary ſtewards. The face of the country exhibits the appearance of one continued heath, producing nothing but paſture for ſheep and ſmall black cattle, which are generally ſold in England; yet theſe duſky moors are interſected with pleaſant valleys, and adorned with a great number of caſtles belonging to private gentlemen, every houſe being ſurrounded with an agreeable plantation. It is watered by the river Dee; which, taking its riſe from the mountains near Carrick, runs through a tract of land about 70 miles in length, and, entering the Iriſh ſea, forms the harbour of Kirkcudbright, a ſmall inconſiderable borough, admirably ſituated for the fiſhery and other branches of commerce, which are almoſt totally neglected through the poverty and indolence of the inhabitants. There is no other town of any conſequence in this ſtewartry. Kirkcudbright gives title of *baron* to the Maclellans, who formerly were a powerful family in the county.

KIRKHAM, a town of Lancaſhire, 221 miles from London, ſtands near the Ribble, ſix miles from the Iriſh ſea, in that part of the country called the *Fieldlands*. It has a market and three fairs, and a free ſchool well endowed. By the late inland navigation, it has a communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles, in the counties of Lincoln, Nottingham, York, Weſtmoreland, Cheſter, Warwick, Leiceſter, Oxford, Worceſter, &c.

KIRKOSWALD, a town of Cumberland on the Eden, 291 miles from London. It had formerly a caſtle, which was demoliſhed above 100 years ago. It has a market and two fairs. Its church is a very irregular old building; and the belfrey is placed diſtant from the church on the top of an hill, that the ſound of the bells might be more eaſily heard by the circumjacent villages.

KIRKWALL, the capital of the Orkneys, ſituated in the iſland of Pomona, in W. Long. 0. 25. N. Lat. 58. 33. It is built upon an inlet of the ſea near the middle of the iſland, having a very ſafe road and harbour for ſhipping. It is a royal borough, governed by a provoſt, four bailiffs, and a common-council. It was formerly poſſeſſed by the Norwegians, who beſtowed upon it the name of *Crucoviaca*. From king James III. of Scotland they obtained a new charter empowering them to elect their own magiſtrates yearly, to hold borough-courts, arreſt, impriſon, make laws and ordinances for the right government of the town: to have a weekly market, and three fairs annually at certain fixed terms: he moreover granted to them ſome lands adjoining to the town, with the cuſtoms and ſhore-dues, the power of a pit and gallows, and exempted them from the expence of ſending commiſſioners to parliament. This charter has been confirmed by ſucceeding monarchs. At preſent Kirkwall is the ſeat of juſtice, where the ſteward, ſheriff, and commiſſary, hold their ſeveral courts of juriſdiction: Here is likewiſe a public grammar-ſchool, endowed with a competent ſalary for the maſter. The town conſiſts of one narrow ſtreet about a mile in length; the houſes are chiefly covered with ſlate, though not at all remarkable for neatneſs and convenience.—The principal edifices are the cathedral church and the biſhop's palace. The former, called *St Magnus*, from Magnus king of Norway, the ſuppoſed founder of the town, is a large Gothic ſtructure: the roof is ſupported by 14 pillars on each ſide, and the ſpire is built upon four large columns. The gates are decorated with a kind of Moſaic work, of red and white ſtones elegantly carved and flowered. By the ruins of the king's caſtle or citadel, it appears to have been a ſtrong and ſtately fortreſs. At the north end of the town there is a ſort of fortification built by the Engliſh in the time of Oliver Cromwell. It is ſurrounded with a ditch and rampart, and ſtill mounted with ſome cannon for the defence of the harbour.

KIRSTENIUS (Peter), profeſſor of phyſic at Upſal, and phyſician-extraordinary to the queen of Sweden, was born at Breſlaw in 1577. He ſtudied Greek, Latin, Hebrew, Syriac, natural philoſophy, anatomy, botany, and other ſciences. Being told that a man could not diſtinguiſh himſelf in phyſic unleſs he underſtood Avicenna, he applied himſelf to the ſtudy of Arabic; and not only to read Avicenna, but alſo Meſue, Rhaſis, Abenzoar, Abukalis, and Averroes. He viſited Spain, Italy, England, and did not return home from his travels till after ſeven years. He was choſen by the magiſtrates of Breſlaw to have the direction of their college and of their ſchools. A fit of ſickneſs having obliged him to reſign that difficult employment, with which he was alſo much diſguſted, he applied himſelf chiefly to the practice of phyſic, and went with his family into Pruſſia. Here he obtained the friendſhip and eſteem of the chancellor Oxenſtiern, whom he accompanied into Sweden; where he was made profeſſor of phyſic in the univerſity of Upſal, and phyſician to the queen. He died in 1640. It is ſaid in his epitaph, that he underſtood 26 languages. He wrote many works; among which are, 1. *Liber ſecundus Canonis Avicennæ, typis Arabicis, ex MSS. editus, et ad verbum in Latinum tranſlatus*, in folio. 2. *De vero uſu et abuſu Medicinæ*. 3. *Grammatica Arabica*, folio. 4. *Vitæ quatuor Evangeliſtarum, ex antiquiſſimo codice MSS. Arabico erutæ*, in folio. 5. *Notæ in Evangelicum S. Matthæi, ex collatione textuum Arabicorum, Syriacorum, Ægyptiacorum, Græcorum, & Latinorum*, in folio &c.

He ought not to be confounded with *George Kirſtenius*, another learned phyſician and naturaliſt, who was born at Stettin, and died in 1660; and alſo wrote ſeveral works which are eſteemed.

KIRTLE, a term uſed for a ſhort jacket; alſo for a quantity of flax about a hundred weight.

KIRTON, or KIRKTON, a town of Lincolnſhire, 151 miles from London. It had its name from its kirk or church, which is truly magnificent. It has a market and two fairs. This place is famous for the pippin, which, when grafted on its ſtock, is called the *rennet*. It gives names to its hundreds, in which are four villages of the ſame name.

KISSER, the ancient Colonia Aſſuras in Africa, as appears from many inſcriptions ſtill to be met with in the place. Here is a triumphal arch done in a very good taſte: there is alſo a ſmall temple of a ſquare figure, having ſeveral inſtruments of ſacrifice carved upon it; but the execution is much inferior to the deſign, which is very curious. The town is ſituated in the kingdom of Tunis, on the declivity of a hill, above a large fertile plain; which is ſtill called the plain of *Surſo*, probably from its ancient name *Aſſuras*.

KISSING, by way of ſalutation, or as a token of reſpect, has been practiſed in all nations. The Roman emperors ſaluted their principal officers by a kiſs. Kiſſing the mouth or the eyes was the uſual compliment upon any promotion or happy event. Soldiers kiſſed the general's hand when he quitted his office. Fathers, amongſt the Romans, had ſo much delicacy, that they never embraced their wives in the preſence of their daughters. Near relations were allowed to kiſs their female kindred on the mouth: but this was done in order to know whether they ſmelt of wine or not; becauſe the Roman ladies, in ſpite of a prohibition to the contrary, were ſometimes found to have made too free with the juice of the grape. Slaves kiſſed their maſters hand, who uſed to hold it out to them for that purpoſe. Kiſſing was a cuſtomary mode of ſalutation amongſt the Jews, as we may collect from the circumſtance of Judas approaching his Maſter with a kiſs. Relations uſed to kiſs their kindred when dying, and when dead; when dying, out of a ſtrange opinion that they ſhould imbibe the departing ſoul; and when dead, by way of valedictory ceremony. They even kiſſed the corpſe after it was conveyed to the pile, when it had been ſeven or eight days dead.

KISTI, an Aſiatic nation, which extends from the higheſt ridge of Caucaſus, along the Sundſha rivulets. According to Major Rennel*, they are bounded to the weſt by the little Cabarda, to the eaſt by the Tartars and Leſguis, and to the ſouth by the Leſguis and Georgians. He imagines they may be the people whom Gaerber calls the *Taulinzi*, i. e. "mountaineers," and to whom he attributes the following ſtrange cuſtom:—"When a gueſt or ſtranger comes to lodge with them, one of the hoſt's daughters is obliged to receive him, to unſaddle and feed his horſe, take care of his baggage, prepare his dinner, paſs the night with him, and continue at his diſpoſal during his ſtay. At his departure, ſhe ſaddles his horſe and packs up his baggage. It would be very uncourtly to refuſe any of theſe marks of hoſpitality." The different tribes of this reſtleſs and turbulent nation are generally at variance with each other, and with all their neighbours. Their dialects have no analogy with any known language, and their hiſtory and origin are at preſent utterly unknown.

Their diſtricts, as enumerated in Major Rennel's Memoir, are, 1. Inguſhi, about 60 miles to the ſouthward of Moſdok, in the high mountains about the Kumbelei. 2. Endery; and, 3. Axai, on a low ridge between the Sundſha and Iaxai rivers. In their territories are the hotwells. 4. Ackinyurt, towards the upper part of the Sundſha and Kumbelei. 5. Ardakli, on the Roſhni that joins the Sundſha. 6. Wapi, near the Oſſetin village Tſhim, towards the ſource of the Terek. 7. Anguſht, on the upper part of the Kumbelei. 8. Shalkha, called by the Ruſſians *Maloi Anguſht*. 9. Tſhetſhen, on the lower part of the Argun river. 10. Atakhi, a ſmall diſtrict on the upper part of the Argun. 11. Kulga, or Dſhanti, in the high mountains. 12. Galgai, or Halha, about the ſource of the Aſai, a Sundſha rivulet. 13. Tſhabrilo, and Shabul, on the Sundſha. 14. Tſhiſhni-Kabul, on the Roſhni, a Sundſha rivulet. 15. Karaboulak, a wandering tribe, who have their little villages about the ſix uppermoſt rivulets of the Sundſha, particularly the Fortan. 16. Meeſti, Meredſhi, Galaſhka, and Duban, are ſmall tribes on the Axai.

The Inguſhi, or firſt of the above tribes, ſubmitted to Ruſſia in 1770. They are capable of arming about 5000 men; they call themſelves *Inguſhi, Kiſti*, or *Halha*; they live in villages near each other, containing about 20 or 30 houſes; are diligent huſbandmen, and rich in cattle. Many of their villages have a ſtone tower, which ſerves in time of war as a retreat to their women and children, and as a magazine for their effects. Theſe people are all armed, and have the cuſtom of wearing ſhields.—Their religion is very ſimple, but has ſome traces of Chriſtianity: they believe in one God, whom they call *Dailé*, but have no ſaints or religious perſons; they celebrate Sunday, not by any religious ceremony, but by reſting from labour; they have a faſt in ſpring, and another in ſummer; they obſerve no ceremonies either at births or deaths; they allow of polygamy, and eat pork. One kind of ſacrifice is uſual among them: at certain times a ſheep is killed by a perſon who ſeems to be conſidered as a kind of prieſt, as he is obliged to live in a ſtate of celibacy. His habitation is in the mountains, near an old ſtone church, which is ſaid to be adorned with various ſtatues and inſcriptions. Under the church is a vault that contains certain old books, which, however, no one ever attempts to approach. Mr Guldenſtaedt † was prevented by the weather from viſiting this church.

The 6th, 7th, and 8th tribes, which were formerly tributary to the Cabardean princes, ſubmitted to Ruſſia in 1770. The ninth, Tſhetſhen, is governed by its own chiefs, who are related to the Avar-Khan. This tribe is ſo numerous and warlike, and has given the Ruſſians ſo much trouble, that its name is uſually given by them to the whole Kiſti nation. The chief village of Tſhetſhen lies on the Argun, about 15 miles from its mouth. Its other principal villages are Hadſhiaul and Iangent, both on the Sundſha.

KIT, in muſic, the name of a ſmall violin of ſuch form and dimenſion as to be capable of being carried in a caſe or ſheath in the pocket. Its length, meaſuring from the extremities, is about 16 inches, and that of the bow about 17. Small as this inſtrument is, its powers are coextenſive with thoſe of the violin.

Kit-Kat Club, an aſſociation of above 30 Engliſh noblemen and gentlemen of diſtinguiſhed merit, formed in 1703, purely to unite their zeal in favour of the Proteſtant ſucceſſion in the houſe of Hanover. Their name was derived from Chriſtopher Kat, a paſtry cook, near the tavern where they met in King's-ſtreet, Weſtminſter, who often ſupplied them with tarts. Old Jacob Tonſon was their bookſeller; and that family is in poſſeſſion of a picture of the original members of this famous club, painted by Sir Godfrey Kneller. The deſign of theſe gentlemen was to recommend and encourage true loyalty by the powerful influence of wit and humour; and Sir Samuel Garth diſtinguiſhed himſelf by the extempore epigrams he made on their toaſts, which were inſcribed on their drinking glaſſes.

KITCHEN, the room in a houſe where the proviſions are cooked.

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* *Memoir of a map of the countries comprehended between the Black Sea and the Caſpian.*

† *Reiſe*, vol. I. p. 150.

Army Kitchen, is a ſpace of about 16 or 18 feet diameter, with a ditch ſurrounding it three feet wide; the oppoſite bank of which ſerves as a ſeat for the men who dreſs the victuals. The kitchens of the flank companies are contiguous to the outline of the camp; and the intermediate ſpace is generally diſtributed equally for the remaining kitchens; and as each tent forms a meſs, each kitchen muſt have as many fire-places as there are tents in the company.

Kitchen-Garden, a piece of ground laid out for the cultivation of fruit, herbs, pulſe, and other vegetables, uſed in the kitchen.

A kitchen-garden ought to be ſituated on one ſide of the houſe, near the ſtables, from whence the dung may be eaſily conveyed into it; and after having built the wall, borders ſhould be made under them; which, according to Miller, ought to be eight or ten feet broad: upon thoſe borders expoſed to the ſouth, many ſorts of early plants may be ſown; and upon thoſe expoſed to the north, you may have ſome late crops, taking care not to plant any ſort of deep-rooting plants, eſpecially beans and peaſe, too near the fruit-trees. You ſhould next proceed to divide the ground into quarters; the beſt figures for theſe is a ſquare or an oblong, if the ground will admit of it; otherwiſe they may be of that ſhape which will be moſt advantageous to the ground: the ſize of theſe quarters ſhould be proportioned to that of the garden; if they are too ſmall, your ground will be loſt in walks, and the quarters being incloſed by eſpaliers of fruit-trees, the plants will draw up ſlender, for want of a more open expoſure. The walks ſhould alſo be proportioned to the ſize of the ground: theſe in a ſmall garden ſhould be ſix feet broad, but in a large one ten; and on each ſide of the walk there ſhould be allowed a border three or four feet wide between it and the eſpalier; and in theſe borders may be ſown ſome ſmall ſalads, or any other herbs that do not take deep root or continue long; but theſe quarters ſhould not be ſown or planted with the ſame crop two years together. In one of theſe quarters, ſituated neareſt to the ſtables, and beſt defended from the cold winds, ſhould be the hot-beds, for early cucumbers, melons, &c. and to theſe there ſhould be a paſſage from the ſtables, and a gate through which a ſmall cart may enter. The moſt important points of general culture conſiſt in well digging and manuring the ſoil; and giving a proper diſtance to each plant, according to their different growths: as alſo in keeping them clear from weeds; for which purpoſe, you ſhould always obſerve to keep your dung-hills clear from them, otherwiſe their ſeeds will be conſtantly brought in and ſpread with the dung.

KITE, in ornithology. See Falco, ſp. 8.

KITTIWAKE, in ornithology. See Larus.

KIU'-hoa. See Parthemium.

KIUN-tcheou-fou. See *Hai-Nan*.

KLEINPOVIA, in botany: A genus of the decandria order, belonging to the gynandria claſs of plants; and in the natural method ranking under the 37th order, *Columniferæ*. The calyx is pentaphyllous; the petals five; the nectarium campanulated and pedunculated, containing the ſtamina; the capſule is inflated and five-ſeeded.

KLEIST (Edward Chriſtian de), a celebrated German poet, and a ſoldier of diſtinguiſhed bravery, was born at Zeblin, in Pomerania, in 1715. At nine years of age he was ſent to purſue his ſtudies at Cron in Poland; and he afterwards ſtudied at Dantzick and Koningſburg. Having finiſhed his ſtudies he went to viſit his relations in Denmark, who invited him to ſettle there; and having in vain endeavoured to obtain preferment in the law, at 21 years of age accepted of a poſt in the Daniſh army. He then applied himſelf to the ſtudy of all the ſciences that have a relation to military affairs, with the ſame aſſiduity as he had before ſtudied civil law. In 1740, at the beginning of the reign of Frederic king of Pruſſia, Mr de Kleiſt went to Berlin, and was preſented to his majeſty, who made him lieutenant of his brother prince Henry's regiment: and he was in all the campaigns which diſtinguiſhed the five firſt years of the king of Pruſſia's reign. In 1749 he obtained the poſt of captain; and in that year publiſhed his excellent poem on the Spring. Before the breaking out of the laſt war, the king choſe him, with ſome other officers at Potſdam, companions to the young prince Frederic-William of Pruſſia, and to eat at his table. In the firſt campaign, in 1756, he was nominated major of Hauſen's regiment; which being in garriſon at Leipſic, he had time to finiſh ſeveral new poems. After the battle of Roſbach, the king gave him, by an order in his own hand-writing, the inſpection of the great hoſpital eſtabliſhed at Leipſic. And on this occaſion his humanity was celebrated by the ſick and wounded of both parties, and his diſintereſtedneſs was equally admired by all the inhabitants of that city. In 1758, Prince Henry coming to Leipſic, Mr Kleiſt deſired to ſerve in his army with the regiment of Hauſen, which was readily granted. Opportunities of diſtinguiſhing himſelf could not be wanting under that great officer, and he always communicated his courage to the battalion under his command. He alſo ſerved that prince at the beginning of the campaign of 1759, when he was with him in Franconia, and in all the expeditions of that army, till he was detached with the troops under general de Fink to join the king's army. On the 12th of Auguſt was fought the bloody battle of Kunerſdorf, in which he fell. He attacked the flank of the Ruſſians, and aſſiſted in gaining three batteries. In theſe bloody attacks he received twelve contuſions; and the two firſt fingers of his right hand being wounded, he was forced to hold his ſword in the left. His poſt of major obliged him to remain behind the ranks; but he no ſooner perceived the commander of the battalion wounded and carried away, than he inſtantly put himſelf at the head of his troops. He led his battalion in the midſt of the terrible fire of the enemy's artillery, againſt the fourth battery. He called up the colours of the regiment; and, taking an enſign by the arm, led him on. Here he received a ball in his left arm; when, being no longer able to hold his ſword in his left hand, he took it again in the right, and held it with the two laſt fingers and his thumb. He ſtill puſhed forward, and was within thirty ſteps of the battery, when his right leg was ſhattered by the wadding of one of the great guns; and he fell from his horſe, crying to his men, "My boys, don't abandon your king." By the aſſiſtance of thoſe who ſurrounded him, he endeavoured twice to remount his horſe; but his ſtrength forſook him, and he fainted. He was then carried behind the line; where a ſurgeon attempting to dreſs his wounds, was ſhot dead. The Coſſacs arriving ſoon after, ſtripped Mr Kleiſt naked, and threw him into a miry place; where ſome Ruſſian huſſars found him in the night, and laid him upon ſome ſtraw near the fire of the grand guard, covered him with a cloak, put a hat on his head, and gave him ſome bread and water. In the morning one of them offered him a piece of ſilver, which he refuſed; on which he toſſed it upon the cloak that covered him, and then departed with his companions. Soon after the Coſſacs returned, and took all that the generous huſſars had given him. Thus he again lay naked on the earth: and in that cruel ſituation continued till noon, when he was known by a Ruſſian officer, who cauſed him to be conveyed in a waggon to Frankfort on the Oder; where he arrived in the evening, in a very weak ſtate, and was inſtantly put into the hands of the ſurgeons. But the fractured bones ſeparating, broke an artery, and he died by the loſs of blood. The city of Frankfort being then in the hands of the enemy, they buried this Pruſſian hero with all military honours: the governor, a great number of the Ruſſian officers, the magiſtrates of the city, with the profeſſors and the ſtudents, formed the proceſſion, preceded by the funeral muſic. Mr Kleiſt's poems, which are greatly admired, are elegantly printed in the German tongue, in 2 volumes 8vo.

KNARESBOROUGH, a town in the Weſt Riding of Yorkſhire in England, 199 miles from London, is an ancient borough by preſcription, called by foreigners *the Yorkſhire Spaw*. It is almoſt encompaſſed by the river Nid, which iſſues from the bottom of Craven-hills; and had a priory, with a caſtle, long ſince demoliſhed, on a craggy rock, whence it took the name. The town is about three furlongs in length; and the pariſh is famous for four medicinal ſprings near each other, and yet of different qualities. 1. The ſweet ſpaw, or vitriolic well, in Knareſborough foreſt, three miles from the town, which was diſcovered in 1620. 2. The ſtinking, or ſulphureous ſpaw, which is uſed only in bathing. 3. St Mungo's, a cold-bath, four miles from the town. 4. The dropping-well, which is in the town, and the moſt noted petrifying ſpring in England, ſo called by reaſon of its dropping from the ſpongy rock hanging over it. The ground which receives it, before it joins the well, is, for 12 yards long, become a ſolid rock. From the well it runs into the Nid, where the ſpring water has made a rock that ſtretches ſome yards into the river. The adjacent fields are noted for liquorice, and a ſoft yellow marle, which is rich manure. The town is governed by a bailiff. Its baths are not ſo much frequented ſince Scarborough Spaw came in vogue It has a good market and ſix fairs. Here is a ſtone bridge over the river, near one end of which is a cell dug out of the rock, and called *St Robert's chapel*.

KNAPDALE, one of the diviſions of Argyleſhire in Scotland It is parted from Cowal on the eaſt by Lochfyn, borders with Kintyre on the ſouth, with Lorn on the north, by Braidalbin on the north-eaſt, and on the weſt by the Hebrides. Its length from north to ſouth does not exceed 20 miles, and the breadth in ſome places may amount to 13. It is joined to Kintyre by a neck of land not above a mile broad, over which the country people draw their boats, to avoid ſailing round Kintyre. This part of Knapdale abounds with lakes, ſome of them containing little iſlands, on which there are caſtles belonging to different proprietors. The grounds are more adapted for paſturage than grain; but that on the ſide of Lochow is fruitful in both.

KNAPSACK, in a military ſenſe, a rough leather bag which a ſoldier carries on his back, and which contains all his neceſſaries. Square knapſacks are moſt convenient; and ſhould be made with a diviſion to hold the ſhoes, black-ball and bruſhes, ſeparate from the linen. White goat-ſkins are the beſt.

KNAVE, an old Saxon word, which had at firſt a ſenſe of ſimplicity and innocence, for it ſignified a *boy*: Sax. *cnapa*, whence a *knave-child*, i. e. a boy, diſtinguiſhed from a girl, in ſeveral old writers; afterwards it was taken for a ſervant-boy, and at length for any ſervant-man. Alſo it was applied to a miniſter or officer that bore the ſhield or weapon of his ſuperior; as *field-knapa*, whom the Latins call *armiger*, and the French *eſcuyer*, 14 Edg. III. c. 3. And it was ſometimes of old made uſe of as a titular addition; as *Joannes C. filius Willielmi C. de Derby, knave*, &c. 22 Hen. VII. c. 37. The word is now perverted to the hardeſt meaning, viz. *a falſe deceitful fellow*.

KNAVESHIP, in Scots law, one of the names of the ſmall duties payable in thirlage to the miller's ſervants, called *ſequels*.

KNAUTIA, in botany; A genus of the monogynia order, belonging to the tetrandria claſs of plants; and in the natural method ranking under the 48th order, *Aggregatæ*. The common calyx is oblong, ſimple, quinqueflorous; the proper one ſimple, ſuperior; the florets irregular; the receptacle naked.

KNEE, in anatomy, the articulation of the thigh and leg bones. See ANATOMY, n° 59.

Knee, in a ſhip, a crooked piece of timber, having two branches or arms, and generally uſed to connect the beams of a ſhip with her ſides or timbers.

The branches of the knees form an angle of greater or ſmaller extent, according to the mutual ſituation of the pieces which they are deſigned to unite. One branch is ſecurely bolted to one of the deck-beams, whilſt the other is in the ſame manner attached to the correſponding timber in the ſhips ſide, as repreſented by E in the plate of *MIDSHIP-Frame*.

Beſides the great utility of knees in connecting the beams and timbers in one compact frame, they contribute greatly to the ſtrength and ſolidity of the ſhip, in the different parts of her frame to which they are bolted; and thereby enable her with great firmneſs to reſiſt the effects of a turbulent ſea.

In fixing of theſe pieces, it is occaſionally neceſſary to give an oblique direction to the vertical or ſide branch, in order to avoid the range of an adjacent gun-port, or becauſe the knee may be ſo ſhaped as to require this diſpoſition; it being ſometimes difficult to procure ſo great a variety of knees as may be neceſſary in the conſtruction of a number of ſhips of war.

In France, the ſcarcity of theſe pieces has obliged their ſhip-wrights frequently to form their knees of iron.

Knees are either ſaid to be *lodging* or *hanging*. The former are fixed horizontally in the ſhip's frame, having one arm bolted to the beam, and the other acroſs two or three timbers, as repreſented in the DECK, Plate CLVI. The latter are fixed vertically, as we have deſcribed above. See alſo *Ship-Building*, DECK, and *Midship-Frame*.

Knee of the Head, a large flat piece of timber, fixed edgeways upon the fore-part of a ſhip's ſtem, and ſupporting the ornamental figure or image placed under the bowſprit. See *Ship-Building*.

The *knee of the head*, which may properly be defined a continuation of the ſtem, as being prolonged from the ſtem forwards, is extremely broad at the upper-part, and accordingly compoſed of ſeveral pieces united into one, YY (*Pieces of the Hull, in Ship-Building* Plates). It is let into the head, and ſecured to the ſhip's bows by ſtrong knees fixed horizontally upon both, and called *the cheeks of the head*. The heel of it is ſcarfed to the upper end of the fore-foot; and it is faſtened to the ſtem above by a knee, called *a ſtandard*, expreſſed by & in the plate.

Beſides ſupporting the figure of the head, this piece is otherwiſe uſeful, as ſerving to ſecure the boom or bumkin, by which the fore-tack is extended to windward; and by its great breadth, preventing the ſhip from falling to leeward when cloſe-hauled ſo much as ſhe would otherwiſe do. It alſo affords a greater ſecurity to the bowſprit, by increaſing the angle of the bob-ſtay, ſo as to make it act more perpendicularly on the bowſprit.

The *knee of the head* is a phraſe peculiar to ſhipwrights; as this piece is always called the *cut-water* by ſeamen, if we except a few, who, affecting to be wiſer than their brethren, have adopted this expreſſion probably on the preſumption that the other is a cant-phraſe or vulgariſm.

Carling Knees, in a ſhip, thoſe timbers which extend from the ſhip to the hatch-way, and bear up the deck on both ſides.

KNELLER (Sir Godfrey), a painter, whoſe fame is well eſtabliſhed in Great Britain. He was born at Lubec in 1648; and received his firſt inſtructions in the ſchool of Rembrant, but became afterwards a diſciple of Ferdinand Bol. When he had gained as much knowledge as that ſchool afforded him, he travelled to Rome, where he fixed his particular attention on Titian and the Caraccii. He afterwards viſited Venice, and diſtinguiſhed himſelf ſo effectually in that city by his hiſtorical pictures and portraits of the noble families there, that his reputation became conſiderable in Italy. By the advice of ſome friends he went at laſt to England, where it was his good fortune to gain the favour of the duke of Monmouth: by his recommendation, he drew the picture of King Charles II. more than once; who was ſo taken with his ſkill in doing it, that he uſed to come and ſit to him at his houſe in Covent-garden piazza. The death of Sir Peter Lely left him without a competitor in England, and from that time his fortune and fame were thoroughly eſtabliſhed. No Painter could have more inceſſant employment, and no painter could be more diſtinguiſhed by public honour. He was ſtate-painter to Charles II. James II. William III. Queen Anne, and George I. equally eſteemed and reſpected by them all: the Emperor Leopold made him a knight of the Roman empire, and king George I. created him a baronet. Moſt of the nobility and gentry had their likeneſſes taken by him, and no painter excelled him in a ſure outline, or in the graceful diſpoſition of his figures: his works were celebrated by the beſt poets in his time. He built himſelf an elegant houſe at Whitton near Hampton-court, where he ſpent the latter part of his life; and died in 1726.

KNIFE is a well-known inſtrument, made for cutting, and adapted in form to the uſes for which it is deſigned.

Knives are ſaid to have been firſt made in England in 1563, by one Matthews, on Fleet-bridge, London. The importation of all ſorts of knives is prohibited in Enland.

KNIGHT (*eques*), among the Romans, a perſon of the ſecond degree of nobility, following immediately that of the ſenators. See *Equestrian Order*, and EQUITES.

KNIGHT, or *Cnecht* (Germ.), in feodal hiſtory, was originally an appellation or title given by the ancient Germans to their youth after being admitted to the privileges of bearing arms.

The paſſion for arms among the Germanic ſtates, as deſcribed by Dr Stuart *, was carried to extremity. It was amidſt ſcenes of death and peril that the young were educated: It was by valour and feats of proweſs that the ambitious ſignalized their manhood. All the honours they knew were allotted to the brave. The ſword opened the path to glory. It was in the field that the ingenious and the noble flattered moſt their pride, and acquired an aſcendancy. The ſtrength of their bodies, and the vigour of their counſels, ſurrounded them with warriors, and lifted them to command.

* *View of Society in Europe*, p. 46.

But, among theſe nations, when the individual felt the call of valour, and wiſhed to try his ſtrength againſt an enemy, he could not of his own authority take the lance and the javelin. The admiſſion of their youth to the privilege of bearing arms, was a matter of too much importance to be left to chance or their own choice. A form was invented by which they were advanced to that honour.

The council of the diſtrict, or of the canton to which the candidate belonged, was aſſembled. His age and his qualifications were inquired into; and if he was deemed worthy of being admitted to the privileges of a ſoldier, a chieftain, his father or one of his kindred adorned him with a ſhield and the lance. In conſequence of this ſolemnity, he prepared to diſtinguiſh himſelf; his mind opened to the cares of the public; and the domeſtic concerns, or the offices of the family from which he had ſprung, were no longer the objects of his attention. To this ceremony, ſo ſimple and ſo intereſting, the inſtitution of *knighthood* is indebted for its riſe.

Knighthood, however, as a ſyſtem, known under the denomination of CHIVALRY, is to be dated only from the 11th century. All Europe being reduced to a ſtate of anarchy and confuſion on the decline of the houſe of Charlemagne, every proprietor of a manor or lordſhip became a petty ſovereign; the manſion-houſe was fortified by a moat, defended by a guard, and called a *caſtle*. The governor had a party of 700 or 800 men at his command; and with theſe he uſed frequently to make excurſions, which commonly ended in a battle with the lord of ſome petty ſtate of the ſame kind, whoſe caſtle was then pillaged, and the women and treaſures borne off by the conqueror. During this ſtate of univerſal hoſtility, there was no friendly communications between the provinces, nor any high roads from one part of the kingdom to another: the wealthy traders, who then travelled from place to place with their merchandiſe and their families, were in perpetual danger; the lord of almoſt every caſtle extorted ſomething from them on the road; and at laſt, ſome one more rapacious than the reſt, ſeized upon the whole of the cargo, and bore off the women for his own uſe.

Thus caſtles became the warehouſes of all kinds of rich merchandiſe, and the priſons of the diſtreſſed females whoſe fathers or lovers had been plundered or ſlain, and who being therefore ſeldom diſpoſed to take the thief or murderer into favour, were in continual danger of a rape.

But as ſome are always diſtinguiſhed by virtue in the moſt general defection, it happened that many lords inſenſibly aſſociated to repreſs theſe ſallies of violence and rapine, to ſecure property, and protect the ladies. Among theſe were many lords of great fiefs; and the aſſociation was at length ſtrengthened by a ſolemn vow, and received the ſanction of a religious ceremony. As the firſt knights were men of the higheſt rank, and the largeſt poſſeſſions, ſuch having moſt to loſe, and the leaſt temptation to ſteal, the fraternity was regarded with a kind of reverence, even by thoſe againſt whom it was formed. Admiſſion into the order was deemed the higheſt honour; many extraordinary qualifications were required in a candidate, and many new ceremonies were added at his creation. After having faſted from ſun-riſe, confeſſed himſelf, and received the ſacrament, he was dreſſed in a white tunic, and placed by himſelf at a ſide-table, where he was neither to ſpeak, to ſmile, nor to eat; while the knights and ladies, who were to perform the principal parts of the ceremony, were eating, drinking, and making merry at the great table. At night his armour was conveyed to the church where the ceremony was performed; and here having watched it till the morning, he advanced with his ſword hanging about his neck, and received the benediction of the prieſt. He then kneeled down before the lady who was to put on his armour, who being aſſiſted by perſons of the firſt rank, buckled on his ſpurs, put an helmet on his head, and accoutred him with a coat of mail, a cuiraſs, bracelets, cuiſſes, and gauntlets.

Being thus armed cap-a-pee, the knight who dubbed him ſtruck him three times over the ſhoulder with the flat ſide of his ſword, in the name of God, St Michael, and St George. He was then obliged to watch all night in all his armour, with his ſword girded, and his lance in his hand. From this time the knight devoted himſelf to the redreſs of thoſe wrongs which, "patient merit of the unworthy takes;" to ſecure merchants from the rapacious cruelty of banditti, and women from raviſhers, to whoſe power they were, by the particular confuſion of the times, continually expoſed.

From this view of the origin of chivalry, it will be eaſy to account for the caſtle, the moat, and the bridge, which are found in romances; and as to the dwarf, he was a conſtant appendage to the rank and fortune of thoſe times, and no caſtle therefore could be without him. The dwarf and the buffoon were then introduced to kill time, as the card-table is at preſent. It will alſo be eaſy to account for the multitude of captive ladies whom the knights, upon ſeizing a caſtle, ſet at liberty; and for the prodigious quantities of uſeleſs gold and ſiver veſſels, rich ſtuffs, and other merchandiſe, with which many apartments in theſe caſtles are ſaid to have been filled.

The principal lords who entered into the confraternity of knights, uſed to ſend their ſons to each other to be educated, far from their parents, in the myſtery of chivalry. Theſe youths, before they arrived at the age of 21, were called *bachelors*, or *bas chevaliers*, inferior knights, and at that age were qualified to receive the order.

So honourable was the origin of an inſtitution, commonly conſidered as the reſult of caprice and the ſource of extravagance; but which, on the contrary, roſe naturally from the ſtate of ſociety in thoſe times, and had a very ſerious effect in refining the manners of the European nations. Valour, humanity, courteſy, juſtice, honour, were its characteriſtics: and to theſe were added religion; which, by infuſing a large portion of enthuſiaſtic zeal, carried them all to a romantic exceſs, wonderfully ſuited to the genius of the age, and productive of the greateſt and moſt permanent effects both upon policy and manners. War was carried on with leſs ferocity, when humanity, no leſs than courage, came to be deemed the ornament of knighthood, and knighthood a diſtinction ſuperior to royalty, and an honour which princes were proud to receive from the hands of private gentlemen: more gentle and poliſhed manners were introduced, when courteſy was recommended as the moſt amiable of knightly virtues, and every knight devoted himſelf to the ſervice of a lady: violence and oppreſſion decreaſed, when it was accounted meritorious to check and to puniſh them: a ſcrupulous adherence to truth, with the moſt religious attention to fulfil every engagement, but particularly thoſe between the ſexes as more eaſily violated, became the diſtinguiſhing character of a gentleman, becauſe chivalry was regarded as the ſchool of honour, and inculcated the moſt delicate ſenſibility with reſpect to that point; and valour, ſeconded by ſo many motives of love, religion, and virtue, became altogether irreſiſtible.

That the ſpirit of chivalry ſometimes roſe to an extravagant height, and had often a pernicious tendency, muſt however be allowed. In Spain, under the influence of a romantic gallantry, it gave birth to a ſeries of wild adventures which have been deſervedly ridiculed: in the train of Norman ambition, it extinguiſhed the liberties of England, and deluged Italy in blood; and at the call of ſuperſtition, and as the engine of papal power, it deſolated Aſia under the banner of the croſs. But theſe ought not to be conſidered as arguments againſt an inſtitution laudable in itſelf, and neceſſary at the time of its foundation: and thoſe who pretend to deſpiſe it, the advocates of ancient barbariſm and ancient ruſticity, ought to remember, that chivalry not only firſt taught mankind to carry the civilities of peace into the operations of war, and to mingle politeneſs with the uſe of the ſword; but rouſed the ſoul from its lethargy, invigorated the human character even while it ſoftened it, and produced exploits which antiquity cannot parallel. Nor ought they to forget, that it gave variety, elegance, and pleaſure, to the intercourſe of life, by making woman a more eſſential part of ſociety; and is therefore intitled to our gratitude, though the point of honour, and the refinements in gallantry, its more doubtful effects, ſhould be excluded from the improvement of modern manners. For,

To illuſtrate this topic more particularly, we may obſerve, that women, among the ancient Greeks and Romans, ſeem to have been conſidered merely as objects of ſenſuality, or of domeſtic conveniency: they were devoted to a ſtate of ſecluſion and obſcurity, had few attentions paid them, and were permitted to take as little ſhare in the converſation as in the general commerce of life. But the northern nations, who paid a kind of devotion to the ſofter ſex, even in their native foreſts, had no ſooner ſettled themſelves in the provinces of the Roman empire, than the female character began to aſſume new conſequence. Thoſe fierce barbarians, who ſeemed to thirſt only for blood, who involved in one undiſtinguiſhing ruin the monuments of ancient grandeur and ancient ingenuity, and who devoted to the flames the knowledge of ages, always forbore to offer any violence to the women. They brought along with them the reſpectful gallantry of the north, which had power even to reſtrain their ſavage ferocity; and they introduced into the weſt of Europe a generoſity of ſentiment, and a complaiſance toward the ladies, to which the moſt poliſhed nations of antiquity were ſtrangers.—Theſe ſentiments of generous gallantry were foſtered by the inſtitution of chivalry, which lifted woman yet higher in the ſcale of life. Inſtead of being nobody in ſociety, ſhe became its *primum mobile.* Every knight devoting himſelf to danger, declared himſelf the humble ſervant of ſome lady, and that lady was often the object of his love. Her honour was ſuppoſed to be intimately connected with his, and her ſmile was the reward of his valour: for her he attacked, for her he defended, and for her he ſhed his blood. Courage, animated by ſo powerful a motive, loſt ſight of every thing but enterpriſe: incredible toils were cheerfully endured, incredible actions were performed, and adventures ſeemingly fabulous were more than realiſed. The effect was reciprocal. Women, proud of their influence, became worthy of the heroiſm which they had inſpired: they were not to be approached but by the high-minded and the brave; and men then could only be admitted to the boſom of the chaſte fair, after proving their fidelity and affection by years of perſeverance and of peril.

Again, as to the change which took place in the operations of war, it may be obſerved, that the perfect hero of antiquity was ſuperior to fear, but he made uſe of every artifice to annoy his enemy: impelled by animoſity and hoſtile paſſion, like the ſavage in the American woods, he was only anxious of attaining his end, without regarding whether fraud or force were the means. But the true knight or modern hero of the middle ages, who ſeems in all his rencounters to have had his eye on the judicial combat or judgment of God, had an equal contempt for ſtratagem and danger. He diſdained to take advantage of his enemy: he deſired only to ſee him, and to combat him upon equal terms, truſting that heaven would declare in behalf of the juſt; and as he profeſſed only to vindicate the cauſe of religion, of injured beauty, or oppreſſed innocence, he was further confirmed in this enthuſiaſtic opinion by his own heated imagination. Strongly perſuaded that the deciſion muſt be in his favour, he fought as if under the influence of divine inſpiration rather than of military ardour. Thus the ſyſtem of chivalry, by a ſingular combination of manners, blended the heroic and ſanctified characters, united devotion and valour, zeal and gallantry, and reconciled the love of God and of the ladies.

Chivalry flouriſhed moſt during the time of the croiſades. From theſe holy wars it followed, that new fraternities of knighthood were invented: hence the knights of the Holy Sepulchre, the Hoſpitallers, Templars, and an infinite number of religious orders. Various other orders were at length inſtituted by ſovereign princes: the Garter, by Edward III. of England; the Golden Fleece, by Philip the Good, duke of Burgundy; and St Michael, by Louis XI. of France. From this time ancient chivalry declined to an empty name; when ſovereign princes eſtabliſhed regular companies in their armies, knights-bannerets were no more, though it was ſtill thought an honour to be dubbed by a great prince or victorious hero; and all who profeſſed arms without knighthood aſſumed the title of *eſquire.*

There is ſcarce a prince in Europe that has not thought fit to inſtitute an order of knighthood; and the ſimple title of *knight*, which the kings of Britain confer on private ſubjects, is a derivation from ancient chivalry, although very remote from its ſource. See *Knight-Bachelor.*

Knight-Service, (*ſervitium militare*, and in law French *chivalry*); a ſpecies of TENURE, the origin and nature of which are explained under the articles CHIVALRY, and *Feodal Syſtem*, n° 13—21.

The knights produced by this tenure differed moſt eſſentially from the knights deſcribed in the preceding article; though the difference ſeems not to have been accurately attended to by authors (a). The one claſs of knights was of a high antiquity; the other was not heard of till the invention of a fee. The adorning with arms and the blow of the ſword made the act of the creation of the ancient knight; the new knight was conſtituted by an inveſtment in a piece of land. The former was the member of an order of dignity which had particular privileges and diſtinctions; the latter was the receiver of a feudal grant. Knighthood was a grant; knight-ſervice a tenure. The firſt communicated ſplendor to an army; the laſt gave it ſtrength and numbers. The knight of honour might ſerve in any ſtation whatever; the knight of tenure was in the rank of a ſoldier.—It is true at the ſame time, that every noble and baron were knights of tenure, as they held their lands by knight-ſervice. But the number of fees they poſſeſſed, and their creation into rank, ſeparated them widely from the ſimple individuals to whom they gave out grants of their lands, and who were merely the knights of tenure. It is no leſs true, that the ſovereign, without conferring nobility, might give even a ſingle fee to a tenant; and ſuch vaſſals *in capite* of the crown, as well as the vaſſals of ſingle fees from a ſubject, were the mere knights of tenure. But the former, in reſpect of their holding from the crown, were to be called to take upon themſelves the knighthood of honour; a condition in which they might riſe from the ranks, and be promoted to offices and command. And as to the vaſſals *in capite* of the crown who had many fees, their wealth of itſelf ſufficiently diſtinguiſhed them beyond the ſtate of the mere knights of tenure. In fact, they poſſeſſed an authority over men who were of this laſt deſcription; for, in proportion to their lands were the fees they gave out and the knights they commanded.

(a) "The terms *knight* and *chivaler* (Dr Stuart * obſerves), denoted both the knight of *honour* and knight of *tenure*; and *chivalry* was uſed to expreſs both *knighthood* and *knight-ſervice*. Hence, it has proceeded, that theſe perſons and theſe ſtates have been confounded. Yet the marks of their difference are ſo ſtrong and pointed, that one muſt wonder that writers ſhould miſtake them. It is not, however, mean and common compilers only who have been deceived. Sir Edward Coke, notwithſtanding his diſtinguiſhing head, is of this number. When eſtimating the value of the knight's fee at L. 20 *per annum*, he appeals to the ſtatute *de militibus*,

* *View of Society in Europe*, p. 346.

Blackſt. Comment.

By the tenure of knight-ſervice, the greateſt part of the lands in England were holden, and that principally of the king *in capite*, till the middle of the laſt century; and which was created, as Sir Edward Coke expreſsly teſtifies, for a military purpoſe, viz. for defence of the realm by the king's own principal ſubjects, which was judged to be much better than to truſt to hirelings or foreigners. The deſcription here given is that of knight-ſervice proper, which was to attend the king in his wars. There were alſo ſome other ſpecies of knight-ſervice; ſo called, though improperly, becauſe the ſervice or render was of a free and honourable nature, and equally uncertain as to the time of rendering as that of knight-ſervice proper, and becauſe they were attended with ſimilar fruits and conſequences. Such was the tenure by *grand ſerjeanty*, *per magnum ſervitium*, whereby the tenant was bound, inſtead of ſerving the king *generally* in his wars, to do ſome ſpecial honorary ſervice to the king in perſon; as to carry his banner, his ſword, or the like; or be his butler, champion, or other officer, at his coronation. It was, in moſt other reſpects, like knight-ſervice, only he was not bound to pay aid or eſcuage; and when tenant by knight-ſervice paid five pounds for a relief on every-knight's fee, a tenant by grand-ſerjeanty paid one year's value of his land, were it much or little. Tenure by *cornage*, which was to wind a horn when the Scots or other enemies entered the land, in order to warn the king's ſubjects, was (like other ſervices of the ſame nature) a ſpecies of grand-ſerjeanty.

Theſe ſervices, both of chivalry and grand-ſerjeanty, were all perſonal, and uncertain as to their quantity or duration. But the perſonal attendance in knight-ſervice growing troubleſome and inconvenient in many reſpects, the tenants found means of compounding for it, by firſt ſending others in their ſtead, and in proceſs of time making a pecuniary ſatisfaction to the lords in lieu of it. This pecuniary ſatisfaction at laſt came to be levied by aſſeſſments, at ſo much for every knight's fee; and therefore this kind of tenure was

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militibus, an. 1 Ed. II. and, by the ſenſe of his illuſtration, he conceives, that the knights alluded to there were the ſame with the poſſeſſors of knight's fees: and they, no doubt, had knight's fees; but a knight's fee might be enjoyed not only by the tenants *in capite* of the crown, but by the tenants of a vaſſal, or by the tenants of a ſub-vaſſal. Now, to theſe the ſtatute makes no alluſion. It did not mean to annex knighthood to every land-holder in the kingdom who had a knight's fee; but to encourage arms, by requiring the tenants *in capite* of the crown to take to them the dignity. He thus confounds *knighthood* and the *knight's fee*. Coke on Litttleton, p. 69.

"If I am not deceived, Sir William Blackſtone has fallen into the ſame miſtake, and has added to it, Speaking of the knights of honour, or the *equites aurati* from the gilt ſpurs they wore, he thus expreſſes himſelf: 'They are alſo called, in our law, *milites*, becauſe they formed a part, or indeed the whole, of the royal army, in virtue of their feodal tenures; one condition of which was, that every one who held a knight's fee (which in Henry II.'s time amounted to L. 20 *per annum)*, was obliged to be knighted, and attend the king in his wars, or fined for his noncompliance. The exertion of this prerogative, as an expedient to raiſe money, in the reign of Charles I. gave great offence, though warranted by law, and the recent example of Queen Elizabeth: but it was, at the reſtoration, together with all other military branches of the feodal law, aboliſhed; and this kind of knighthood has ſince that time fallen into great diſrepute.' Book I. ch. 12.

"After what has been ſaid, I need hardly obſerve, that this learned and able writer has confounded the knight of *honour* and the knight of *tenure;* and that the requiſition to take knighthood was not made to *every* poſſeſſor of a knight's fee, but to the tenants of knight's fees held *in capite* of the crown, who had merely a ſufficiency to maintain the dignity, and were thence diſpoſed not to take it. The idea that the whole force of the royal army conſiſted of knights of honour, or dubbed knights, is ſo extraordinary a circumſtance, that it might have ſhown of itſelf to this eminent writer the ſource of his error. Had every ſoldier in the feudal army received the inveſtiture of arms, could he wear a ſeal, ſurpaſs in ſilk and dreſs, uſe enſigns armorial, and enjoy all the other privileges of knighthood? But, while I hazard theſe remarks, my reader will obſerve, that it is with the greateſt deference I diſſent from Sir William Blackſtone, whoſe abilities are the object of a moſt general and deſerved admiration.

was called *ſcutagium* in Latin, or *ſervitium ſcuti; ſcutum* being then a well-known denomination of money: and in like manner it was called, in the Norman French, *eſcuage;* being indeed a pecuniary inſtead of a military ſervice. The firſt time this appears to have been taken, was in the 5 Hen. II. on account of his expedition to Tolouſe; but it ſoon came to be ſo univerſal, that perſonal attendance fell quite into diſuſe. Hence we find in ancient hiſtories, that, from this period when the kings went to war, they levied ſcutages on their tenants, that is, on all the landholders of the kingdom, to defray their expences and to hire troops: and theſe aſſeſſments in the time of Henry II. ſeem to have been made arbitrarily, and at the king's pleaſure. Which prerogative being greatly abuſed by his ſucceſſors, it became matter of national clamour; and King John was obliged to conſent, by his *magna carta*, that no ſcutage ſhould be impoſed without conſent of parliament. But this clauſe was omitted in his ſon Henry III.'s charter; where we only find, that ſcutages or eſcuage ſhould be taken as they were uſed to be taken in the time of Henry II.; that is, in a reaſonable and moderate manner. Yet afterwards, by ſtatute 25 Edw. I. c. 5. & 6. and many ſubſequent ſtatutes, it was enacted, that the king ſhould take no aids or taſks but by the common aſſent of the realm. Hence it is held in the old books, that eſcuage or ſcutage could not be levied but by conſent of parliament; ſuch ſcutages being indeed the groundwork of all ſucceeding ſubſidies, and the land-tax of later times.

Since, therefore, eſcuage differed from knight-ſervice in nothing but as a compenſation differs from actual ſervice, knight-ſervice is frequently confounded with it. And thus Littleton muſt be underſtood, when he tells us, that tenant by homage, fealty, and eſcuage, was tenant by knight-ſervice: that is, that this tenure (being ſubſervient to the military policy of the nation) was reſpected as a tenure in chivalry. But as the actual ſervice was uncertain, and depended upon emergencies, ſo it was neceſſary that this pecuniary compenſation ſhould be equally uncertain, and depend on the aſſeſſments of the legiſlature ſuited to thoſe emergencies. For had the eſcuage been a ſettled invariable ſum, payable at certain times, it had been neither more nor leſs than a mere pecuniary rent; and the tenure, inſtead of knight ſervice, would have then been of another kind, called SOCAGE.

By the degenerating of knight-ſervice, or perſonal military duty, into eſcuage or pecuniary aſſeſſments, all the advantages (either promiſed or real) of the feodal conſtitutions were deſtroyed, and nothing but the hardſhips remained. Inſtead of forming a national militia compoſed of barons, knights, and gentlemen, bound by their intereſt, their honour, and their oaths, to defend their king and country, the whole of this ſyſtem of tenures now tended to nothing elſe but a wretched means of raiſing money to pay an army of occaſional mercenaries. In the mean time the families of all the nobility and gentry groaned under the intolerable burdens which (in conſequence of the fiction adopted after the conqueſt) were introduced and laid upon them by the ſubtlety and fineſſe of the Norman lawyers. For, beſides the ſcutages to which they were liable in defect of perſonal attendance, which, however, were aſſeſſed by themſelves in parliament, they might be called upon by the king or lord paramount for *aids*, whenever his eldeſt ſon was to be knighted, or his eldeſt daughter married; not to forget the ranſom of his own perſon. The heir, on the death of his anceſtor, if of full age, was plundered of the firſt emoluments ariſing from his inheritance, by way of *relief* and *primer ſeiſin;* and if under age, of the whole of his eſtate during infancy. And then, as Sir Thomas Smith very feelingly complains, "when he came to his own, after he was out of *wardſhip*, his woods decayed, houſes fallen down, ſtock waſted and gone, lands let forth and ploughed to be barren," to make amends, he was yet to pay half a year's profits as a fine for ſuing out his *livery;* and alſo the price or value of his *marriage*, if he refuſed ſuch wife as his lord and guardian had bartered for, and impoſed upon him; or twice that value, if he married another woman. Add to this, the untimely and expenſive honour of *knighthood*, to make his poverty more completely ſplendid. And when, by theſe deductions, his fortune was ſo ſhattered and ruined, that perhaps he was obliged to ſell his patrimony, he had not even that poor privilege allowed him, without paying an exorbitant fine for a *licence* of *alienation*.

A ſlavery ſo complicated and ſo extenſive as this, called aloud for a remedy in a nation that boaſted of her freedom. Palliatives were from time to time applied by ſucceſſive acts of parliament, which aſſuaged ſome temporary grievances. Till at length the humanity of King James I. conſented, for a proper equivalent, to aboliſh them all, though the plan then proceeded not to effect; in like manner as he had formed a ſcheme, and began to put it in execution, for removing the feodal-grievance of heritable juriſdictions in Scotland, which has ſince been purſued and effected by the ſtatute 20 Geo. II. c. 43. King James's plan for exchanging the military tenures ſeems to have been nearly the ſame as that which has been ſince purſued; only with this difference, that by way of compenſation for the loſs which the crown and other lords would ſuſtain, an annual fee-farm rent ſhould be ſettled and inſeparably annexed to the crown, and aſſured to the inferior lords, payable out of every knight's fee within their reſpective ſeignories. An expedient, ſeemingly much better than the hereditary exciſe which was afterwards made the principal equivalent for theſe conceſſions. For at length the military tenures, with all their heavy appendages, were deſtroyed at one blow by the ſtatute 12 Car. II. c. 24. which enacts, "that the court of ward or liveries, and all wardſhips, liveries, primer ſeiſins, and ouſterlemains, values and forfeitures of marriages, by reaſon of any tenure of the king or others, be totally taken away. And that all fines for alienations, tenures by homage, knights-ſervice, and eſcuage, and alſo aids for marrying the daughter or knighting the ſon, and all tenures of the king *in capite*, be likewiſe taken away. And that all ſorts of tenures, held of the king or others, be turned into free and common ſoccage; ſave only tenures in frankalmoign, copyholds, and the honorary ſervices (without the ſlaviſh part) of grand-ſerjeanty." A ſtatute which was a greater acquiſition to the civil property of the kingdom than even *magna carta* itſelf: ſince that only pruned the luxuriances that had grown out of the military tenures, and thereby preſerved them in vigour; but the ſtatute of King Charles extirpated the whole, and demoliſhed both root and branches.

Knights-Errant. During the prevalence of chivalry, the ardour of redreſſing wrongs ſeized many knights ſo powerfully, that, attended by eſquires, they wandered about in ſearch of objects whoſe miſfortunes and miſery required their aſſiſtance and ſuccour. And as ladies engaged more particularly their attention, the relief of unfortunate damſels was the atchievement they moſt courted. This was the riſe of knights-errant, whoſe adventures produced romance. Theſe were originally told as they happened. But the love of the marvellous came to interfere; fancy was indulged in her wildeſt exaggerations; and poetry gave her charms to the moſt monſtrous fictions, and to ſcenes the moſt unnatural and gigantic. See Knight.

Knight-Bachelor. See Bachelor.

Knight-Baronet. See Baronet.

Knights of the ſhire, or *Knights of Parliament*, in England, are two gentlemen of worth, choſen on the king's writ in *pleno comitatu*, by ſuch of the freeholders of every county as can expend 40 s. *per annum*, to repreſent ſuch county in parliament. Theſe, when every man who held a knights-fee *in capite* of the crown was cuſtomarily conſtrained to be a knight, were of neceſſity to be *milites gladio cincti*, for ſo the writ runs to this day; but now cuſtom admits eſquires to be choſen to this office. They muſt have at leaſt 500 l. *per annum;* and their expences are to be defrayed by the county, though this be ſeldom now required.

Knight-Marſhal, an officer in the king's houſehold, who has juriſdiction and cognizance of any tranſgreſſion within the king's houſehold and verge; as alſo of contracts made there, whereof one of the houſe is party.

Knights, in a ſhip, two ſhort thick pieces of wood, commonly carved like a man's head, having four ſhivers in each, three for the halyards; and one for the top to run in: one of them ſtands faſt bolted on the beams abaft the foremaſt, and is therefore called the *fore-knight;* and the other, ſtanding abaft the mainmaſt, is called the *main-knight*.

KNIGHTHOOD, a military order or honour, or a mark or degree of ancient nobility, or reward of perſonal virtue and merit.

There are four kinds of knighthood; military, regular, honorary, and ſocial.

Military Knighthood, is that of the ancient knights, who acquired it by high feats of arms. They are called *milites*, in ancient charters and titles, by which they were diſtinguiſhed from mere bachelors, &c. Theſe knights were girt with a ſword, and a pair of gilt ſpurs; whence they were called *equites aurati*.

Knighthood is not hereditary, but acquired. It does not come into the world with a man like nobility; nor can it be revoked. The ſons of kings, and kings themſelves, with all other ſovereigns, heretofore had knighthood conferred on them as a mark of honour. They were uſually knighted at their baptiſm or marriage, at their coronation, before or after a battle, &c.

Regular Knighthood, is applied to all military orders which profeſs to wear ſome particular habit, to bear arms againſt the infidels, to ſuccour and aſſiſt pilgrims in their paſſage to the Holy Land, and to ſerve in hoſpitals where they ſhould be received; ſuch were the knights templars, and ſuch ſtill are the knights of Malta, &c.

*Honorary-*Knighthood, is that which princes confer on other princes, and even on their own great miniſters and favourites; ſuch are knights of the Garter, Bath, St Patrick, Nova Scotia, Thiſtle, &c. See theſe articles; and for a repreſentation of their different inſignia, ſee Plate CCLVIII.

Social Knighthood, is that which is not fixed nor confirmed by any formal inſtitution, nor regulated by any laſting ſtatutes; of which kind there have many orders been erected on occaſion of factions, of tilts and tournaments, maſquerades, and the like.

The abbot Bernardo Juſtiniani, at the beginning of his Hiſtory of Knighthood, gives us a complete catalogue of the ſeveral orders: according to this computation, they are in number 92. Favin has given us two volumes of them under the title of *Theatre d'Honneur & de Chevalerie*. Menenius has publiſhed *Deliciæ Equeſtrium Ordinum*, and Andr. Mendo has written *De Ordinibus Militaribus*. Beloi has traced their original; and Geliot, in his Armorial Index, has given us their inſtitutions. To theſe may be added, Father Meneſtrier *de la Chevalerie Ancienne & Moderne*, Michieli's *Treſor Militaire*, Caramuel's *Theologia Regolare*, Miræus's *Origines Equeſtrium ſive Militarium Ordinum:* but above all, Juſtinian's *Hiſtorie Chronologiche dell'Origine de gl Ordine Militari, e di tutte le Religione Cavalereſche;* the edition which is fulleſt is that of Venice in 1692, in two vols. fol.

KNIGHTLOW Hill, or Cross, which gives name to a hamlet in Warwickſhire, ſtands in the road from Coventry to London, at the entrance of Dunſmore-Heath. About 40 towns in this hamlet, which are ſpecified by Dugdale, are obliged, on the forfeiture of 30 s. and a white bull, to pay a certain rent to the lord of the hamlet, called *wroth-money* or *ſwarf-penny;* which muſt be depoſited every Martinmas-day in the morning at this croſs before ſun-riſe; when the party paying it muſt go thrice about the croſs, and ſay the wroth-money, and then lay it in the hole of the ſaid croſs before good witneſs.

KNIGHTON, a well built town of Radnorſhire in South Wales, 145 miles from London. It is pleaſantly ſituated on an elevation riſing from a ſmall river, which divided this part of Wales from Shropſhire. It carries on a conſiderable trade, and has a market and a fair.

KNIGHTSBRIDGE, a village of Middleſex, and the firſt village from London in the great weſtern road. It lies in the pariſhes of St Margaret's Weſtminſter, and St George by Hanover-Square; and has a chapel, which is nevertheleſs independent. At the entrance of it from London ſtands that noble infirmary for ſick and wounded, called *St George's Hoſpital*, erected and maintained by the contributions of the nobility and gentry, of whom there are no leſs than 300 governors.

In the centre of this village, there is a fabric lately erected, where is carried on one of the moſt conſiderable manufactures in England for painting floor-cloths, &c.

KNOCTOPHER, a borough and market town of Ireland in the county of Kilkenny and province of Leinſter, 63 miles from Dublin. It returns two members to parliament: patronage in the families of Langriſhe and Ponſonby.

KNOLL, a term uſed in many parts of Britain for the top of a ſmall hill, or for the hill itſelf.

KNOLLES (Richard), was born in Nothamptonſhire, about the middle of the 16th century, and educated at Oxford, after which he was appointed maſter of the free-ſchool at Sandwich in Kent. He compoſed *Grammaticæ Latinæ, Græcæ, et Hebraicæ, compendium, cum radicibus*, London 1606; and ſent a great number of well grounded ſcholars to the univerſities. He alſo ſpent 12 years in compiling a hiſtory of the Turks; which was firſt printed in 1610, and by which he has perpetuated his name. In the later editions it is called, *The general hiſtory of the Turks, from the firſt beginning of that nation to the riſing of the Ottoman family*, &c. He died in 1610, and this hiſtory has been ſince continued by ſeveral hands: the beſt continuation is that by Paul Ricaut conſul at Smyrna, folio, London 1680. Knolles wrote alſo, "The lives and conqueſts of the Ottoman kings and emperors to the year 1610;" which was not printed till after his death in 1621, to which time it was continued by another hand; and laſtly, "A brief diſcourſe of the greatneſs of the Turkiſh empire, and wherein the greatneſs of the ſtrength thereof conſiſteth, &c."

KNOT, a part of a tree, from which ſhoots out branches, roots, or even fruit. The uſe of the knots is, to ſtrengthen the ſtem; they ſerve alſo as ſearces, to filtrate, purify, and refine the juices raiſed up for the nouriſhment of the plant.

Knots of a Rope, among ſeamen, are diſtinguiſhed into three kinds, viz. whole-knot, that made ſo with the lays of a rope that it cannot ſlip, ſerving for ſheets, tacks, and ſtoppers: bow-line knot, that ſo firmly made and faſtened to the cringles of the ſails, that they muſt break or the ſail ſplit before it ſlips: and ſheep-ſhank knot, that made by ſhortening a rope without cutting it, which may be preſently looſened, and the rope not the worſe for it.

Knots of the Log-line, at ſea, are the diviſions of it. See the article LOG.

KNOT, in ornithology. See TRINGA.

Knot-Graſs, or *Biſtort*. See POLYGONUM.

KNOT (Edward), born in Northumberland in England, entered among the Jeſuits at the age of 26, being already in prieſt's orders. This happened in the year 1606. He taught a long time at Rome in the Engliſh college; and was afterwards appointed ſub-provincial of the college of England, and was ſent provincial thither. He was twice honoured with that employment. He was preſent as provincial at the general aſſembly of the order of the Jeſuits held at Rome in 1646, and was choſen definitor. He died in 1696. He publiſhed ſeveral pieces; among the reſt, Mercy and Truth, or Charity maintained by the Catholics; againſt Dr Potter, who had charged the church of Rome with wanting charity, becauſe ſhe aſſerts that a man cannot be ſaved in the Proteſtant communion.

KNOTTESFORD, a town of Cheſhire, near the Merſey, 184 miles from London, is divided into the upper and lower towns by a rivulet called *Bicken*. In the former is the church; and in the latter is a chapel of eaſe, the market and town-houſe. It has a market and three fairs.

KNOTTINGLEY, a town in the weſt riding of Yorkſhire, on the Aire near Ferrybridge, is noted for its merchandize in lime. The ſtones of which it is made are dug up plentifully at Elmet, and here burnt; from whence it is conveyed at certain ſeaſons in great quantities to Wakefield, Sandal, and Standbridge, for ſale, and ſo carried into the weſtern parts of the county for manure.

KNOUT, the name of a puniſhment inflicted in Ruſſia, with a kind of whip called *knout*, and made of a long ſtrap of leather prepared for this purpoſe. With this whip the executioners dexterouſly carry off a ſlip of ſkin from the neck to the bottom of the back laid bare to the waiſt, and repeating their blows, in a little while rend away all the ſkin off the back in parallel ſtrips. In the common knout the criminal receives the laſhes ſuſpended on the back of one of the executioners: but in the great knout, which is generally uſed on the ſame occaſions as racking on the wheel in France, the criminal is raiſed into the air by means of a pully fixed to the gallows, and a cord faſtened to the two wriſts tied together; a piece of wood is placed between his two legs alſo tied together; and another of a crucial form under his breaſt. Some times his hands are tied behind over his back; and when he is pulled up in this poſition, his ſhoulders are diſlocated. The executioners can make this puniſhment more or leſs cruel: and it is ſaid, are ſo dexterous, that when a criminal is condemned to die, they can make him expire at pleaſure either by one or ſeveral laſhes.

KNOWLEDGE, is defined by Mr Locke to be the perception of the connection and agreement or diſagreement and repugnancy of our ideas. See METAPHYSICS and LOGIC.

KNOX (John), the hero of the reformation in Scotland, was born in 1505, at Gifford near Haddington in Eaſt Lothian; and educated at the univerſity of St Andrew's, where he took a degree in arts, and commenced teacher very early in life. At this time the new religion of Martin Luther was but little known in Scotland; Mr Knox therefore at firſt was a zealous Roman-catholic: but attending the ſermons of a certain black friar, named *Guialliam*, he began to waver in his opinions; and afterwards converſing with the famous Wiſhart, who in 1544 came to Scotland with the commiſſioners ſent by Henry VIII. he renounced the Romiſh religion, and became a zealous reformer. Being appointed tutor to the ſons of the lairds of Ormiſtoun and Langniddery, he began to inſtruct them in the principles of the Proteſtant religion; and on that account was ſo violently perſecuted by the biſhop of St Andrew's, that with his two pupils he was obliged in the year 1547 to take ſhelter in the caſtle of that place. But the caſtle was beſieged and taken by 21 French galleys. He continued a priſoner on board a galley two years, namely, till the latter end of the year 1549; when being ſet at liberty, he landed in England, and having obtained a licence, was appointed preacher, firſt at Berwick, and afterwards at Newcaſtle. Strype conjectures that in 1552 he was appointed chaplain to Edward VI. He certainly obtained an annual penſion of 40l. and was offered the living of Allhallows in London; which he refuſed, not chooſing to conform to the liturgy.

Soon after the acceſſion of Queen Mary, he retired to Geneva; whence, at the command of John Calvin, he removed to Francfort, where he preached to the exiles; but a difference ariſing on account of his refuſing to read the Engliſh liturgy, he went back to Geneva; and from thence in 1555 returned to Scotland, where the reformation had made conſiderable progreſs during his abſence. He now travelled from place to place, preaching and exhorting the people with unremitting zeal and reſolution. About this time (1556), he wrote a letter to the queen regent, earneſtly intreating her to hear the Proteſtant doctrine; which letter ſhe treated with contempt. In the ſame year the Engliſh Calviniſts at Geneva invited Mr Knox to reſide among them. He accepted their invitation. Immediately after his departure from Scotland, the biſhop ſummoned him to appear, and he not appearing, condemned him to death for hereſy, and burnt his effigy at the croſs of Edinburgh.

Our reformer continued abroad till the year 1559, during which time he publiſhed his "Firſt blaſt againſt the monſtrous regiment of women." Being now returned to Scotland, he reſumed the great work of reformation with his uſual ardour, and was appointed miniſter at Edinburgh. In 1561 Queen Mary arrived from France. She, it is well known, was bigotted to the religion in which ſhe had been educated; and on that account was expoſed to continual inſults from her reformed ſubjects. Mr Knox himſelf frequently inſulted her from the pulpit; and when admitted to her preſence, regardleſs of her ſex, her beauty, and her high rank, behaved to her with a moſt unjuſtifiable freedom. In the year 1571 the reformer was obliged to leave Edinburgh, on account of the confuſion and danger from the oppoſition to the earl of Lenox, then regent; but he returned the following year, and reſumed his paſtoral functions. He died at Edinburgh in November 1572, and was buried in the church-yard of St Giles's in that city.—His hiſtory of the Reformation was printed with his other works at Edinburgh in 1584, 1586, 1644, 1732. He publiſhed many other pieces; and ſeveral more are preſerved in Calderwood's Hiſtory of the Church of Scotland. He left alſo a conſiderable number of manuſcripts, which in 1732 were in the poſſeſſion of Mr Woodrow, miniſter of Eaſtwood.

As to his character, it is eaſily underſtood, notwithſtanding the extreme diſſimilitude of the two portraits drawn by Popiſh and Calviniſtical pencils. According to the firſt, he was a devil, in the ideas of the latter, an angel. He was certainly neither. The following character is drawn by Dr Robertſon. "Zeal, intrepidity, diſintereſtedneſs, were virtues that he poſſeſſed in an eminent degree. He was acquainted too with the learning cultivated in that age; and excelled in that ſpecies of eloquence which is calculated to rouſe and to inflame. His maxims, however, were often too ſevere, and the impetuoſity of his temper exceſſive. Rigid and uncomplying, he ſhowed no indulgence to the infirmities of others. Regardleſs of the diſtinctions of rank and character, he uttered his admonitions with an acrimony and vehemence more apt to irritate than to reclaim; and this often betrayed him into indecent expreſſions, with reſpect to Queen Mary's perſon and conduct. Thoſe very qualities, however, which now render his character leſs amiable, fitted him to be the inſtrument of Providence for advancing the reformation among a fierce people, and enabled him to face dangers, and to ſurmount oppoſition, from which a perſon of a more gentle ſpirit would have been apt to ſhrink back. By an unwearied application to ſtudy and to buſineſs, as well as by the frequency and fervour of his public diſcourſes, he had worn out a conſtitution naturally ſtrong. During a lingering illneſs, he diſcovered the utmoſt fortitude; and met the approach of death with a magnanimity inſeparable from his character. He was conſtantly employed in acts of devotion, and comforted himſelf with thoſe proſpects of immortality, which not only preſerve good men from deſponding, but fill them with exultation in their laſt moments. The earl of Morton, who was preſent at his funeral, pronounced his eulogium in a few words, the more honourable for Knox, as they came from one whom he had often cenſured with peculiar ſeverity; "Here lies he who never feared the face of man."

KNOXIA, in botany: A genus of the monogynia order, belonging to the tetrandria claſs of plants; and in the natural method ranking under the 47th order, *Stellatæ*. The corolla is monopetalous, and funnel-ſhaped; there are two furrowed ſeeds; the calyx has one leaf larger than the reſt.

KNUTZEN (Matthias), a native of Holſtein, the only perſon on record who openly profeſſed and taught atheiſm. It is ſaid he had about 1000 diſciples in different parts of Germany. They were called *Conſcienciaries*, becauſe they aſſerted there is no other God, no other religion, no other lawful magiſtracy, but conſcience, which teaches every man the three fundamental principles of the law of nature:—To hurt nobody, to live honeſtly, and to give every one his due. Several copies of a letter of his from Rome were ſpread abroad, containing the ſubſtance of his ſyſtem. It is to be found entire in the laſt edition of Micrælius.

KOEDOE. See CAPRA.

KOEI-TCHEOU, a province of China, and one of the ſmalleſt in the kingdom. On the ſouth it has Quang-ſi, on the eaſt Hou-quang, on the north Se-tchuen, and Yun-nan on the weſt. The whole country is almoſt a deſert, and covered with inacceſſible mountains: it may juſtly be called the *Siberia* of China. The people who inhabit it are mountaineers, accuſtomed to independence, and who ſeem to form a ſeparate nation: they are no leſs ferocious than the ſavage animals among which they live.—The mandarins and governors who are ſent to this province are ſometimes diſgraced noblemen, whom the emperor does not think proper to diſcard entirely, either on account of their alliances, or the ſervices which they have rendered to the ſtate: numerous garriſons are entruſted to their charge, to over-awe the inhabitants of the country; but theſe troops are found inſufficient, and the court deſpairs of being ever able thoroughly to ſubdue theſe untractable mountaineers.—Frequent attempts have been made to reduce them to obedience, and new forts have from time to time been erected in their country; but the people, who are not ignorant of thoſe deſigns, keep themſelves ſhut up among their mountains, and ſeldom iſſue forth but to deſtroy the Chineſe works or ravage their lands.—Neither ſilk-ſtuffs nor cotton cloths are manufactured in this province; but it produces a certain herb much reſembling our hemp, the cloth made of which is uſed for ſummer dreſſes. Mines of gold, ſilver, quickſilver, and copper, are found here; of the laſt metal, thoſe ſmall pieces of money are made which are in common circulation throughout the empire.—Koei-tcheou contains 10 cities of the firſt claſs, and 38 of the ſecond and third.

KŒMPFER (Engelbert), was born in 1651 at Lemgow in Weſtphalia. After ſtudying in ſeveral towns, he went to Dantzick, where he gave the firſt public ſpecimen of his proficiency by a diſſertation *De majeſtatis diviſione*. He then went to Thorn; and from thence to the univerſity of Cracow, where he took his degree of doctor in philoſophy; after which he went to Koningſberg in Pruſſia, and ſtaid there four years. He next travelled into Sweden, where he ſoon began to make a figure, and was appointed ſecretary of the embaſſy to the ſophi of Perſia. He ſet out from Stockholm with the preſents for that emperor; and went through Aaland, Finland, and Ingermanland, to Narva, where he met Mr Fabricius the ambaſſador, who had been ordered to take Moſcow in his way. The ambaſſador having ended his negociations at the Ruſſian court, ſet out for Perſia. During their ſtay, two years, at Iſpahan, Dr Kœmpfer, whoſe curious and inquiſitive diſpoſition ſuffered nothing to eſcape him unobſerved, made all the advantages poſſible of ſo long an abode in the capital of the Perſian empire. The ambaſſador, towards the cloſe of 1685, preparing to return into Europe, Dr Kœmpfer choſe rather to enter into the ſervice of the Dutch Eaſt India company, in quality of chief ſurgeon to the fleet, then cruiſing in the Perſian Gulph. He went aboard the fleet, which, after touching at many Dutch ſettlements, came to Batavia in September 1689. Dr Kœmpfer here applied himſelf chiefly to natural hiſtory. Hence he ſet out for Japan, in quality of phyſician to the embaſſy which the Dutch Eaſt India company ſends once a year to the Japaneſe court. He quitted Japan to return to Europe in 1692. In 1694 he took his degree of Doctor of phyſic at Leyden; on which occaſion he communicated, in what are called *Inaugural Theſes*, ten very ſingular and curious obſervations made by him in foreign countries. He intended to digeſt his memoirs into proper order; but was prevented, by being made phyſician to the count de Lippe. He died in 1716. His principal works are, 1. *Amœnitates Exoticæ*, in 4to: a work which includes many curious and uſeful particulars in relation to the civil and natural hiſtory of the countries through which he paſſed. 2. *Herbarium Ultra-Gangeticum*. 3. The hiſtory of Japan, in German, which is very curious and much eſteemed; and for which the public is indebted to the late Sir Hans Sloane, who purchaſed for a conſiderable ſum of money all our author's curioſities, both natural and artificial, as likewiſe all his drawings and manuſcript memoirs, and prevailed with the late learned Dr Scheuchzer to tranſlate the Japaneſe hiſtory into Engliſh.

KŒMPFERIA. See KEMPFERIA.

KOENIG (Samuel), a learned philoſopher and mathematician, was profeſſor of philoſophy at Franeker, and afterwards at the Hague, where he became librarian to the Stadtholder, and died there in 1757. He wrote ſeveral works which are eſteemed.

KOENIGIA, in botany; a genus of the trigynia order, belonging to the triandria claſs of plants. The calyx is triphyllous; there is no corolla: and but one ovate and naked ſeed.

KONGSBERG, a town of Norway, belonging to Denmark, and celebrated for its ſilver mines, whoſe produce has been conſiderably exaggerated by moſt of the travellers that have publiſhed on that ſubject. The town, which ſtretches on both ſides the river Lowe, contains about 1000 houſes, and including the miners 6000 inhabitants. The mines, which lie about two miles from the town, were firſt diſcovered and worked during the reign of Chriſtian IV.; and of their preſent ſtate the following account is given by Mr Coxe†. There are 36 mines now working; the deepeſt whereof called *Segen-Gottes in der North*, is 652 feet perpendicular. The matrix of the ore is the ſaxum of Linnæus. The ſilver is extracted according to the uſual proceſs, either by ſmelting the ore with lead or by pounding. The pure ſilver is occaſionally found in ſmall grains and in ſmall pieces of different ſizes, ſeldom weighing more than four or five pounds. Sometimes, indeed, but extremely rare, maſſes of a conſiderable bulk have been diſcovered; and one in particular which weighed 409 marks, and was worth 3000 rix-dollars, or 600 l. This piece is ſtill preſerved in the cabinet of curioſities at Copenhagen. Formerly theſe mines produced annually 350,000 rix-dollars, or 70,000 l.; ſterl. and in 1769, even 79,000l.; at preſent they ſeldom yield only from 50,000l. to 54,000 l. Formerly above 4000 men were neceſſary for working the mines, ſmelting and preparing the ore; but a few years ago 2400 miners were removed to the cobalt works lately eſtabliſhed at Foſſum and to other mines, and the number is now reduced to 2500. By theſe and other reductions, the expence, which was before eſtimated at 5760 l. *per* month, now amounts to only 4400 l. or about 52,800 l. *per annum*. Yet even with this diminution the expences generally equal, and ſometimes exceed, the profits. Government, therefore, draws no other advantage from theſe mines, than by giving employment to ſo many perſons, who would be otherwiſe incapable of gaining their livelihood, and by receiving a certain quantity of ſpecie, which is much wanted in the preſent exhauſted ſtate of the finances in Denmark. For ſuch is the deficiency of ſpecie, that even at Kongſberg itſelf change for a bank note is with difficulty obtained. The miners are paid in ſmall bank notes, and the whole expences are defrayed in paper currency. The value of 13,000 rix-dollars, or 2600 l. in block ſilver is annually ſent to Copenhagen; the remainder of the ore is coined in the mint of Kongſberg, and transferred to Copenhagen. The largeſt piece of money now ſtruck at Kongſberg is only eight ſkillings or four pence.

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† *Travels into Poland*, &c. vol. v. p. 234.

KONIG (George Matthias), a learned German, born at Altorf in Franconia in 1616. He became profeſſor of poetry and of the Greek tongue there, and librarian to the univerſity; in which laſt office he ſucceeded his father. He gave ſeveral public ſpecimens of his learning; but is principally known for a Biographical Dictionary, intitled, *Bibliotheca vetus et nova*, 4to, Altorf, 1674: which, though it is very defective, is uſeful to biographers. He died in 1699.

KONIG (Emanuel), a learned phyſician of Baſil, born in that city in 1658, whoſe medicinal works were ſo eſteemed in Switzerland, that he was conſidered as a ſecond Avicenna. He died at Baſil in 1731.

KONINGSBERG, a town of Poland, and capital of Regal Pruſſia, with a magnificent palace, in which is a hall 274 feet long and 59 broad without pillars to ſupport it, and a handſome library. It is about five miles in circumference; and including the garriſon of 7000 men contains 60,000 inhabitants. The town-houſe, the exchange, and the cathedral church, are all very fine ſtructures. The tower of the caſtle is exceeding high; and has 284 ſteps to go to the top, from whence there is a very diſtant proſpect. There are 18 churches in all; of which 14 belong to the Lutherans, three to the Calviniſts, and one to the Papiſts. It ſtands on the Pregel, a navigable river which flows from the north-weſtern provinces of Poland, and here falls into the eaſtern extremity of the Friſche Haf, an inlet of the Baltic. No ſhips drawing more than ſeven feet water can paſs the bar and come up to the town; ſo that the large veſſels anchor at Pillau, a ſmall town on the Baltic, which is the port of Koningſberg; and the merchandiſe is ſent in ſmaller veſſels to this place. Its trade is very conſiderable.—Koningſberg contains an univeſity founded by Albert of Brandenburgh. According to the original endowment there were 40 profeſſors; but their number is now reduced to 16. Each profeſſor receives a ſalary of about 50l. *per annum*, which may be increaſed by private lectures. In 1775, the univerſity contained 800 ſtudents, of whom 200 are lodged and boarded at the expence of the crown. There are three public libraries in the town, the royal or univerſity library, the town library, and the *Wallenrodt library*, ſo called becauſe it was given by Martien von Wallenrodt, in 1650. E. L. 21. 35. N. L. 54. 43.

KORAN, or ALCORAN. See ALCORAN and MAHOMETANISM.

KOREKI, the country of the Koriacs. See the next article,

KORIACS, a people inhabiting the northern part of Kamtchatka, and all the coaſt of the Eaſtern Ocean from thence to the Anadir. They are divided into the Rein-deer or Wandering Koriacs, and the Fixed Koriacs. The former lead an erratic life, in the tract bounded by the Penſchinſka ſea to the ſouth-eaſt, the river Kowyma to the weſt, and the river Anadir to the north. They wander from place to place with their rein-deer, in ſearch of the moſs, the food of thoſe animals, which are their only wealth. They are ſqualid, cruel, and warlike; the terror of the Fixed Koriacs as much as the Tſchutſki are of them. They never frequent the ſea, nor live on fiſh. Their habitations are jourts, or places half ſunk in the earth; and they never uſe balagans or ſummer-houſes elevated on poſts like the Kamtchatkans. They are in their perſons lean, and very ſhort; have ſmall heads and black hair, which they ſhave frequently: their faces are oval; their noſe is ſhort; their eyes are ſmall; their mouth is large; and their beard black and pointed, but often eradicated.—The fixed Koriacs are likewiſe ſhort; but rather taller than the others, and ſtrongly made: the Anadir is alſo their boundary to the north, the ocean to the eaſt, and the Kamtchatkans to the ſouth. They have few rein-deer, which they uſe in their ſledges; but neither of the tribes of Koriacs are civilized enough to apply them to the purpoſes of the dairy. Each ſpeak a different dialect of the ſame language; but the Fixed in moſt things reſemble the Kamtchatkans, and, like them, live almoſt entirely on fiſh. They are timid to a high degree, and behave to their wandering brethern with the utmoſt ſubmiſſion; who call them by a name which ſignifies *their ſlaves*. Theſe poor people ſeem to have no alternative; for, by reaſon of the ſcarcity of rein-deer, they depend on theſe tyrants for the eſſential article of clothing.—Theſe two nations Mr Pennant ſuppoſes, from their features, to be the offspring of Tartars, which have ſpread to the eaſt, and degenerated in ſize and ſtrength by the rigour of the climate, and often by ſcarcity of food.

KOS, in Jewiſh antiquity, a meaſure of capacity, containing about four cubic inches: this was the cup of bleſſing out of which they drank when they gave thanks after ſolemn meals, like that of the paſſover.

KOTTERUS (Chriſtopher), was one of the three fanatics whoſe viſions were pbbliſhed at Amſterdam in 1657, with the title of *Lux in Tenebris*. He lived at Sprotta in Sileſia, and his viſions began in 1616. He fancied he ſaw an angel under the form of a man, who commanded him to go and declare to the magiſtrates, that, unleſs the people repented, the wrath of God would make dreadful havock. The elector Palatine, whom the Proteſtants had declared king of Bohemia, was introduced in theſe viſions. Kotterus waited on him at Breſlaw in December 1620, and informed him of his commiſſion. He went to ſeveral other places, and at laſt to the court of Brandenburg. As moſt of theſe predictions promiſed felicity to the elector palatine, and unhappineſs to his imperial majeſty, the emperor's fiſcal in Sileſia and Luſatia got him ſeized, ſet on the pillory, and baniſhed the emperor's dominions. Upon this he went to Luſatia, and there lived unmoleſted till his death, which happened in 1647.

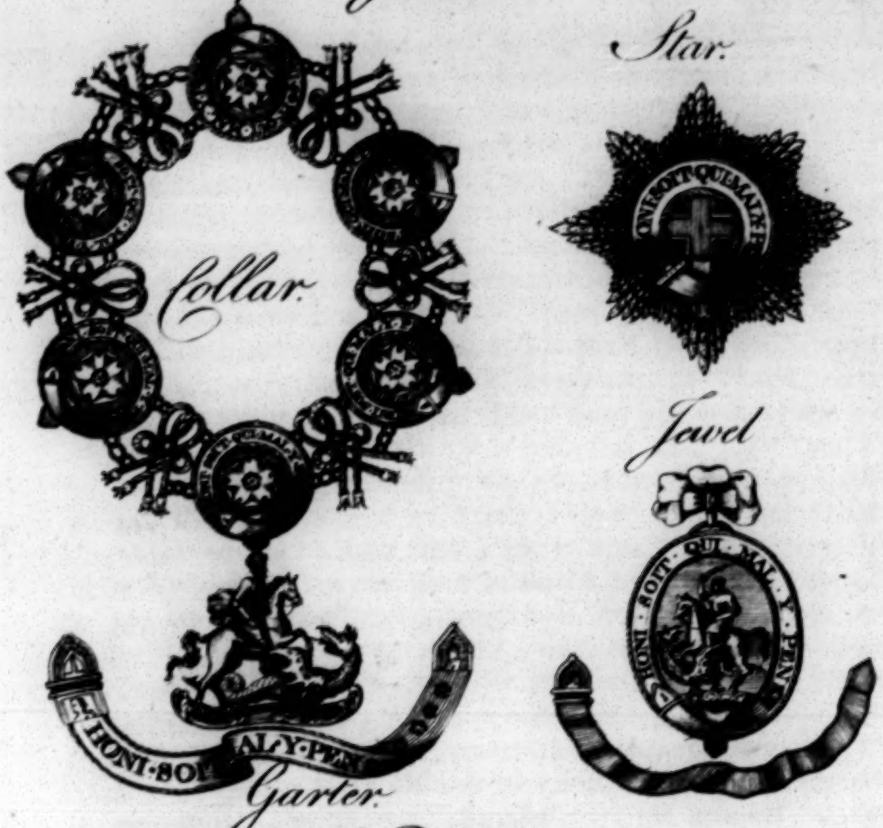
KOU-CHU, a Chineſe ſhrub, which bears a great reſemblance to the fig-tree both in the make of its branches and the form of its leaves. From its root ſeveral twigs or ſhoots generally ſpring up, which form a kind of buſh; but ſometimes it conſiſts of only one ſhoot. The wood of the branches of the kou-chu is ſoft and ſpongy, and covered with bark like that of the fig-tree. Its leaves are deeply indented, and their colour and the texture of their fibres are exactly the ſame as thoſe of the fig-tree; but they are larger and thicker, and much rougher to the touch.

Groſier's China, vol. i. p. 486.

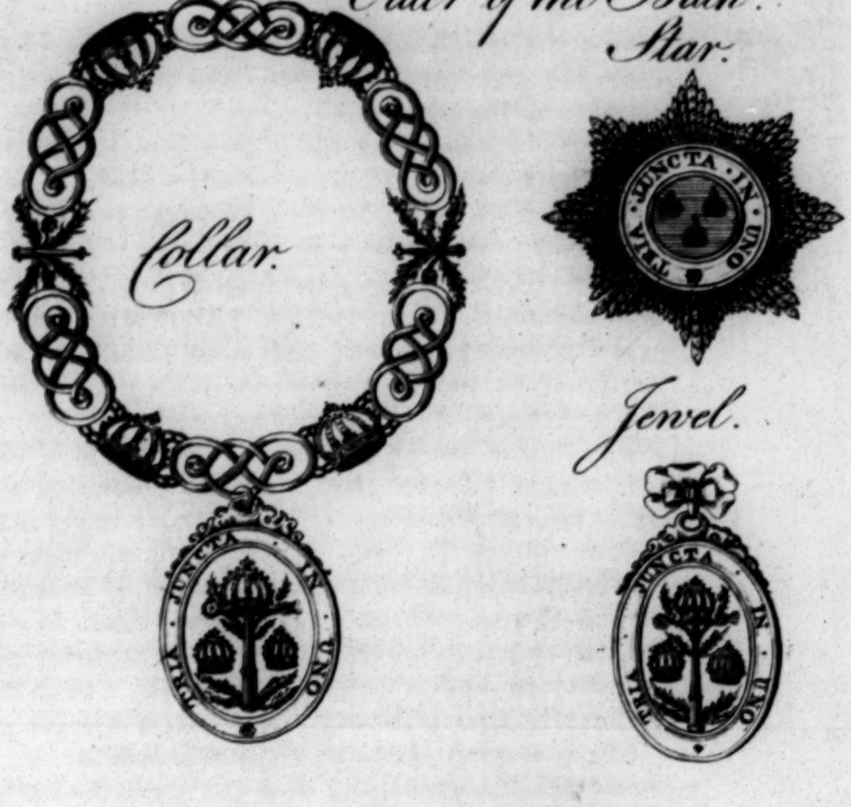
KNIGHTHOOD.

Plate CCLVIII

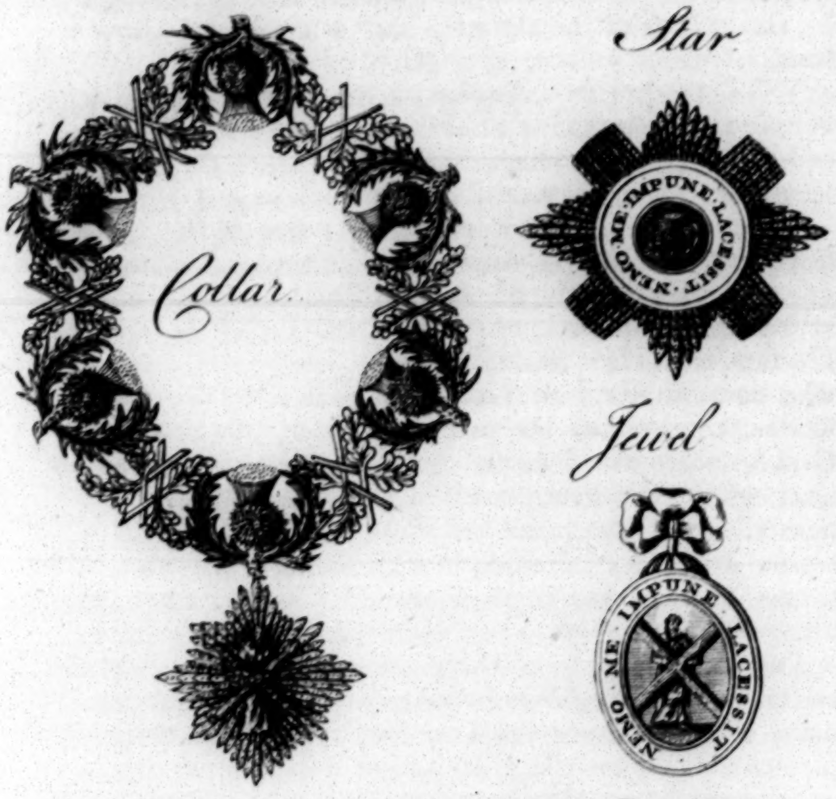
Order of the Garter.


Star.
Collar.
Jewel
HONI SOIT QUI MAL Y PENSE
Garter.

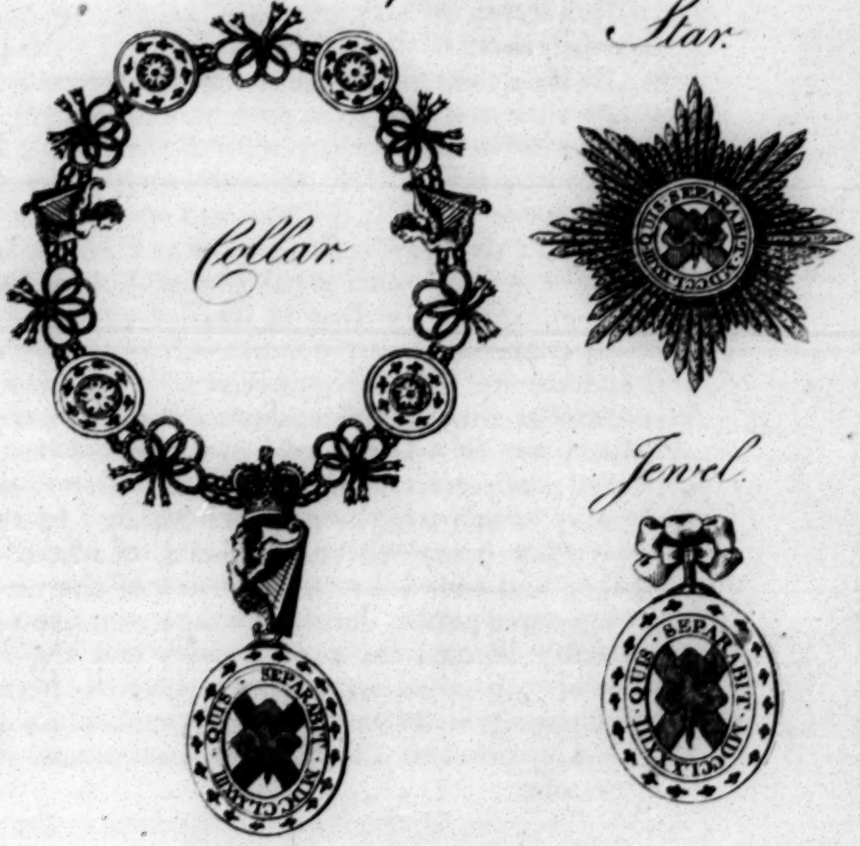
Order of the Bath.


Star.
TRIA JUNCTA IN UNO
Collar.
Jewel.

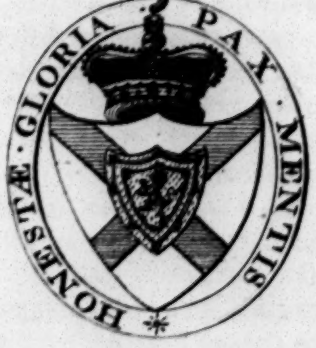
Order of the Thistle.


Star.
NEMO ME IMPUNE LACESSIT
Collar.
Jewel

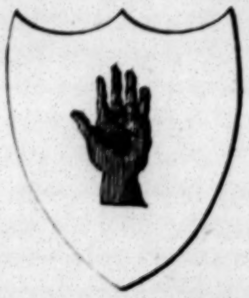
Order of St. Patrick.


Star.
QUIS SEPARABIT MDCCLXXXIII
Collar.
Jewel.

Barnet of Nova Scotia.


HONESTÆ GLORIA PAX MENTIS

Baronet of England.



Scot Philada.

Engravd. by F. Challes.

BRITISH MUSEUM

This tree yields a kind of milky juice, which the Chineſe uſe for laying on gold-leaf in gilding. They make one or more inciſions in the trunk, into which they inſert the edges of a ſhell, or ſomething elſe of the ſame kind, to receive the ſap. When they have extracted a ſufficiency, they uſe it with a ſmall bruſh, and delineate whatever figures they intend for the decoration of their wood. They then lay on the gold-leaf, which is ſo ſtrongly attracted by this liquor, that it never comes off.

KOUANIN, in the Chineſe language, the name of a tutelary deity of women. The Chineſe make great numbers of the figures of this deity in white porcelain, and ſend them to all parts of the world, as well as keep them in their own houſes. The figure repreſents a woman with a child in her arms. The women who have no children pay a ſort of adoration to theſe images, and ſuppoſe the deity they repreſent to have power to make them fruitful. The ſtatue always repreſents a handſome woman very modeſtly attired.

KOUC, or Koeck (Peter), an excellent painter in the 16th century, was born at Aloſt, and was the diſciple of Bernard Van Orley, who lived with Raphael. He went to Rome; and by ſtudying the beautiful pieces which he found there, formed an excellent taſte, and became a very correct deſigner. On his return to his own country, he undertook the office of directing the execution of ſome tapeſtry-work after the deſigns of Raphael. He was afterwards perſuaded by ſome merchants of Bruſſels to undertake a voyage to Conſtantinople; but when he came there, finding that the Turks were not allowed by their religion to draw any figure, and that there was nothing for him to do but to draw deſigns for tapeſtry, he ſpent his time in deſigning the particular proſpects in the neighbourhood of Conſtantinople, and the manner of the Turks living; of which he has left many wooden cuts, that alone ſuffice to give an idea of his merit. After his return from Conſtantinople he ſettled at Antwerp, where he drew ſeveral pictures for the emperor Cha. V. He was alſo a good architect; and, in the latter part of his life, wrote A Treatiſe of Sculpture, Geometry, and Perſpective; and tranſlated Vitruvius and Serliv into the Flemiſh tongue. He died in 1550.

KOULI-KHAN (Thamas), or *Schah Nadir*, was not the ſon of a ſhepherd, as the authors of the Engliſh Biographical Dictionary aſſert; his father being chief of a branch of the tribe of Affchars, and governor of a fortreſs erected by that people againſt the Turks. Upon his father's death, his uncle uſurped his government, under the pretext of taking care of it during the minority of Kouli-Khan; or, more properly, young Nadir. Diſguſt at this affront made him commence adventurer. He entered into the ſervice of Beglerbeg, governor of Muſchada, in the Khoraſan; who, diſcovering in him ſtrong marks of a military genius, promoted him to the command of a regiment of cavalry. In 1720, the Uſbec tartars having made an irruption into the Khoraſan with 10,000 men, Beglerbeg, whoſe whole force conſiſted only of 4000 horſe and 2000 infantry, called a council of war, in which it was declared imprudent to face the enemy with ſuch an inferior force: but Kouli-Khan propoſed to march againſt the enemy, and engaged to conduct the expedition, and to be anſwerable for the ſucceſs of it. He was accordingly made general; defeated the Tartars, and took their commander priſoner. Hoſſein Beglerbeg received him at his return with marks of diſtinction: but growing jealous of his riſing fame, inſtead of obtaining him the rank of lieutenant-general of the Khoraſan, as he had promiſed, obtained it for another; which ſo exaſperated Kouli-Khan, that he publicly complained of the governor's ingratitude and perfidy; who thereupon broke him, and ordered him to be puniſhed with the baſtinado ſo ſeverely, that the nails of his great toes fell off. This affront occaſioned his flight, and his joining a banditti of robbers (not his ſtealing his father's or his neighbour's ſheep). The reſt of his adventures are too numerous to be inſerted in this work. In 1729 he was made general of Perſia by Schah Thamas, and permitted to take his name *Thamas*, and that of *Khuli*, which ſignifies *ſlave*: his title therefore was, *The ſlave of Thamas*; but he was ennobled by the addition of Khan. In 1736, he fomented a revolt againſt his maſter, for having made an ignominious peace with the Turks; and having the army at his command, he procured his depoſition, and his own advancement to the throne. In 1739 he conquered the Mogul empire; and from this time growing as cruel as he was ambitious, he at length met with the uſual fate of tyrants, being aſſaſſinated by one of his generals, in league with his nephew and ſucceſſor, in 1747, aged ſixty.

KOUMISS, a ſort of wine made in Tartary, where it is uſed by the natives as their common beverage during the ſeaſon of it, and often ſerves them inſtead of all other food. It is ſaid to be ſo nouriſhing and ſalutary, that the Baſchkir Tartars, who towards the end of winter are much emaciated, no ſooner return in ſummer to the uſe of koumiſs, than they become ſtrong and fat. The author of "A hiſtorical deſcription of all the nations which compoſe the Ruſſian empire," ſays, ſpeaking of Koumiſs, *Elle eſt fort nouriſſante, et peut tenir lieu de tout autre aliment. Les Baſchkirs ſ'en trouvent très bien, elle les rend bienportans et gais; elle leur donne de l'embonpoint, et de bonnes couleurs.* From the Tartars it has been borrowed by the Ruſſians who uſe it medicinally. It is made with fermented mares-milk, according to the following recipe communicated by Dr Grieve in the Edin. Phil. Tranſ. * as he obtained it from a Ruſſian nobleman, who went into that part of Tartary where it is made, for the ſake of uſing it medicinally.

"Take of freſh mare's milk, of one day, any quantity; add to it a ſixth part of water, and pour the mixture into a wooden veſſel; uſe then, as a ferment, an eighth part of the soureſt cow's milk that can be got; but at any future preparation, a ſmall portion of old koumiſs will better anſwer the purpoſe of ſouring; cover the veſſel with a thick cloth, and ſet it in a place of moderate warmth; leave it at reſt 24 hours, at the end of which time the milk will have become ſour, and a thick ſubſtance will be gathered on the top; then with a ſtick made at the lower end in the manner of a churn-ſtaff, beat it tilll the thick ſubſtance abovementioned be blended intimately with the ſubjacent fluid. In this ſituation, leave it again at reſt for 24

* Vol. i. p. 181.

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hours more; after which pour it into a higher and narrower veſſel, reſembling a churn, where the agitation muſt be repeated as before, till the liquor appear to be perfectly homogeneous; and in this ſtate it is called *koumiſs*, of which the taſte ought to be a pleaſant mixture of ſweet and ſour. Agitation muſt be employed every time before it be uſed."—To this detail of the proceſs the nobleman ſubjoined, that in order to obtain milk in ſufficient quantity, the Tartars have a cuſtom of ſeparating the foal from the mare during the day, and allowing it to ſuck during the night: and when the milk is to be taken from the mare, which is generally about five times a-day, they always produce the foal, on the ſuppoſition that ſhe yields her milk more copiouſly when it is preſent.

To the above method of making koumiſs, our author has added ſome particulars taken from other communications with which he was favoured by Tartars themſelves. According to the account of a Tartar who lived to the ſouth eaſt of Orenbourg, the proportion of milk and ſouring ought to be the ſame as above; only, to prevent changing the veſſel, the milk may be put at once into a pretty high and narrow veſſel; and in order to accelerate the fermentation, ſome warm milk may be added to it, and, if neceſſary, more ſouring.—From a Tartar whom the Doctor met with at the fair of Macarieff upon the Volga, and from whom he purchaſed one of the leathern bags (A) which are uſed by the Kalmucks for the preparation and carriage of their koumiſs, he learned that the proceſs may be much ſhortened by heating the milk before the ſouring be added to it, and as ſoon as the parts begin to ſeparate, and a thick ſubſtance to riſe to the top, by agitating it every hour or oftener. In this way he made ſome in the Doctor's preſence in the ſpace of 12 hours. Our author learned alſo, that it was common among ſome Tartars to prepare it in one day during ſummer, and that with only two or three agitations; but that in winter, when, from a deficiency of mare's milk, they are obliged to add a great proportion of that of cows, more agitation and more time are neceſſary. And though it is commonly uſed within a few days after the preparation, yet when well ſecured in cloſe veſſels, and kept in a cold place, that it may be preſerved for three months, or even more, without any injury to its qualities. He was told farther, that the acid fermentation might be produced by ſour milk as above, by a ſour paſte of rye-flour, by the rennet of a lamb's ſtomach, or, what is more common, by a portion of old koumiſs; and that in ſome places they ſaved much time, by adding the new milk to a quantity of that already fermented; on being mixed with which, it very ſoon undergoes the vinous change.

It was according to the proceſs firſt mentioned, however, that all the koumiſs which the Doctor employed in medicine was prepared.—It has been found ſerviceable in hectics and in nervous complaints; and our author relates ſome very ſtriking caſes which the uſe of it had completely cured. All thoſe who drank it, our author informs us agreed in ſaying, that during its uſe, they had little appetite for food; that they drank it in very large quantities, not only without diſguſt, but with pleaſure; that it rendered their veins turgid, without producing languor; that, on the contrary, they ſoon acquired from it an uncommon degre of ſprightlineſs and vivacity; that even in caſes of ſome exceſs it was not followed by indigeſtion, headach, or any of the ſymptoms which uſually attend the abuſe of other fermented liquors.

Koumiſs.

The utility, however, of this preparation as a medicine, ſuppoſing it completely aſcertained, would among us, as our author obſerves, be greatly circumſcribed by the ſcarcity of mares milk in this country. "Hence (ſays he) inquiries will naturally be made, whether other ſpecies of milk admit of a ſimilar vinous fermentation, and what proportion of ſpirit they contain. As theſe have never been the object, however, of my attention, I will here give the ſubſtance of what I have been able to learn from others reſpecting that which is the moſt common, the milk of cows.

"Dr Pallas, in the work above quoted, ſays, that cows milk is alſo ſuſceptible of the vinous fermentation, and that the Tartars prepare a wine from it in winter, when mares milk fails them; that the wine prepared from cows milk they call *airen*; but that they always prefer koumiſs when it can be got, as it is more agreeable, and contains a greater quantity of ſpirit; that koumiſs on diſtillation yields of a weak ſpirit one third, but that airen yields only two ninth parts of its whole quantity, which ſpirit they call *arika*.

"This account is confirmed by Oſeretſkowſky, a Ruſſian, who accompanied Lepechin and other academicians, in their travels through Siberia and Tartary. He publiſhed lately a diſſertation on the ardent ſpirit to be obtained from cows milk.

"From his experiments it appears, that cows milk may be fermented with, or even without, ſouring, provided ſufficient time and agitation be employed; that no ſpirit could be produced from any one of its conſtituent parts taken ſeparately, nor from any two of them, unleſs inaſmuch as they were mixed with ſome part of the third; that the milk with all its parts in their natural proportion was the moſt productive of it; that the cloſer it was kept, or, which is the ſame thing, the more difficultly the fixed air is allowed to eſcape during the fermentation (care being taken, however, that we do not endanger the burſting of the veſſel), the more ſpirit is obtained. He alſo informs us, that it had a ſourer ſmell before than after agitation; that the quantity of ſpirit was increaſed, by allowing the fermented liquor to repoſe for ſome time before diſtillation; that from ſix pints of milk, fermented in a cloſe veſſel, and thus

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(A) This bag was made of a horſe's hide undreſſed, and by having been ſmoked had acquired a greater degree of hardneſs. Its ſhape was conical, but was at the ſame time ſomewhat triangular, from being compoſed of three different pieces, ſet in a circular baſe of the ſame hide. The ſutures, which were made with tendons, were ſecured by a covering on the outſide, with a doubling of the ſame ſkin, very cloſely ſecured. It had a dirty appearance, and a very diſagreeable ſmell. On being aſked the reaſon of this, he ſaid, "The remains of the old koumiſs were left, in order to ſupply a ferment to the new milk."

thus ſet to repoſe, he obtained three ounces of ardent ſpirit, of which one was conſumed in burning; but that from the ſame quantity of the ſame milk fermented in an open veſſel, he could ſcarcely obtain an ounce."

KRAKEN, in zoology, a moſt amazing large ſea animal, ſaid to be ſeemingly of a crab-like form; the credit of whoſe exiſtence reſts upon the evidence produced by biſhop Pontoppidan, in his Natural hiſtory of Norway.

As a full grown kraken has never been ſeen in all its parts and dimenſions, an accurate ſurvey of which muſt employ ſome time, and not a little motion, it is impoſſible to give a complete deſcription of one. Nevertheleſs, we ſhall ſubmit the probability of its exiſtence on the beſt information our author could collect, which ſeems to have fixed his own belief of it; though at the ſame time he acknowleges the account is very defective, and ſuppoſes a farther information concerning the creature may be reſerved for poſterity.

Our fiſhermen, ſays the author, unanimouſly and invariably affirm, that when they are ſeveral miles from the land, particularly in the hot ſummer days, and by their diſtance, and the bearings of ſome points of land, expect from eighty to a hundred fathoms depth, and do not find but from twenty to thirty; and more eſpecially if they find a more than uſual plenty of cod and ling, they judge that the kraken is at the bottom; but if they find by their lines that the water in the ſame place ſtill ſhallows on them, they know he is riſing to the ſurface, and row off with the greateſt expedition till they come into the uſual ſoundings of the place; when lying on their oars, in a few minutes the monſter emerges, and ſhows himſelf ſufficiently, though his whole body does not appear. Its back or upper part, which ſeems an Engliſh mile and an half in circumference (ſome have affirmed more), looks at firſt like a number of ſmall iſlands, ſurrounded with ſomething that floats like ſea-weeds; at laſt ſeveral bright points of horns appear, which grow thicker the higher they emerge, and ſometimes ſtand up as high and large as the maſts of middle-ſized veſſels. In a ſhort time it ſlowly ſinks, which is thought as dangerous as its riſing; as it cauſes ſuch a ſwell and whirlpool as draws every thing down with it, like that of Maleſtrom. The biſhop juſtly regrets the omiſſion of probably the only opportunity that ever has or may be preſented, of ſurveying it alive, or ſeeing it entire when dead. This, he informs us, once did occur, on the credit of the reverend Mr Friis, miniſter at Nordland, and vicar of the college for promoting Chriſtian knowledge; who informed him that in 1680, a kraken (perhaps a young and careleſs one, as they generally keep ſeveral leagues from land) came into the waters that run between the rocks and cliffs near Alſtahong; where, in turning about, ſome of its long horns caught hold of ſome adjoining trees, which it might eaſily have torn up, but that it was alſo entangled in ſome clifts of the rocks, whence it could not extricate itſelf, but putrefied on the ſpot. Our author has heard of no perſon deſtroyed by this monſter, but relates a report of the danger of two fiſhermen who came upon a part of the water full of the creature's thick ſlimy excrements (which he voids for ſome months, as he feeds for ſome other); they immediately ſtrove to row off, but were not quick enough in turning to ſave the boat from one of the kraken's horns, which ſo cruſhed the head of it that it was with difficulty they ſaved their lives on the wreck, though the weather was perfectly calm; the monſter never appearing at other times. His excrement is ſaid to be attractive of other fiſh on which he feeds; which expedient was probably neceſſary, on account of his ſlow unwieldy motion, to his ſubſiſtence; as this ſlow motion again may be neceſſary to the ſecurity of ſhips of the greateſt force and burden, which muſt be overwhelmed on encountering ſuch an immenſe animal, if his velocity was equal to his weight; the Norwegians ſuppoſing, that if his arms, on which he moves, and with which he takes his food, were to lay hold of the largeſt man of war, they would pull it down to the bottom.

In confirmation of the reality of this animal, our learned author cites Debes's deſcription of Faroe, for the exiſtence of certain iſlands which ſuddenly appear and as ſuddenly vaniſh. Many ſeafaring people, he adds, give accounts of ſuch, particularly in the north ſea; which their ſuperſtition has either attributed to the deluſion of the devil, or conſidered as inhabited by evil ſpirits. But our honeſt hiſtorian, who is not for wronging the devil himſelf, ſuppoſes ſuch miſtaken iſlands to be nothing but the kraken, called by ſome the *ſoe trolden*; or *ſea miſchief*; in which opinion he was greatly confirmed by the following quotation of Dr Hierne, a learned Swede, from baron Grippenhielm; and which is certainly a very remarkable paſſage, viz. "Among the rocks about Stockholm, there is ſometimes ſeen a tract of land, which at other times diſappears, and is ſeen again in another place. Buræus has placed it as an iſland in his map. The peaſants, who call it *gummars ore*, ſay, that it is not always ſeen, and that it lies out in the open ſea, but I could never find it. One Sunday, when I was out amongſt the rocks ſounding the coaſt, it happened, that in one place I ſaw ſomething like three points of land in the ſea, which ſurpriſed me a little, and I thought I had inadvertently paſſed them over before. Upon this I called to a peaſant, to enquire for gummars ore; but when he came, we could ſee nothing of it: upon which the peaſant ſaid all was well, and that this prognoſticated a ſtorm or a great quantity of fiſh." To which our author ſubjoins, "who cannot diſcover that this gummars ore, with its points and prognoſtications of fiſh, was the kraken, miſtaken by Buræus for an iſland, who may keep himſelf about that ſpot where he riſes?" He takes the kraken, doubtleſs, from his numerous *tentaculi*, which ſerve him as feet, to be of the polype kind; and the contemplation of its enormous bulk led him to adapt a paſſage from Eccleſiaſticus, xliii. 31, 32. to it. Whether by it may be intended the dragon that is in the ſea, mentioned Iſaiah xxvii. 1. we refer to the conjecture of the reader. After paying but a juſt reſpect to the moral character, the reverend function, and diligent inveſtigations of our author, we muſt admit the poſſibility of its exiſtence, as it implies no contradiction; though it ſeems to encounter a general prepoſſeſſion of the whale's being the largeſt animal on or in our globe; and the eradication of any long prepoſſeſſion is attended with ſomething irkſome to us. But were we to ſuppoſe a ſalmon or a ſturgeon the largeſt fiſh any number of perſons had ſeen or heard of, and the whale had diſcovered himſelf as ſeldom, and but in part, as the kraken, it is eaſy to conceive that the exiſtence of the whale had been as indigeſtible to ſuch perſons then as that of the kraken may be to others now. Some may incline to think ſuch an extenſive monſter would encroach on the ſymmetry of nature, and be over proportionate to the ſize of the globe itſelf; as a little retroſpection will inform us, that the breadth of what is ſeen of him, ſuppoſing him nearly round, muſt be full 2600 feet (if more oval, or crab-like, full 2000), and his thickneſs, which may rather be called *altitude*, at leaſt three hundred; our author declaring he has choſen the leaſt circumference mentioned of this animal for the greater certainty. Theſe immenſe dimenſions, nevertheleſs, we apprehend will not argue concluſively againſt the exiſtence of the animal, though conſiderably againſt a numerous increaſe or propagation of it. In fact, the great ſcarcity of the kraken, his confinement to the north ſea, and perhaps to equal latitudes in the ſouth; the ſmall number propagated by the whale, who is viviparous; and by the largeſt land animals, of whom the elephant is ſaid to go near two years with young; all induce us to conclude from analogy, that this creature is not numerous; which coincides with a paſſage in a manuſcript aſcribed to Svere king of Norway, as it is cited by Ol. Wormius, in his Muſeum, p. 280, in Latin, which we ſhall exactly tranſlate, "There remains one kind, which they eall *haſguſe*, whoſe magnitude is nnknown, as it is ſeldom ſeen. Thoſe who affirm they have ſeen its body, declare, is is more like an iſland than a beaſt, and that its carcaſe was never found; whence ſome imagine there are but two of the kind in nature." Whether the vaniſhing iſland Lemair, of which Captain Rodney went in ſearch, was a kraken, we ſubmit to the fancy of our readers. In fine, if the exiſtence of the creature is admitted, it will ſeem a fair inference, that he is the ſcarceſt as well as largeſt in our world; and that if there are larger in the univerſe, they probably inhabit ſome ſphere or planet more extended than our own. Such we have no pretence to limit; and that fiction can deviſe a much greater than this is evident, from the cock of Mahomet, and the whale in the Bava Bathra of the Talmud, which were intended to be credited; and to either of which our kraken is a very ſhrimp in dimenſions.

KRANTZIUS (Albertus), a native of Hamburgh, and a famous hiſtorian, who travelled over ſeveral parts of Europe, and was made rector of the univerſity of Roſtoch in 1482. He went from thence to Hamburgh in 1508, where he was elected dean of the chapter in the cathedral. He did many good ſervices to that church and city; and was ſo famed for his abilities and prudence, that John king of Denmark and Frederic duke of Holſtein did not ſcruple to make him umpire in a diſpute they had with the Ditmarſi. He wrote ſeveral good hiſtorical works; the moſt conſiderable of which is an Eccleſiaſtical Hiſtory of Saxony, intitled *Metropolis*, in folio; the beſt edition is that of Francfort. He died in 1517.

KRAUT, or CROUT. See CROUT.

KUBESHA. See LESGUIS.

KUHNIUS (Joachim), a learned German critic, was born at Gripſwalde in Pomerania, in 1647. He was in 1669 made principal of the college at Oetingen in Suabia: in 1676, he was elected Greek profeſſor in the principal college at Straſburg; and after acquitting himſelf with honour for ten years in this capacity, was made Greek and Hebrew profeſſor in the ſame univerſity. His uncommon ſkill in the Greek language drew a great number of ſcholars about him from very diſtant places; and he publiſhed ſome claſſic authors with very learned notes both explanatory and critical. He died in 1697.

KUNCKEL (John), a celebrated Saxon chemiſt, born in the duchy of Sleſwick, in 1630. He became chemiſt to the elector of Saxony, the elector of Brandenburgh, and Charles II. king of Sweden, who gave him the title of *counſellor in metals*, and letters of nobility, with the ſurname of *Louwenſteing*. He employed 50 years in chemiſtry; in which, by the help of the furnace of a glaſs-houſe which he had under his care, he made ſeveral excellent diſcoveries, particularly of the phoſphorus of urine. He died in Sweden in 1702; and left ſeveral works, ſome in German, and others in Latin: among which, that intitled *Obſervationes Chemicæ*, and the "Art of making Glaſs," printed at Paris in 1752, are the moſt eſteemed.

KURIL or KURILSKI ISLES, extending from N. Lat. 51. to 45. which probably once lengthened the peninſula of Kamtchatka before they were convulſed from it, are a ſeries of iſlands running ſouth from the low promontory Lopatka, between which and Shoomſka the moſt northerly is only the diſtance of one league. On the lofty Paramouſer, the ſecond in the chain, is a high-peaked mountain probably volcanic; and on the fourth, called *Araumakutan*, is another volcano. On Uruſs there is another; on Storgu there are two; and on Kunatir, or Kaunachir, there is one. Theſe three make part of the group which paſs under the name of the land of *Jeſo*. Japan abounds with volcanoes; ſo that there is a ſeries of ſpiracles from Kamtchatka to Japan, the laſt great link of this extenſive chain.—The Ruſſians ſoon annexed theſe iſlands to their conqueſts. The ſea abounded with otters, and the land with bears and foxes; and ſome of the iſles ſheltered the ſable: temptations ſufficient for the Ruſſians to invade theſe iſlands; but the rage after the furs of the ſea otters has been ſo great, that they are become extremely ſcarce both here and in Kamtchatka.

KUSTER (Ludolf), a very learned writer in the 18th century, was born at Blomberg in Weſtphalia. When very young, he was upon the recommendation of baron Spanheim appointed tutor to the two ſons of the count de Schwerin, prime miniſter of the king of Pruſſia, who, upon our author's quitting that ſtation, procured him a penſion of 400 livres. He was promiſed a profeſſorſhip in the univerſity of Joachim; and till this ſhould be vacant, being then but 25, he reſolved to travel. He read lectures at Utrecht; went to England; and from thence to France, where he collated Suidas with three MSS. in the king's library, which furniſhed him with a great many fragments that had never been publiſhed. He was honoured with the degree of doctor by the univerſity of Cambridge, which made him ſeveral advantageous offers, to continue there: but he was called to Berlin, where he was inſtalled in the profeſſorſhip promiſed him. Afterwards he went to Antwerp: and being brought over to the Catholic religion, he abjured that of the Proteſtants. The king of France rewarded him with a penſion, and ordered him to be admitted ſupernumerary aſſociate of the academy of inſcriptions. But he did not enjoy this new ſettlement long; for he died in 1716, aged 46. He was a great maſter of the Latin tongue, and wrote well in it; but his chief excellence was his ſkill in the Greek language, to which he almoſt entirely devoted himſelf. He wrote many works; the principal of which are, 1. *Hiſtoria critica Homeri.* 2. *Jamblicus de vita Pythagoræ.* 3. An excellent edition of Suidas, in Greek and Latin, three volumes, folio. 4. An edition of Ariſtophanes, in Greek and Latin, folio. 5. A new Greek edition of the New Teſtament, with Dr Mills's Variations, in folio.

KYPHONISM, Kyphonismus, or *Cyphoniſmus*, an ancient puniſhment which was frequently undergone by the martyrs in the primitive times; wherein the body of the perſon to ſuffer was anointed with honey, and ſo expoſed to the ſun, that the flies and waſps might be tempted to torment him. This was performed in three manners: ſometimes they only tied the patient to a ſtake; ſometimes they hoiſted him up into the air, and ſuſpended him in a baſket; and ſometimes they ſtretched him out on the ground with his hands tied behind him. The word is originally Greek, and comes from κυφων, which ſignifies either the *ſtake* to which the patient was tied, the *collar* fitted to his neck, or an *inſtrument* wherewith they tormented him: the ſcholiaſt on Ariſtophanes ſays, it was a wooden lock or cage; and that it was called ſo from κυπτειν, "to crook or bend," becauſe it kept the tortured in a crooked, bowing poſture; others take the κυφων for a log of wood laid over the criminal's head, to prevent his ſtanding upright: Heſychius deſcribes the κυφων as a piece of wood whereon criminals were ſtretched and tormented. In effect, it is probable the word might ſignify all theſe ſeveral things. It was a generical name, whereof theſe were the ſpecies.

Suidas gives us the fragment of an old law, which puniſhed thoſe who treated the laws with contempt with kyphoniſm for the ſpace of twenty days; after which they were to be precipitated from a rock, dreſſed in womens habit.

L.

L, A ſemi-vowel, or liquid, making the eleventh letter of the alphabet.

It was derived from the old Hebrew Lamed, or Greek Lambda λ. It is ſounded by intercepting the breath between the top of the tongue and forepart of the palate, with the mouth open; and makes a ſweet ſound, with ſomething of an aſpiration; and therefore the Britons and Spaniards uſually doubled it, or added an *h* to it, in the beginning of words, as in *llan*, or *lhan*, "a temple," ſounding nearly like *ſl*, &c. In Engliſh words of one ſyllable it is doubled at the end, as *tell*, *bell*, *knell*, &c. but in words of more ſyllables than one it is ſingle at the end, as *evil*, *general*, *conſtitutional*, &c. It is placed after moſt of the conſonants in the beginning of words and ſyllables, as *black*, *glare*, *ad-le*, *ea-gle*, &c. but before none. Its ſound is clear in *Abel*, but obſcure in *able*, &c.

As a numeral letter, L denotes 50; and with a daſh over it, thus, $\bar{L}$, 5000. Uſed as an abbreviature, L ſtands for Lucius; and L. L. S. for a ſeſterce. See Sesterce.

LA, the ſyllable by which Guido denotes the laſt ſound of each hexachord; if it begins in C, it anſwers to our A; if in G, to E; and if in F, to D.

LABADIE (John), a famous French enthuſiaſt, ſon of John Charles Labadie, governor of Bourges and gentleman in ordinary of the bed-chamber to the French king, was born in 1610. He entered young into the Jeſuits college at Bourdeaux; which, by his own account, he afterwards quitted, but by other accounts was expelled for his peculiar notions, and for hypocriſy. He became a popular preacher; but being repeatedly detected in working upon female devotees with ſpiritual inſtructions for carnal purpoſes, his loſs of character among the Catholics drove him among the Proteſtants. A reformed jeſuit being thought a great acquiſition, he was precipitately accepted as a paſtor at Montauban, where he officiated for eight years; but, attempting the chaſtity of a young lady whom he could not convert to his purpoſe, and quarrelling with the Catholic prieſt about the right of interring a dead body, he was at length baniſhed that place. The ſtory of his affair with the lady, as related by Mr Balye, may here be given as a ſpecimen of his miniſtry. Having directed this damſel to the ſpiritual life, which he made to conſiſt in internal recollection and mental prayer, he gave her out a certain point of meditation; and having ſtrongly recommended it to her to apply herſelf entirely for ſome hours to ſuch an important object, he went up to her when he believed her to be at the height of her recollection, and put his hand into her breaſt. She gave him a haſty repulſe, expreſſed a great deal of ſurpriſe at the proceeding, and was even preparing to rebuke him, when he, without being in the leaſt diſconcerted, and with a devout air, prevented her thus: "I ſee plainly, my child, that you are at a great diſtance from perfection; acknowledge your weakneſs with an humble ſpirit; aſk forgiveneſs of God for your having given ſo little attention to the myſteries upon which you ought to have meditated. Had you beſtowed all neceſſary attention upon theſe things, you would not have been ſenſible of what was doing about your breaſt. But you are ſo much attached to ſenſe, ſo little concentered with the Godhead, that you were not a moment in diſcovering that I had touched you. I wanted to try whether your fervency in prayer had raiſed you above the material world, and united you with the Sovereign Being, the living ſource of immortality and of a ſpiritual ſtate; and I ſee, to my great grief, that you have made very ſmall progreſs, and that you only creep on the ground. May this, my child, make you aſhamed, and for the future move you to perform the duties of mental prayer better than you have hitherto done." The young lady, who had as much good ſenſe as virtue, was no leſs provoked at theſe words than at the bold actions of her ghoſtly inſtructor; and could never afterwards bear the name of ſuch an holy father. Labadie being driven out of Montauban, went to ſeek an aſylum at Orange: but not finding himſelf ſo ſafe there as he imagined, he withdrew privately to Geneva, where he impoſed on the people by his devout preaching and carriage; and from thence was invited to Middleburg, where his ſpirituality made him and his followers conſidered as ſo many ſaints, diſtinguiſhed by the name of *Labadiſts*. They increaſed ſo much, that he excited the attention of the other churches, whoſe authority he diſputed, till he was formally depoſed by the ſynod of Dort. Inſtead of obeying, he procured a tumultuous ſupport from a crowd of his devotees; and at length formed a little ſettlement between Utrecht and Amſterdam, where he erected a printing-preſs, which ſent forth many of his works. Here he was betrayed by ſome deſerters, who expoſed his private life, and informed the public of his familiarities with his female diſciples, under pretence of uniting them more particularly to God; and was finally obliged to retire to Altena in Holſtein, where he died in 1674.

LABADISTS, a ſect of religioniſts in the 17th century, followers of the opinions of John Labadie, of whom an account is given in the preceding article. Some of their opinions were, 1. That God could, and did deceive men. 2. That, in reading the Scriptures, greater attention ſhould be paid to the internal inſpiration of the Holy Spirit than to the words of the text. 5. That baptiſm ought to be deferred till mature age. 4. That the good and the wicked entered equally into the old alliance, provided they deſcended from Abraham; but that the new admitted only ſpiritual men. 5. That the obſervation of Sunday was a matter of indifference. 6. That Chriſt would come and reign 1000 years on earth. 7. That the euchariſt was only a commemoration of the death of Chriſt; and that, though the ſymbols were nothing in themſelves, yet that Chriſt was ſpiritually received by thoſe who partook of them in a due manner. 8. That a contemplative life was a ſtate of grace, and of divine union during this life, the ſummit of perfection, &c. 9. That the man whoſe heart was perfectly content and calm, half enjoys God, has familiar entertainments with him, and ſees all things in him. 10. That this ſtate was to be come at by an entire ſelf-abnegation, by the mortification of the ſenſes and their objects, and by the exerciſe of mental prayer.

LABARUM, the banner or ſtandard born before the Roman emperors in the wars. The *labarum* conſiſted of a long lance, with a ſtaff a-top; croſſing it at right angles; from which hung a rich ſtreamer, of a purple colour, adorned with precious ſtones. Till the time of Conſtantine it had an eagle painted on it; but that emperor, in lieu thereof, added a croſs with a cipher expreſſing the name of *Jeſus*.

This ſtandard the Romans took from the Germans, Dacæ, Sarmatæ, Pannonians, &c. whom they had overcome. The name *labarum* was not known before the time of Conſtantine; but the ſtandard itſelf, in the form we have deſcribed it, abating the ſymbols of Chriſtianity, was uſed by all the preceding emperors. Some derive the word from *labor*, as if this finiſhed their labours; ſome from ευλαϐεια, "reverence, piety;" others from λαμϐανειν, "to take;" and others from λαφυρα, "ſpoils."

LABAT (John Baptiſt), a celebrated traveller, of the order of St Dominic, was born at Paris taught philoſophy at Nancy, and in 1693 came to America in quality of a miſſionary. At his return to France in 1705, he was ſent to the chapter of his order at Bologna to give an account of his miſſion, and ſtaid ſeveral years in Italy. He died at Paris in 1738. His principal works are, 1. A new voyage to the American iſlands, 6 vols 12mo. 2. Travels in Spain and Italy, 8 vols 12mo. 3. A new account of the weſtern parts of Africa, 5 vols 12mo.: Father Labat was not in Africa, and therefore was not a witneſs of what he relates in that work. He alſo publiſhed the *Chevalier des Marchais's voyage to Guinea*, in 4 vols 12mo.; and *An hiſtorical account of the weſtern parts of Æthiopia*, tranſlated from the Italian of Father Cavazzi, 5 vols 12mo.

LABBE (Philip), born at Bourges in France, in 1607; profeſſed philoſophy, divinity, and the languages, with great applauſe; and died in 1667, aged 70. He was a laborious writer, and a good critic; and wrote, 1. *Nova Bibliotheca MS. librorum* in two volumes folio. 2. *De Byzantinæ hiſtoriæ Scriptoribus*. 3. *Galeni vita*. 4. *Bibliotheca bibliothecarum*. 5. *Concordantia chronologica*, &c. He began the laſt edition of "The councils," and died while the ninth volume was printing; they were finiſhed in 12 volumes by father Coſſart.

LABDANUM, or LADANUM, in the materia medica, a reſinous juice, which exſudes from a tree of the ciſtus kind. It is ſaid to have been formerly collected from the beards of goats who brouſed the leaves of the ciſtus: at preſent, a kind of rake, with ſeveral ſtraps or thongs of ſkins fixed to it, is drawn lightly over the ſhrub, ſo as to take up the unctuous juice, which is afterwards ſcraped off with knives. It is rarely met with pure, even in the places which produce it; the duſt, blown upon the plant by the wind, mingling with the tenaceous juice: the inhabitants are alſo ſaid to mix with it a certain black ſand. In the ſhops two ſorts are met with. The beſt (which is very rare) is in dark-coloured almoſt black maſſes, of the conſiſtence of a ſoft plaſter, which grows ſtill ſofter upon being handled; of a very agreeable ſmell, and of a light pungent bitteriſh taſte. The other ſort is harder, not ſo dark coloured, in long rolls coiled up: this is of a much weaker ſmell than the firſt, and has a large admixture of a fine ſand, which in the ladanum, examined by the French academy, made up three-fourths of the maſs.

In medicine it is uſed externally, to attenuate and diſcuſs tumors; internally, it is more rarely uſed, but is greatly extolled by ſome againſt catarrhs and in dyſenteries. Rectified ſpirit of wine almoſt entirely diſſolves pure ladanum, leaving only a ſmall portion of gummy matter which has no taſte or ſmell: and hence this reſin may be thus excellently purified for internal purpoſes. It is an uſeful ingredient in the ſtomachic plaſter, which is now indeed ſtyled the *emplaſtrum ladani.*

LABEL, a long, thin, braſs rule, with a ſmall ſight at one end, and a centre-hole at the other; commonly uſed with a tangent-line on the edge of a circumferentor, to take altitudes, &c.

LABEL, in law, is a narrow ſlip of paper, or parchment, affixed to a deed or writing, in order to hold the appending ſeal.—Any paper annexed by way of addition or explication, to any will or teſtament, is alſo called a label or codicil.

LABEL, in heraldry, a fillet uſually placed in the middle along the chief of the coat, without touching its extremities. Its breadth ought to be a ninth part of the chief. It is adorned with pendants; and when there are above three of theſe, the number muſt be ſpecified in blazoning.

It is uſed on the arms of eldeſt ſons while the father is alive, to diſtinguiſh them from the younger; and is eſteemed the moſt honourable of all differences. See HERALDRY, p. 445. col. 1.

LABIAL LETTERS, thoſe pronounced chiefly by means of the lips.

LABIATED FLOWERS, monopetalous flowers, conſiſting of a narrow tube with a wide mouth, divided into two or more ſegments.

LABIAU, a ſmall town of Ducal Pruſſia, in a circle of the ſame name, ſeated at the mouth of the river Deime, with a ſtrong caſtle, two ſides of which are ſurrounded with water, and the other defended by a wall and ditch. E. Long. 19. 56. N. Lat. 55. 17.

LABORATORY, or ELABORATORY, the chemiſts work-houſe, or the place where they perform their operations, where the furnaces are built, their veſſels kept, &c. and in general the term *laboratory* is applied to any place where phyſical experiments in pharmacy, chemiſtry, pyrotechny, &c. are perfomed.

As laboratories muſt be of very different kinds, according to the nature of the operations to be performed in them, it is impoſſible that any directions can be given which will anſwer for every one. Where the purpoſes are merely experimental, a ſingle furnace or two of the portable kind will be ſufficient. It is ſcarce needful to add, that ſhelves are neceſſary for holding veſſels with the products of the different operations; and that it is abſolutely neceſſary to avoid confuſion and diſorder, as by theſe means the products of the operations might be loſt or miſtaken for one another. Mortars, filters, levigating ſtones, &c. muſt alſo be procured; but from a knowledge of the methods of performing the different chemical operations will eaſily be derived the knowledge of a proper place to perform them in; for which ſee the articles CHEMISTRY, METALLURGY, and FURNACE.

LABORATORY, in military affairs, ſignifies that place where all ſorts of fire-works are prepared, both for actual ſervice and for pleaſure, viz. quick-matches, fuzes, port-fires, grape-ſhot, caſe-ſhot, carcaſſes, hand-grenades, cartridges, ſhells filled, and fuzes fixed, wads, &c. &c.

LABOUR, in general, denotes a cloſe application to work or buſineſs.—Among ſeamen a ſhip is ſaid to be in labour when ſhe rolls and tumbles very much, either a hull, under ſail, or at anchor.—It is alſo ſpoken of a woman in travail or child birth; ſee MIDWIFERY.

LABOURER, generally ſignifies one that does the moſt ſlaviſh and leſs artful part of a laborious work, as that of huſbandry, maſonry, &c.

LABOUREUR (John le), almoner to the king of France, and prior of Juvigne, was born at Montmorency near Paris in 1623. At the age of 18, he diſtinguiſhed himſelf by publiſhing "A collection of the monuments of illuſtrious perſons buried in the church of the Celeſtines at Paris, with their elogies, genealogies, arms, and mottoes," 4to. He afterwards publiſhed an excellent edition of The Memoirs of Michael de Caſtelnau, with ſeveral other genealogical hiſtories; and died in 1675.—He had a brother, *Louis le Laboureur* bailiff of Montmorency, author of ſeveral pieces of poetry; and an uncle, *Dom. Claude le Laboureur*, provoſt of the abbey of L'iſle Barbe, of which abbey he wrote a hiſtory, and publiſhed notes and corrections upon the breviary of Lyons, with ſome other things.

LABRADOR, the ſame with *New BRITAIN*, or the country round *HUDSON's Bay*. See theſe articles.

LABRADORE STONE, a curious ſpecies of felt-ſpar, which exhibits all the colours of a peacock's tail. See the article *FELT-Spar*.

LABRUM, in antiquity, a great tub which ſtood at the entrance of the temples, containing water for the prieſts to waſh themſelves in previous to their ſacrifices. It was alſo the name of a bathing tub uſed in the baths of the ancients.

LABRUS, in ichthyology, a genus of fiſhes belonging to the order of thoracici. The characters are as follow: The covers of the gills ſcaly; the branchioſtegous rays unequal in number; teeth conic, long, and blunt at their ends; one tuberculated bone in the bottom of the throat; two above, oppoſite to the other; one dorſal fin reaching the whole length of the back; a ſlender ſkin extending beyond each ray, with a rounded tail. There are 41 ſpecies of this genus, which vary from each other, even thoſe of the ſame ſpecies, almoſt infinitely in colour; ſome of them being of a dirty red mixed with a certain duſkineſs; others moſt beautifully ſtriped, eſpecially about the head, with the richeſt colours, ſuch as blue, red, and yellow. Care muſt therefore be taken not to multiply the ſpecies from theſe accidental teints, but to attend to the form, which never varies. Mr Pennant mentions his having ſeen a ſpecies of labrus taken about the Giant's Cauſeway in Ireland, of a moſt beautiful vivid green, ſpotted with ſcarlet; and others at Bandooran in the county of Sligo of a pale green. To this genus belongs the fiſh called by the Engliſh the *old-wiſe*.

LABURNUM, in botany. See CYTISUS.

LABYRINTH, among the ancients, was a large intricate edifice cut out into various aiſles and meanders running into each other, ſo as to render it difficult to get out of it.

There is mention made of ſeveral of thoſe edifices amongſt the ancients; but the moſt celebrated are the Egyptian and the Cretan labyrinths.

That of Egypt, according to Pliny, was the oldeſt of all the known labyrinths, and was ſubſiſting in his time after having ſtood 3600 years. He ſays it was built by king Peteſucus, or Tithoes; but Herodotus makes it the work of ſeveral kings: it ſtood on the banks of the lake Mœris, and conſiſted of 12 large contiguous palaces, containing 3000 chambers, 1500 of which were under ground.—Strabo, Diodorus Siculus, Pliny, and Mela, ſpeak of this monument with the ſame admiration as Herodotus: but not one of them tells us that it was conſtructed to bewilder thoſe who attempted to go over it; though it is manifeſt that, without a guide, they would be in danger of loſing their way.

It was this danger, no doubt, which introduced a new term into the Greek language. The word *labyrinth*, taken in the literal ſenſe, ſignifies a circumſcribed ſpace, interſected by a number of paſſages, ſome of which croſs each other in every direction like thoſe in quarries and mines, and others make larger or ſmaller circuits round the place from which they depart like the ſpiral lines we ſee on certain ſhells. In the figurative ſenſe, it was applied to obſcure and captious queſtions, to indirect and ambiguous anſwers, and to thoſe diſcuſſions which, after long digreſſions, bring us back to the point from which we ſet out.

The Cretan labyrinth is the moſt famed in hiſtory or fable; having been rendered particularly remarkable by the ſtory of the Minotaur, and of Theſeus who found his way through all its windings by means of Ariadne's clue. On Plate CCLIX. is exhibited a ſuppoſed plan of it, copied after a draught given by Meurſius[*], taken from an ancient ſtone.—But what was the real nature of this labyrinth, merits a more particular inquiry.

Diodorus Siculus relates as a conjecture, and Pliny as a certain fact, that Dædalus conſtructed this labyrinth on the model of that of Egypt, though on a leſs ſcale. They add, that it was formed by the command of Minos, who kept the Minotaur ſhut up in it; and that in their time it no longer exiſted, having been either deſtroyed by time, or purpoſely demoliſhed. Diodorus Siculus and Pliny, therefore, conſidered this labyrinth as a large edifice; while other writers repreſent it ſimply as a cavern hollowed in the rock, and full of winding paſſages. The two former authors, and the writers laſt mentioned, have tranſmitted to us two different traditions; it remains for us to chooſe that which is moſt probable.

If the labyrinth of Crete had been conſtructed by Dædalus under Minos, whence is it that we find no mention of it, neither in Homer, who more than once ſpeaks of that prince and of Crete; nor in Herodotus, who deſcribes that of Egypt, after having ſaid that the monuments of the Egyptians are much ſuperior to thoſe of the Greeks; nor in the more ancient geographers; nor in any of the writers of the ages when Greece flouriſhed?

This work was attributed to Dædalus, whoſe name is alone ſufficient to diſcredit a tradition. In fact, his name, like that of Hercules, had become the reſource of ignorance, whenever it turned its eyes on the early ages. All great labours, all works which required more ſtrength than ingenuity, were attributed to Hercules; and all thoſe which had a relation to the arts, and required a certain degree of intelligence in the execution, were aſcribed to Dædalus.

The opinion of Diodorus and Pliny ſuppoſes, that in their time no traces of the labyrinth exiſted in Crete, and that even the date of its deſtruction had been forgotten. Yet it is ſaid to have been viſited by the diſciples of Apollonius of Tyana, who was cotemporary with thoſe two authors. The Cretans, therefore, then believed that they poſſeſſed the labyrinth.

" I would requeſt the reader (continues the Abbe Barthelemi[†], from whom theſe obſervations are extracted) to attend the following paſſage in Strabo. At Napulia, near the ancient Argos, (ſays that judicious writer), are ſtill to be ſeen vaſt caverns, in which are conſtructed labyrinths that are believed to be the work of the Cyclops: the meaning of which is, that the labours of men had opened in the rock paſſages which croſſed and returned upon themſelves, as is done in quarries. Such, if I am not miſtaken, is the idea we ought to form of the labyrinth of Crete.

" Were there ſeveral labyrinths in that iſland? Ancient authors ſpeak only of one, which the greater part place at Cnoſſus; and ſome, though the number is but ſmall, at Gortyna.

" Belon and Tournefort have given us the deſcription of a cavern ſituated at the foot of mount Ida, on the ſouth ſide of the mountain, at a ſmall diſtance from Gortyna. This was only a quarry according to the former, and the ancient labyrinth according to the latter; whoſe opinion I have followed, and abridged his account. Thoſe who have added critical notes to his work, beſides this labyrinth, admit a ſecond at Cnoſſus, and adduce as the principal ſupport of this opinion the coins of that city, which repreſent the plan of it, according as the artiſts conceived it. For on ſome of theſe it appears of a ſquare form, on others round: on ſome it is only ſketched out; on others it has, in the middle of it, the head of the Minotaur. In the Memoirs of the Academy of Belles Lettres, I have given an engraving of one which appears to me to be of about the 5th century before Chriſt; and on which we ſee on one ſide the figure of the Minotaur, and on the other a rude plan of the labyrinth. It is therefore certain, that at that time the Cnoſſians believed they were in poſſeſſion of that celebrated cavern; and it alſo appears that the Gortynians did not pretend to conteſt their claim, ſince they have never given the figure of it on their money.

" The place where I ſuppoſe the labyrinth of Crete to have been ſituated, according to Tournefort, is but one league diſtant from Gortyna; and, according to Strabo, it was diſtant from Cnoſſus ſix or ſeven leagues. All we can conclude from this is, that the territory of the latter city extended to very near the former.

" What was the uſe of the caverns to which the name of labyrinth was given? I imagine that they were firſt excavated in part by nature; that in ſome places ſtones were extracted from them for building cities; and that, in more ancient times, they ſerved for a habitation or aſylum to the inhabitants of a diſtrict expoſed to frequent incurſions. In the journey

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[*] *In Cret.* lib. 1. cap. 2.

[†] *Travels of Anacharſis*, vi. 441.

of Anacharſis through Phocis, I have ſpoken of two great caverns of Parnaſſus, in which the neighbouring people took refuge; in the one at the time of the deluge of Deucalion, and in the other at the invaſion of Xerxes. I here add, that, according to Diodorus Siculus, the moſt ancient Cretans dwelt in the caves of Mount Ida. The people, when inquiries were made on the ſpot, ſaid that their labyrinth was originally only a priſon. It may have been put to this uſe; but it is difficult to believe that, to prevent the eſcape of a few unhappy wretches, ſuch immenſe labours would have been undertaken."

Labyrinth of the Ear. See Anatomy, p. 764.

LAC, milk, among phyſicians. See Milk.

Lac, *Gum.* See Lacca.

LACARRY (Giles), a learned Jeſuit of the 17th century, was born in the dioceſe of Caſtres, in Languedoc, in 1605. He taught philoſophy, theology, and the holy Scriptures in his ſociety; was rector of the college of Cahors; and became well ſkilled in hiſtory. He wrote many works; the principal of which are, 1. *Hiſt. Galliarum ſub Præfectis Prætorii Galliarum*, 4to. a work which is much eſteemed, and extends from the reign of Conſtantine to that of Juſtinian. 2. *Hiſtoria Romana a Julio Cæſare ad Conſtantinum Magnum, per numiſmata & marmora antiqua*, an excellent work. 3. *Epitome hiſtoriæ Reg. Franciæ, ex Dionyſio Petavio excerpta*, alſo much eſteemed. 4. An edition of Velleius Paterculus, with learned notes.

LACCA, Lac, or *Gum-Lac* is a kind of wax, of which a ſpecies of inſects form cells upon trees, like honey-combs. See the article Coccus, ſpec. 5. In theſe cells remain ſome of the dead inſects, which give a red colour to the whole ſubſtance of the lac. That called *ſtick-lac* is the wax adhering to ſome of the ſmall branches of the tree, and which is unprepared. This lac, when ſeparated from the adhering ſticks, and groſsly powdered, and deprived of its colour by digeſtion with menſtruums, for the ſake of the dyes and other purpoſes, is called *ſeed-lac;* when the ſtick-lac is freed from impurities by melting it over a gentle fire, and formed into cakes, it is called *lump-lac;* and laſtly, that called *ſhell-lac* is the cells liquified, ſtrained, and formed into thin tranſparent laminæ in the following manner. Separate the cells from the branches, break them into ſmall pieces, throw them into a tub of water for one day, waſh off the red water and dry the cells, and with them fill a cylindrical tube of cotton cloth two feet long, and one or two inches in diameter; tie both ends, turn the bag above a charcoal fire; as the lac liquifies twiſt the bag, and when a ſufficient quantity has tranſuded the pores of the cloth, lay it upon a ſmooth junk of the plantain-tree (*Musa Paradiſiaca, Linnæi*), and with a ſtrip of the plantain leaf draw it into a thin lamella; take it off while flexible, for in a minute it will be hard and brittle. The value of ſhell-lac is according to its tranſparency.

Kerr's Account of the Gum Laccæ, in Phil. Tranſ. vol. 71. p. 378. &c.

The lac inſect is one of the moſt uſeful of that tribe yet diſcovered, particularly to the natives of the countries where it is found. They conſume a great quantity of ſhell-lac in making ornamental rings, painted and gilded in various taſtes, to decorate the arms of the ladies; and it is formed into beads, ſpiral and linked chains for necklaces, and other female ornaments.—The following are recipes for various purpoſes to which this ſubſtance is applied by them.

1. For ſealing-wax. Take a ſtick, and heat one end of it upon a charcoal fire; put upon it a few leaves of the ſhell-lac ſoftened above the fire; keep alternately heating and adding more ſhell-lac until you have got a maſs of three or four pounds of liquified ſhell-lac upon the end of your ſtick (in which manner lump-lac is formed from ſeed-lac). Knead this upon a wetted board with three ounces of levigated cinnabar; form it into cylindrical pieces; and to give them a poliſh, rub them while hot with a cotton cloth.

2. For japanning. Take a lump of ſhell-lac, prepared in the manner of ſealing-wax, with whatever colour you pleaſe, fix it upon the end of a ſtick, heat the poliſhed wood over a charcoal fire, and rub it over with the half-melted lac, and poliſh by rubbing it even with a piece of folded plantain leaf held in the hand; heating the laquer and adding more lac as occaſion requires. Their figures are formed by lac, charged with various colours in the ſame manner.

3. For varniſh. In ornamenting their images and religious houſes, &c. they make uſe of very thin beat lead, which they cover with various varniſhes, made of lac charged with colours. The preparation of them is kept a ſecret. The leaf of lead is laid upon a ſmooth iron heated by fire below while they ſpread the varniſh upon it.

4. For grindſtones. Take of river ſand three parts, of ſeed-lac waſhed one part, mix them over the fire in a pot, and form the maſs into the ſhape of a grindſtone, having a ſquare hole in the centre, fix it on an axis with liquified lac, heat the ſtone moderately, and by turning the axis it may eaſily be formed into an exact orbicular ſhape. Poliſhing grindſtones are made only of ſuch ſand as will paſs eaſily through fine muſlin, in the proportion of two parts ſand to one of lac. This ſand is found at Ragimaul. It is compoſed of ſmall angular cryſtalline particles tinged red with iron, two parts to one of black magnetic ſand. The ſtonecutters, inſtead of ſand, uſe the powder of a very hard granite called *corune*. Theſe grindſtones cut very faſt. When they want to increaſe their power, they throw ſand upon them, or let them occaſionally touch the edge of a vitrified brick. The ſame compoſition is formed upon ſticks, for cutting ſtones, ſhells, &c. by the hand.

5. For painting. Take one gallon of the red liquid from the firſt waſhing for ſhell-lac, ſtrain it thro' a cloth, and let it boil for a ſhort time; then add half an ounce of ſoap earth (foſſil alkali); boil an hour more, and add three ounces of powdered load (bark of a tree); boil a ſhort time, let it ſtand all night, and ſtrain next day. Evaporate three quarts of milk without cream to two quarts upon a ſlow fire, curdle it with ſour milk, and let it ſtand for a day or two; then mix it with the red liquid abovementioned; ſtrain them through a cloth, add to the mixture one ounce and an half of alum, and the juice of eight or ten lemons: mix the whole and throw it into a cloth-bag ſtrainer. The blood of the inſect forms a coagulum with the caſeous part of the milk, and remains in the bag,

Lacca.

bag, while a limpid acid water drains from it. The coagulum is dried in the ſhade, and is uſed as a red colour in painting and colouring.

6. For Dyeing. Take one gallon of the red liquid prepared as before without milk, to which add three ounces of alum. Boil three or four ounces of tamarinds in a gallon of water, and ſtrain the liquor. Mix equal parts of the red liquid and tamarind water over a briſk fire. In this mixture dip and wring the ſilk alternately until it has received a proper quantity of the dye. To increaſe the colour, increaſe the proportion of the red liquid, and let the ſilk boil a few minutes in the mixture. To make the ſilk hold the colour, they boil a handful of the bark called *load* in water, ſtrain the decoction, and add cold water to it; dip the dried ſilk into this liquor ſeveral times, and then dry it. Cotton cloths are dyed in this manner; but the dye is not ſo laſting as in ſilk.

The lac colour is preſerved by the natives upon flakes of cotton dipped repeatedly into a ſtrong ſolution of the lac inſect in water, and then dried.

Among us lac is alſo uſed in various arts; being employed in the preparation of ſpirit-varniſhes, for the making of ſealing-wax, and as a colouring material for dying ſcarlet; ſee Varnish, Wax, &c. It is unſoluble in water: and difficultly ſoluble in ſpirit of wine, which for that purpoſe muſt be well dephlegmated. According to Neumann, 16 ounces of ſeed-lac, diſtilled in an open fire, yielded nine ounces and ſix drams of a butter or thick oil, one ounce ſix drams of a watery liquor neither acid nor alkaline, and a reſiduum weighing two ounces and a half. The colour given by lac is leſs beautiful, but more durable, than that given by cochineal. To render the colouring matter of the lac diffuſible in water, ſo as to be applied to the ſtuffs to be dyed. Mr Hellot directs the following proceſs: Let ſome powdered gum-lac be digeſted during two hours in a decoction of comfry root, by which a fine crimſon colour is given to the water, and the gum is rendered pale or ſtraw-coloured. To this tincture, poured off clear, let a ſolution of alum be added; and when the colouring matter has ſubſided, let it be ſeparated from the clear liquor and dried. It will weigh about $\frac{1}{7}$th of the quantity of lac employed. This dried fecula is to be diſſolved or diffuſed in warm water, and ſome ſolution of tin is to be added to it, by which it acquires a vivid ſcarlet colour. This liquor is to be added to a ſolution of tartar in boiling water; and thus the dye is prepared.

The method of obtaining the fine red lac uſed by painters from this ſubſtance, is by the following ſimple proceſs. Boil the ſtick-lac in water, filter the decoction, and evaporate the clear liquor to a dryneſs over a gentle fire. The occaſion of this eaſy ſeparation is, that the beautiful red colour here ſeparated, adheres only ſlightly to the outſides of the ſticks broke off the trees along with the gum-lac, and readily communicates itſelf to boiling water. Some of this ſticking matter alſo adhering to the gum itſelf, it is proper to boil the whole together; for the gum does not at all prejudice the colour, nor diſſolve in boiling water: ſo that after this operation the gum is as fit for making ſealing-wax as before, and for all other uſes which do not require its colour.

Lacca, Lace.

Lac is likewiſe employed for medicinal purpoſes. The ſtick-lac is the ſort uſed. It is of great eſteem in Germany, and other countries, for laxity and ſpongineſs of the gums proceeding from cold or a ſcorbutic habit: for this uſe the lac is boiled in water, with the addition of a little alum, which promotes its ſolution; or a tincture is made from it with rectified ſpirit. This tincture is recommended alſo internally in the fluor albus, and in rheumatic and ſcorbutic diſorders: it has a grateful ſmell, and not unpleaſant, bitteriſh, aſtringent taſte.

The gum-lac has been lately uſed as an electric, inſtead of glaſs, for electrical machines. See Lacquer, Lake, and Varnish.

Artificial Lacca, or *Lacque*, is alſo a name given to a coloured ſubſtance drawn from ſeveral flowers; as the yellow from the flower of the juniper, the red from the poppy, and the blue from the iris or violet. The tinctures of theſe flowers are extracted by digeſting them ſeveral times in aqua-vitæ, or by boiling them over a ſtove fire in a lixivium of pot-aſhes and alum.

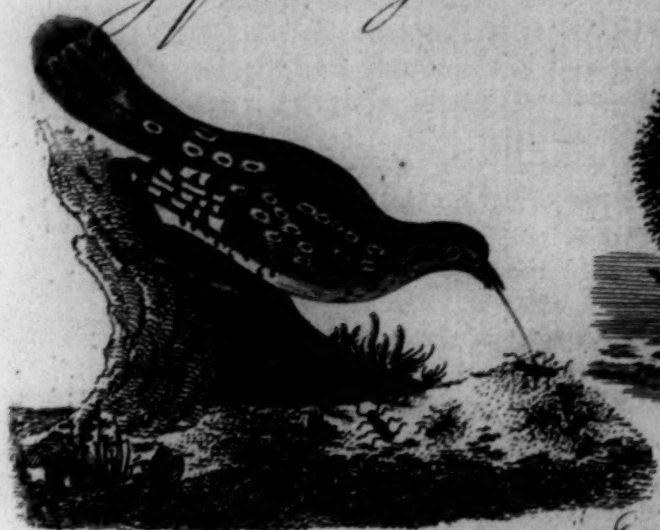
An artificial lacca is alſo made of Braſil wood, boiled in a lixivium of the branches of the vine, adding a little cochineal, turmeric, calcined alum, and arſenic, incorporated with the bones of the cuttle-fiſh pulverized and made up into little cakes and dried. If it be to be very red, they add the juice of lemon to it; to make it brown, they add oil of tartar. Dove-coloured or columbine lacca is made with Braſil of Fernambuc, ſteeped in diſtilled vinegar for the ſpace of a month, and mixed with alum incorporated in cuttle-fiſh bone. For other proceſſes, ſee *Colour-Making*.

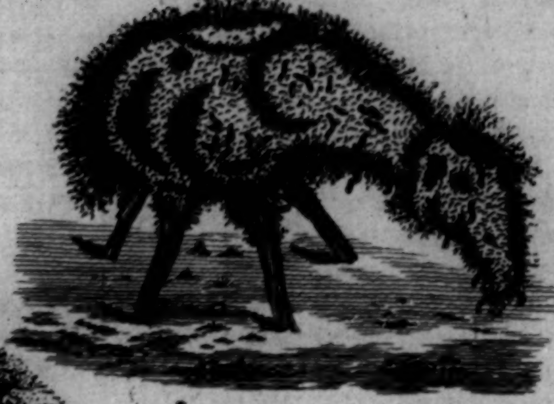
LACE, in commerce, a work compoſed of many threads of gold, ſilver, or ſilk, interwoven the one with the other, and worked upon a pillow with ſpindles according to the pattern deſigned. The open work is formed with pins, which are placed and diſplaced as the ſpindles are moved. The importation of gold and ſilver lace is prohibited in Britain.

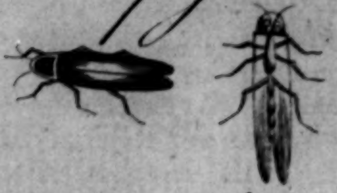
Method of Cleaning Gold Lace and Embroidery when tarniſhed.—For this purpoſe alkaline liquors are by no means to be uſed; for while they clean the gold, they corrode the ſilk, and change or diſcharge its colour. Soap alſo alters the ſhade, and even the ſpecies of certain-colours. But ſpirit of wine may be uſed without any danger of its injuring either the colour or quality of the ſubject; and in many caſes proves as effectual, for reſtoring the luſtre of the gold, as the corroſive detergents. A rich brocade, flowered with a variety of colours, after being diſagreeably tarniſhed, had the luſtre of the gold perfectly reſtored by waſhing it with a ſoft bruſh dipt in warm ſpirit of wine; and ſome of the colours of the ſilk, which were likewiſe ſoiled, became at the ſame time remarkably bright and lively. Spirit of wine ſeems to be the only material adapted to this intention, and probably the boaſted ſecret of certain artiſts is no other than this ſpirit diſguiſed. Among liquids, Dr Lewis ſays, he does not know of any other that is of ſufficient activity to diſcharge the foul matter, without being hurtful to the ſilk: as to powders, however fine, and however cautiouſly uſed, they ſcratch and wear the gold, which here is only ſuperficial and of extreme tenuity.

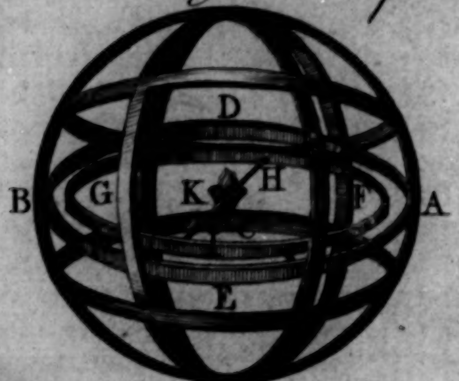
But though ſpirit of wine is the moſt innocent material

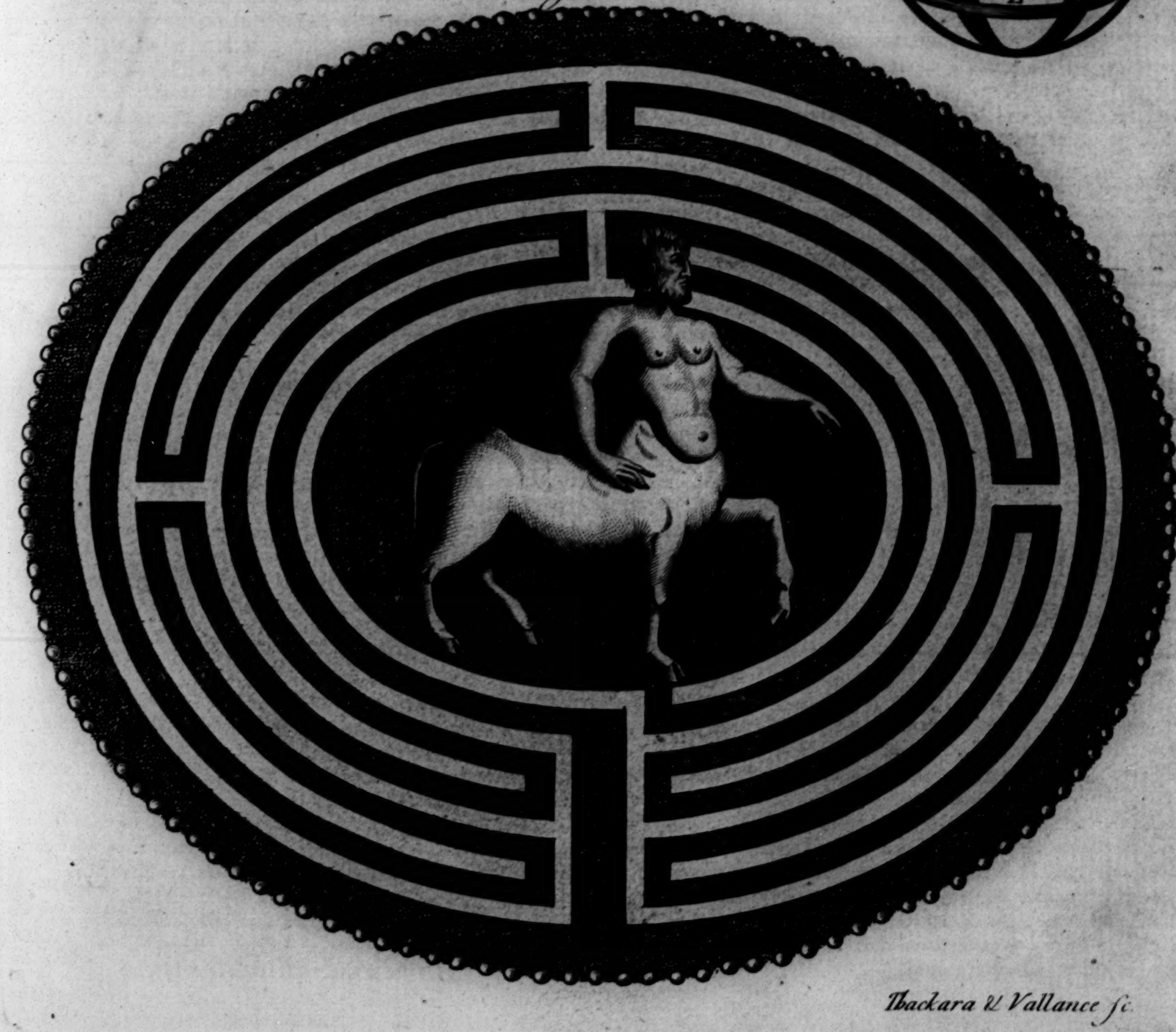
Plate CCLIX.


Jynx or Wry neck.


Scythian Lamb.


Lampyris.


Rolling Lamp.


Labyrinth.

Thackara & Vallance sc.

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al that can be employed for this purpoſe, it is not in all caſes proper. The golden covering may be in ſome parts worn off; or the baſe metal, with which it had been iniquitouſly alloyed, may be corroded by the air, ſo as to leave the particles of the gold diſunited; while the ſilver underneath, tarniſhed to a yellow hue, may continue a tolerable colour to the whole: in which caſes it is apparent, that the removal of the tarniſh would be prejudicial to the colour, and make the lace or embroidery leſs like gold than it was before. A piece of old tarniſhed gold-lace, cleaned by ſpirit of wine, was deprived, with its tarniſh, of the greateſt part of its golden hue, and looked now almoſt like ſilver-lace.

Method of ſeparating the Gold and Silver from Lace *without burning it.* Cut the lace in pieces, and (having ſeparated the thread from it by which it was ſewed to the garment) tie it up in a linen cloth, and boil it in ſoap-ley, diluted with water, till you perceive it is diminiſhed in bulk; which will take up but a little time, unleſs the quantity of lace be very conſiderable. Then take out the cloth, and waſh it ſeveral times in cold water, ſqueezing it pretty hard with your foot, or beating it with a mallet, to clear it of the ſoap-ley; then untie the cloth, and you will have the metallic part of the lace pure, and nowhere altered in colour or diminiſhed in weight.

This method is abundantly more convenient and leſs troubleſome than the common way of burning; and as a ſmall quantity of the ley will be ſufficient, the expence will be trifling, eſpecially as the ſame ley may be uſed ſeveral times, if cleared of the ſilky calcination. It may be done in either an iron or copper veſſel.

The ley may be had at the ſoap-boilers, or it may be made of pearl-aſh and quick-lime boiled together in a ſufficient quantity of water.

The reaſon of this ſudden change in the lace will be evident to thoſe who are acquainted with chemiſtry: for ſilk, on which all our laces are wove, is an animal ſubſtance, and all animal ſubſtances are ſoluble in alkalies, eſpecially when rendered more cauſtic by the addition of quicklime; but the linen you tie it in, being a vegetable, will remain unaltered.

Blond-Lace, a lace made of fine linen thread or ſilk, much in the ſame manner as that of gold and ſilver. The pattern of the lace is fixed upon a large round pillow, and pins being ſtuck into the holes or openings in the patterns, the threads are interwoven by means of a number of bobbins made of bone or ivory, each of which contains a ſmall quantity of fine thread, in ſuch a manner as to make the lace exactly reſemble the pattern. There are ſeveral towns in England, and particularly in Buckinghamſhire, that carry on this manufacture; but vaſt quantities of the fineſt lace have been imported from Flanders.

LACEDÆMON (fab. hiſt.), a ſon of Jupiter and Tayget the daughter of Atlas, who married Sparta the daughter of Europa, by whom he had Amyclas and Eurydice the wife of Acryſius. He was the firſt who introduced the worſhip of the Graces in Laconia, and who firſt built them a temple. From Lacedæmon and his wife, the capital of Laconia was called *Lacedæmon* and *Sparta*.

Lacedæmon, a noble city of Peloponneſus, called alſo *Sparta*: theſe names differing in this, that the latter is the proper and ancient name of the city, the former of the country, which afterwards came to be applied to the city (Strabo, Stephanus.) Homer alſo makes this diſtinction; who calls the country *holy*, becauſe encompaſſed with mountains. It has alſo been ſeverally known by the name of *Lelegia*, from the Leleges the firſt inhabitants of the country, or from Lelex one of their kings; and *Oebalia*, from *Oebalas* the ſixth king from Eurotas. It was alſo called *Hecatompolis*, from 100 cities which the whole province once contained. This city was the capital of Laconia, ſituated on the right or weſt ſide of the Eurotas: it was leſs in compaſs than, however equal, or even ſuperior, to Athens in power. Polybius makes it 48 ſtadia, a circuit much inferior to that of Athens. Lelex is ſuppoſed to have been the firſt king of Lacedæmon. His deſcendants, 13 in number, reigned ſucceſſively after him, till the reign of the ſons of Oreſtes, when the Heraclidæ recovered the Peloponneſus about 80 years after the Trojan war. Procles and Euryſthenes, the deſcendants of the Heraclidæ, uſurped the crown together; and after them it was decreed that the two families ſhould always ſit on the throne together. The monarchial power was aboliſhed, and the race of the Heraclidæ extinguiſhed at Sparta about 219 years before Chriſt. Lacedæmon in its flouriſhing ſtate remained without walls, the bravery of its citizens being inſtead of them (Nepos). At length in Caſſander's time, or after, when the city was in the hands of tyrants, diſtruſting the defence by arms and bravery, a wall was built round it, at firſt ſlight, and in a tumultuary, or haſty manner; which the tyrant Nabis made very ſtrong (Livy, Juſtin). Pauſanias aſcribes the firſt walls to the times of Demetrius and Pyrrhus, under Nabis. The walls of the city were pulled down 188 years before Chriſt by Philopœmen, who was then at the head of the Achæan league, and Laconia ſome time after became a Roman province when reduced by Mummias. See Sparta.—The preſent city is called *Miſitra*, ſituated in E. Long. 23. 0. N. Lat. 36. 55.

LACERNA, a coarſe thick garment worn by the Romans over their gowns like a cloak, to keep off the rain and cold. It was firſt uſed in the camp, but afterwards admitted into the city. The emperors wore the lacerna of a purple dye. The lacerna was at firſt very ſhort, but was lengthened after it became faſhionable, which was not till the civil wars and the triumvirate; before this time it was confined to the ſoldiers. Senators were forbidden wearing it in the city by Valentinian and Theodoſius. Martial makes mention of lacernæ worth 10,000 ſeſterces. Some confound this garment with the penula; but it ſeems rather to have reſembled the *chlamys* and *birrus*.

Plates CCLX. & CCLXI.

LACERTA, the lizard, in zoology, a genus of amphibious animals, belonging to the order of reptilia, the characters of which are theſe: The body is naked, with four feet, and a tail. There are 49 ſpecies: the moſt remarkable are,

1. The crocodylus, or crocodile, has a compreſſed jagged tail, five toes on the fore and four on the hind feet. This is the largeſt animal of the lizard kind. One that was diſſected at Siam, an account of which was ſent to the Royal Academy at Paris, was

18 feet and a half long, of which the tail was no leſs than five feet and a half, and the head and neck above two and a half. He was four feet and nine inches in circumference where thickeſt.

The hinder legs, including the thigh and the paw, were two feet and two inches long; the paws, from the joint to the extremity of the longeſt claws, were above nine inches. They were divided into four toes; of which three were armed with large claws, the longeſt of which was an inch and a half, and ſeven lines and a half broad at the root. The fourth toe was without a nail, and of a conical figure; but was covered with a thick ſkin like ſhagreen leather. Theſe toes were united with membranes like thoſe of ducks, but much thicker.

The fore-legs, had the ſame parts and conformation as the arms of a man, both within and without; but they were ſomewhat ſhorter than thoſe behind. The hands had five fingers, the two laſt of which had no nails, and were of a conical figure, like the fourth toe on the hind paws. The head was long, and had a little riſing at the top; but the reſt was flat, and eſpecially towards the extremity of the jaws. It was covered with a ſkin, which adhered firmly to the ſkull and to the jaws. The ſkull was rough and unequal in ſeveral places; and about the middle of the forehead there were two bony creſts, about two inches high. They were not quite parallel, but ſeparated from each other in proportion as they mounted upwards.

The eye was very ſmall in proportion to the reſt of the body; and was ſo placed within its orbit, that the outward part, when ſhut, was only a little above an inch in length, and run parallel to the opening of the jaws.

The noſe was placed in the middle of the upper jaw, near an inch from its extremity, and was perfectly round and flat, being two inches in diameter, of a black, ſoft, ſpongy ſubſtance, not unlike the noſe of a dog. The noſtrils were in the form of a Greek capital Σ; and there were two caruncles which filled and cloſed them very exactly, and which opened as often as he breathed through the noſe. The jaws ſeemed to ſhut one within another by means of ſeveral apophyſes, which proceeded from above downwards, and from below upwards, there being cavities in the oppoſite jaw to receive them. They had 27 dog-teeth in the upper jaw and 15 in the lower, with ſeveral void ſpaces between them. They were thick at the bottom, and ſharp at the point; being all of different ſizes, except ten large hooked ones, ſix of which were in the lower jaw, and four in the upper. The mouth was 15 inches in length, and eight and a half in breadth where broadeſt; and the diſtance of the two jaws, when opened as wide as they could be, was 15 inches and a half. The ſkull, between the two creſts, was proof againſt a muſket-ball, for it only rendered the part a little white that it ſtruck againſt.

The colour of the body was of a dark brown on the upper part, and of a whitiſh citron below, with large ſpots of both colours on the ſides. From the ſhoulders to the extremity of the tail he was covered with large ſcales of a ſquare form, diſpoſed like parallel girdles, and were 52 in number; but thoſe near the tail were not ſo thick as the reſt. In the middle of each girdle there were four protuberances, which became higher as they approached the end of the tail, and compoſed four rows; of which the two in the middle were lower than the remaining two, forming three channels, which grew deeper the nearer they came to the tail, and were confounded with each other about two feet from its extremity.

The ſkin was defended with a ſort of armour which, however, was not proof againſt a muſket-ball, contrary to what has been commonly ſaid. However, it muſt be acknowledged, that the attitude in which it was placed might contribute not a little thereto; for probably, if the ball had ſtruck obliquely againſt the ſhell, it would have flown off. Thoſe parts of the girdles underneath the belly were of a whitiſh colour, and were made up of ſcales of divers ſhapes. They were about one-ſixth of an inch in thickneſs, and were not ſo hard as thoſe on the back.

This creature is, however, ſaid to grow to a ſtill larger ſize than that abovementioned, ſome having been known to meaſure 25 feet in length.——They have no tongue; but in place of that organ there is a ſort of membrane attached by its edges to the two ſides of the under jaw.

The crocodile lays eggs, which ſhe covers over with ſand, and leaves to be hatched by the heat of the ſun. They are to be met with in the rivers Nile, Niger, and Ganges, beſides moſt other large rivers in the ſouthern parts of Aſia, Africa, and America.

Mr Haſſelquiſt informs us, that the crocodile ſwallows ſtones to aſſiſt digeſtion, after the manner of ſeed-eating birds, which commit to the ſtomach the work of maſtication as well as concoction, being deſtitute of the inſtruments adapted to that purpoſe. The Egyptians ſay, that his excrements do not paſs by the anus; this ſeems to be confirmed by the ſtructure of the gut, which is near the pylorus; for it cannot eaſily be conceived that excrements ſhould paſs through ſuch a narrow paſſage, ſeemingly deſtined for the conveyance of the chyle only; but the ſtructure of the parts, and the gut being ſo near the pylorus, ſeem to indicate that the excrements paſs through it into the ventricle, and are vomited up. The inhabitants above Cairo ſay they ſee this daily; and obſerve, that the crocodile is obliged to come on ſhore as often as he has occaſion to eaſe himſelf. There is a folliculus, of the bigneſs of a hazel-nut, under the ſhoulders of the old crocodiles, which contains a thick matter ſmelling like muſk. The Egyptians are very anxious to get this when they kill a crocodile, it being a perfume much eſteemed by the grandees. When the male copulates with the female, he turns her with his ſnout on her back. The Egyptians uſe the fat againſt the rheumatiſm and ſtiffneſs of the tendons, eſteeming it a powerful remedy outwardly applied. They ſay the gall is good for the eyes; they make uſe of it as a certain remedy for barrenneſs in women, taking about ſix grains internally, and outwardly they apply a peſſus made of cotton and the gall of a crocodile. The eyes of the crocodile are the beſt aphrodiſiacs of any known by the Arabs; who prefer them to all confections, dea-ſatyrii, hyacinthi, &c. and even to ambergris.

The crocodile is a very dangerous and terrible animal in ſome countries. It does a great deal of miſ-

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chief among the common people of Upper Egypt, often killing and devouring women who come to the river to fetch water, and children playing on the ſhore or ſwimming in the river. In the ſtomach of one diſſected before Mr Barton the Engliſh conſul, they found the bones of the legs and arms of a woman, with the rings which they wear in Egypt as ornaments. Theſe animals are ſeen in ſome places lying for whole hours, and even days, ſtretched in the ſun and motionleſs; ſo that one not uſed to them might miſtake them for trunks of trees covered with a rough and dry bark: but the miſtake would ſoon be fatal; for the ſeemingly torpid animal, at the near approach of any living creature, inſtantly darts upon it, and carries it to the bottom. In the times of an inundation they ſometimes enter the cottages of the natives, where they ſeize the firſt animal they meet with. There have been ſeveral examples of their taking a man out of a canoe in the ſight of his companions, without their being able to lend him any aſſiſtance. The crocodile, however, except when preſſed with hunger, or with a view of depoſiting its eggs, ſeldom leaves the water. Its uſual method is to float along upon the ſurface, and ſeize whatever animals come within its reach: but when this method fails, it then goes cloſer to the bank. There it waits in patient expectation of ſome land animal that comes to drink; the dog, the bull, the tiger, or man himſelf. Nothing is to be ſeen as the animal approaches, nor is its retreat diſcovered till it is too late for ſafety. It ſeizes the victim with a ſpring, and goes at a bound much faſter than ſuch an unwieldy animal could be ſuppoſed to do; then having ſecured the creature both with teeth and claws, it drags it into the water, inſtantly ſinks with it to the bottom, and in this manner quickly drowns it. Sometimes it happens, that the creature wounded by the crocodile makes its eſcape; in which caſe, the latter purſues with great celerity, and often takes it a ſecond time. In theſe depredations, however, this terrible animal often ſeizes on another as formidable as itſelf, and meets with a deſperate reſiſtance. We are told of frequent combats between the crocodile and the tiger. All creatures of the tiger kind are continually oppreſſed by a parching thirſt, that keeps them in the vicinity of great rivers, whither they deſcend to drink very frequently. On theſe occaſions they are ſeized by the crocodile; upon whom they inſtantly turn with the greateſt agility, and force their claws into his eyes, while he plunges with his fierce antagoniſt into the river. There they continue to ſtruggle for ſome time, till at laſt the tiger is drowned. Notwithſtanding all this, however, we are aſſured by Labat, that a negro, with no other weapon than a knife in his right hand, and his left arm wrapped round with a cow-hide, ventures boldly to attack this animal in its own element. As ſoon as he approaches the crocodile, he preſents his left arm, which the animal ſwallows moſt greedily: but as it ſticks in his throat, the negro has time to give it ſeveral ſtabs below the chin, where it is eaſily vulnerable; and the water alſo getting in at the mouth, which is held involuntarily open, the creature is ſoon bloated up as big as a tun, and expires.

The natives of Siam ſeem particularly fond of the capture of all the great animals with which their country abounds. The crocodiles are taken by throwing three or four ſtrong nets acroſs a river, at proper diſtances from each other; ſo that if the animal breaks through the firſt, it may be caught by one of the reſt. When it is firſt taken, it employs the tail, which is the grand inſtrument of ſtrength, with great force; but after many unſucceſsful ſtruggles, the animal's ſtrength is at laſt exhauſted. Then the natives approach their priſoner in boats, and pierce him in the moſt tender parts till he is weakened by loſs of blood. When he has done ſtirring, they begin by tying up his mouth, and with the ſame cord tie his head to his tail, which laſt they bend back like a bow. However, they are not yet perfectly ſecure from his fury; but for their greater ſafety they tie his fore feet, as well as thoſe behind, to the top of his back. Theſe precautions are not uſeleſs: for if they were to omit them, the crocodile would ſoon recover ſtrength enough to do a great deal of miſchief. When thus brought into ſubjection, or when taken young and tamed, this formidable animal is uſed to divert and entertain the great men of the eaſt. It is often managed like an horſe; a curb is put into its mouth, and the rider directs it as he thinks proper. Though aukwardly formed, it does not fail to proceed with ſome degree of ſwiftneſs; and is thought to move as faſt as ſome of the moſt unwieldy of our own animals, the hog or the cow. Some indeed aſſert, that no animal could eſcape it but for its ſlowneſs in turning; which, however, ſeems very improbable, as its back-bone is full of articulations, and ſeemingly as flexible as that of other large animals.

Lacerta.

All crocodiles breed near freſh waters; and though they are ſometimes found in the ſea, yet that may be conſidered rather as a place of excurſion than abode. They produce their young by eggs, as was ſaid above; and for this purpoſe, the female, when ſhe comes to lay, chooſes a place by the ſide of a river, or ſome freſh-water lake, to depoſite her brood in. She always pitches upon an extenſive ſandy ſhore, where ſhe may dig a hole without danger of detection from the ground being freſh turned up. The ſhore muſt alſo be gentle and ſhelving to the water, for the greater convenience of the animal's going and returning; and a convenient place muſt be found near the edge of the ſtream, that the young may have a ſhorter way to go. When all theſe requiſites are adjuſted, the animal is ſeen cautiouſly ſtealing up on ſhore to depoſit her burden. The preſence of a man, a beaſt, or even a bird, is ſufficient to deter her at that time; and if ſhe perceives any creature looking on, ſhe infallibly returns. If, however, nothing appears, ſhe then goes to work, ſcratching up the ſand with her fore-paws, and making a hole pretty deep in the ſhore. There ſhe depoſites from 80 to 100 eggs, of the ſize of a tennis-ball, and of the ſame figure, covered with a tough white ſkin like parchment. She takes above an hour to perform this taſk; and then covering up the place ſo artfully that it can ſcarcely be perceived, ſhe goes back to return again the next day. Upon her return with the ſame precaution as before, ſhe lays about the ſame number of eggs; and the day following alſo a like number. Thus having depoſited her whole quantity, and having covered them cloſe up in the ſand, they are ſoon vivified by the heat of the ſun; and at the end of 30 days the young ones begin to break open the ſhell. At this time the female is inſtinctively taught that her young ones want relief; and ſhe goes upon land to ſcratch away the ſand and ſet them free. Her brood quickly avail themſelves of their liberty: a part run unguided to the water; another part aſcend the back of the female, and are carried thither in greater ſafety. But the moment they arrive at the water, all natural connection is at an end; when the female has introduced her young to their natural element, not only ſhe, but the male, become amongſt the number of their moſt formidable enemies, and devour as many of them as they can. The whole brood ſcatters into different parts at the bottom; by far the greateſt number are deſtroyed, and the reſt find ſafety in their agility or minuteneſs.

But it is not the parent alone that is thus found to thin their numbers; the eggs of this animal are not only a delicious feaſt to the ſavage, but are eagerly ſought after by every beaſt and bird of prey. The ichneumon was erected into a deity among the ancients for its ſucceſs in deſtroying the eggs of theſe monſters: at preſent that ſpecies of the vulture called the *gallinazo* is their moſt prevailing enemy. All along the banks of great rivers, for thouſands of miles, the crocodile is ſeen to propagate in numbers that would ſoon over-run the earth, but for the vulture, that ſeems appointed by Providence to abridge its fecundity. Theſe birds are ever found in great numbers where the crocodile is moſt numerous; and hiding themſelves within the thick branches of the trees that ſhade the banks of the river, they watch the female in ſilence, and permit her to lay all her eggs without interruption. Then when ſhe has retired, they encourage each other with cries to the ſpoil; and flocking all together upon the hidden treaſure, tear up the eggs, and devour them in a much ſhorter time than they were depoſited. Nor are they leſs diligent in attending the female while ſhe is carrying her young to the water; for if any one of them happens to drop by the way, it is ſure to receive no mercy.

Such is the extraordinary account given us by late travellers of the propagation of this animal; an account adopted by Linnæus and the moſt learned naturaliſts of the age. Yet if one might argue from the general analogy of nature, the crocodile's devouring her own young when ſhe gets to the water ſeems doubtful. This may be a ſtory raiſed from the general idea of this animal's rapacious cruelty; when in fact the crocodile only ſeems more cruel than other animals, becauſe it has more power to do miſchief. It is probable that it is not more diveſted of parental tenderneſs than other creatures; and we are the more led to think ſo, from the peculiar formation of one of the crocodile kind, called,

2. The *open-bellied crocodile*; which is furniſhed with a falſe belly like the opoſſum, where the young creep out and in as their dangers or neceſſities require. The crocodile, thus furniſhed at leaſt, cannot be ſaid to be an enemy to her own young, ſince ſhe thus gives them more than parental protection. It is probable alſo that this open bellied crocodile is viviparous, and foſters her young that are prematurely excluded in this ſecond womb until they come to proper maturity.

This crocodile is a ſpecies that was not deſcribed by Linnæus; but has been inſerted in the *Syſtema Naturæ* ſince his death, under the name of *Lacerta gangetica*. Mr Edwards tells us, that three of theſe creatures were ſent from Bengal about the year 1747, to the late Dr Mead phyſician in ordinary to the Britiſh king. Two of them the Doctor preſerved in his collection, and preſented the third to the late curious Mrs Kennon; and ſince the deceaſe of theſe worthy perſons, they became the property of Mr James Lemon of London, who obliged our author with one of them to produce to the royal ſociety. The narrowneſs of the beak is the moſt extraordinary circumſtance in this crocodile, which appears like the bill of the bird called *gooſeander*. It has ſmall ſharp teeth. Another peculiarity is a paunch or open purſe in the middle of the under ſide of the belly, which ſeems to be naturally formed with round hips, and hollow within, to receive its young in time of danger, as it appears in the American animal called *opoſſum*. Dr Parſons gave it as his opinion, that the opening in the belly was really natural, it having no appearance of being cut or torn open. In other reſpects it hath all the marks common to alligators or crocodiles. The beak was finely creaſed tranſverſely. The animal appeared in the ſpirits all over of a yellowiſh olive colour, the under ſide lighter than the upper, the latter having ſome duſky marks and ſpots. This ſpecies inhabits the banks of the Ganges; and it is very ſtrange that they ſhould never have been deſcribed before, as the India company have been ſo long ſettled there, and the animal is at full growth nearly, if not altogether, as large as the common crocodile.

How long the crocodile lives we are not certainly informed: if we may believe Ariſtotle, it lives the age of a man; but the ancients ſo much amuſed themſelves in inventing fables concerning this animal, that even truth from them is ſuſpicious. What we know for certain from the ancients is, that among the various animals that were produced to fight in the amphitheatre at Rome, the combat of the crocodile was not wanting. Marcus Scaurus produced them living in his unrivalled exhibitions; and the Romans conſidered him as the beſt citizen, becauſe he furniſhed them with the moſt expenſive entertainments.

3. The alligator, or American crocodile, has a vaſt mouth, furniſhed with ſharp teeth; from the back to the end of the tail, ſerrated; ſkin tough and brown, and covered on the ſides with tubercles. This dreadful ſpecies, which grows to the length of 17 or 18 feet, is found in the warmer parts of North America; and moſt numerous as we approach the ſouth, and the more fierce and ravenous. Yet in Carolina it never devours the human ſpecies, but on the contrary ſhuns mankind; it will, however, kill dogs as they ſwim the rivers, and hogs which feed in the ſwamps. It is often ſeen floating like a log of wood on the ſurface of the water, and is miſtaken for ſuch by dogs and other animals, which it ſeizes and draws under water to devour at its leiſure. Like the wolf, when preſſed by long hunger, it will ſwallow mud, and even ſtones

and pieces of wood. They often get into the wears in purſuit of fiſh, and do much miſchief by breaking them to pieces. They are torpid during the winter in Carolina; and retire into their dens, which they form by burrowing far under ground. It makes the entrance under water, and works upwards. In ſpring it quits its retreat, and reſorts to the rivers, which it ſwims up and down; and chiefly ſeeks its prey near the mouth, where the water is brackiſh.—It roars and makes a dreadful noiſe at its firſt leaving its den, and againſt bad weather. It lays a vaſt number of eggs in the ſand, near the banks of lakes and rivers, and leaves them to be hatched by the ſun: multitudes are deſtroyed as ſoon as hatched either by their own ſpecies or by fiſh of prey. In South America the carrion vulture is the inſtrument of Providence to deſtroy multitudes; by that means preventing the country from being rendered uninhabitable.

4. The Cayman, or Antilles crocodile, which has by different authors been confounded with the two preceding ſpecies, is evidently different from both; and has accordingly been properly diſtinguiſhed by the Abbe Bonnaterre in the *Encyclopédie Methodique* [‡]. See our figure, where the differences are ſo apparent as to require no detail.—The greateſt ſtrength of this animal, according to M. Merian, conſiſts in its teeth, of which there are two rows croſſing one another, by means of which it grinds with the greateſt eaſe whatever it ſeizes upon. But it muſt not be underſtood from this that there is a double row of teeth, as Seba pretends, on each ſide of the under jaw; but only that there are two rows on each jaw, one on the right and the other on the left ſide.—The *Cayman* is ſo called from ſome ſmall iſles of that name among the Antilles, where theſe creatures are ſaid to be very numerous. They are of exceeding ſtrength, and equally the dread both of men and animals; for they live on land as well as in the water, and devour every creature they meet with.—Another figure is added, repreſenting an egg with the young one at the time of breaking the ſhell. See the Plates.

5. The caudiverbera, has a depreſſed pinnatifid tail, and palmated feet. It is larger than the common green lizard, is found in Peru, and has got its name from its beating the ground with its tail.

6. The ſtellio has a verticillated tail, and dentated ſcales. It is a native of Africa, and the warm parts of Aſia. It frequents the ruinous walls of Natolia, Syria, and Paleſtine. The Arabs call it *hardun*. The Turks kill it; for they imagine, that, by declining the head, it mimics them while they ſay their prayers.

7. The agilis, has a pretty long verticillated tail, with ſharp ſcales, and a ſcaly collar. This is the common green lizard, and is a native both of Europe and India. This ſpecies is extremely nimble: in hot weather it baſks on the ſides of dry banks or old trees; but, on being obſerved, immediately retreats to its hole. The food of this ſpecies, as well as of all the other Britiſh lizards, is inſects; and they themſelves are devoured by birds of prey. They are all perfectly harmleſs; yet their form ſtrikes one with diſguſt, and has occaſioned great obſcurity in their hiſtory. Mr Pennant mentions a lizard killed in Worceſterſhire in the year 1714, which was two feet ſix inches long, and four inches in girth. The fore-legs were placed eight inches from the head; the hind-legs five inches beyond thoſe: the legs were two inches long; the feet divided into four toes, each furniſhed with a ſharp claw. Another of the ſame kind was afterwards killed in that county; but whether theſe large lizards were natives of other countries and imported into England, or whether they were of Britiſh growth, is uncertain.

8. The chamæleon has a crooked cylindrical tail. The head of a large chamæleon is almoſt two inches long, and from thence to the beginning of the tail it is four inches and a half. The tail is five inches long, and the feet two and a half. The thickneſs of the body is different at different ſeaſons; for ſometimes from the back to the belly it is two inches, and ſometimes but one; for he can blow himſelf up and contract himſelf at pleaſure. This ſwelling and contraction is not only of the back and belly, but alſo of the legs and tail.

Theſe different motions are not like thoſe of other animals, which proceed from a dilatation of the breaſt in breathing, and which riſes and falls ſucceſſively; but they are very irregular, as in tortoiſes and frogs. The chamæleon has continued as it were blown up for two hours together, and then he would grow leſs and leſs inſenſibly; for the dilatation was always more quick and viſible than the contraction. In this laſt ſtate he appeared extremely lean, and the ſpine of the back was ſharp, and all his ribs might be told; likewiſe the tendons of the arms and legs might be ſeen very diſtinctly.

The ſkin is very cold to the touch; and notwithſtanding he ſeems ſo lean, there is no feeling the beating of the heart. The ſurface of the ſkin is unequal, and has a grain not unlike ſhagreen, but very ſoft, becauſe each eminence is as ſmooth as if it was poliſhed. Some of theſe are as large as a middling pin's head on the arms, legs, belly, and tail; but on the ſhoulders and head they are of an oval figure, and a little larger. Thoſe under the throat are ranged in the form of a chaplet, from the lower lip to the breaſt. Some on the head and back are amaſſed together in cluſters, with ſpaces between them, on which are almoſt imperceptible ſpots of a pale red and yellow colour, as well as the ground of the ſkin itſelf, which plainly appears between theſe cluſters. This ground changes colour when the animal is dead, becoming of a greyiſh brown, and the ſmall ſpots are whitiſh.

The colour of all thoſe eminences, when the chamæleon is at reſt in a ſhady place, is of a bluiſh grey, except on the claws, where it is white with a little yellow; and the ſpaces between the cluſters is of a pale red and yellow, as was before obſerved. But when he is in the ſun, all parts of the body which are affected with the light become of a greyiſh brown, or rather of a tawney. That part of the ſkin which the ſun does not ſhine on, changes into ſeveral brighter colours, which form ſpots of the ſize of half one's finger. Some of theſe deſcend from the ſpine half way on the back; and others appear on the ſides, arms, and tail. They are all of an Iſabella colour, from a mixture of a pale yellow and of a bright red, which is the colour of the ground of the ſkin.

[‡] Voyez *Erpetologie*, dans la diviſion de l'Hiſtoire Naturelle, p. 35.

The head of a chamæleon is not unlike that of a fiſh, it being joined to the breaſt by a very ſhort neck, covered on each ſide with cartilaginous membranes reſembling the gills of fiſhes. There is a creſt directly on the top of the head, and two others on each ſide above the eyes, and between theſe there are two cavities near the top of the head. The muzzle is blunt, and not much unlike that of a frog: at the end there is a hole on each ſide for the noſtrils; but there are no ears, nor any ſign of any.

The jaws are furniſhed with teeth, or rather with a bone in the form of teeth, which he makes little or no uſe of, becauſe he lives upon ſwallowing flies and other inſects without chewing them; and hence aroſe the vulgar notion of his living upon air, becauſe he was never ſeen to eat. The tongue, which Linnæus ſays reſembles an earthworm, is of conſiderable length, and is enlarged and ſomewhat flattened at the end. From this member there continually oozes out a very glutinous liquor, by means of which it catches ſuch inſects as come within its reach, and it is ſurpriſing to ſee with what quickneſs it retracts its tongue the inſtant it has arreſted any prey. The form, ſtructure, and motion of the eyes, have ſomething very particular; for they are very large, being almoſt half an inch in diameter. They are of a globous figure; which may be eaſily ſeen, becauſe they ſtand out of the head. They have a ſingle eye-lid like a cap, with a ſmall hole in the middle, through which the ſight of the eye appears, no bigger than a pin's head, and of a ſhining brown, encircled by a little ring of a gold colour. This eye-lid has a grain like ſhagreen, as well as the other parts of the ſkin; and when the reſt of the body changes colour, and aſſumes ſpots of different ſhapes, thoſe on the lid always keep the ſame form, though they are tinctured with the ſame colour as the ſkin. But the moſt extraordinary thing relating to the eyes is, that this animal often moves one when the other is entirely at reſt; nay, ſometimes one eye will ſeem to look directly forward and the other backward, and one will look up to the ſky when the other regards the earth.

That part of the body which is called the *trunk*, and comprehends the thorax and the belly in a chamæleon, is almoſt all thorax, with little or no belly. The four feet are all of a length; and the only difference between them is, that thoſe before are turned backwards, and thoſe behind forwards. There are five toes on each paw, which have a greater reſemblance to hands than feet. They are all divided into two, which gives the appearance of two hands to each arm, and two feet to each leg; and though one of theſe parts have three toes, and the other but two, yet they ſeem to be all of the ſame ſize. Theſe toes lie together under the ſame ſkin as in a mitten; however, their ſhape might be ſeen through the ſkin. With theſe paws the chamæleon can lay hold of the ſmall branches of trees in the ſame manner as a parrot. When he is about to perch, he parts his toes differently from birds, becauſe he puts two behind and two before. The claws are little, crooked, very ſharp, and of a pale yellow, proceeding but half way out of the ſkin, while the other half is hid beneath it. His walk is ſlower than that of a tortoiſe, and he ſeems to move along with an affectation of gravity. He ſeems to ſeek for a proper place to ſet his feet upon; and when he climbs up trees, he does not truſt to his feet like ſquirrels, but endeavours to find out clefts in the bark, that he may get a ſurer hold.

His tail is like that of a viper when it is puffed up and round; for otherwiſe the bones may be ſeen in the ſame manner as on the back. He always wraps his tail round the branches of trees, and it ſerves him as it were inſtead of a fifth hand.—He is a native of Africa and Aſia. Mr Haſſelquiſt is of opinion, that the change of colour in the chamæleon is owing to its being exceedingly ſubject to the jaundice, which particularly happens either when it is expoſed to the ſun, or when it is made angry. The mixture of the bile with its blood is then very perceptible, and, as the ſkin is tranſparent, makes it ſpotted with green and yellow. He never ſaw it coloured with red, blue, or purple; and does not believe that ever it aſſumes theſe colours.

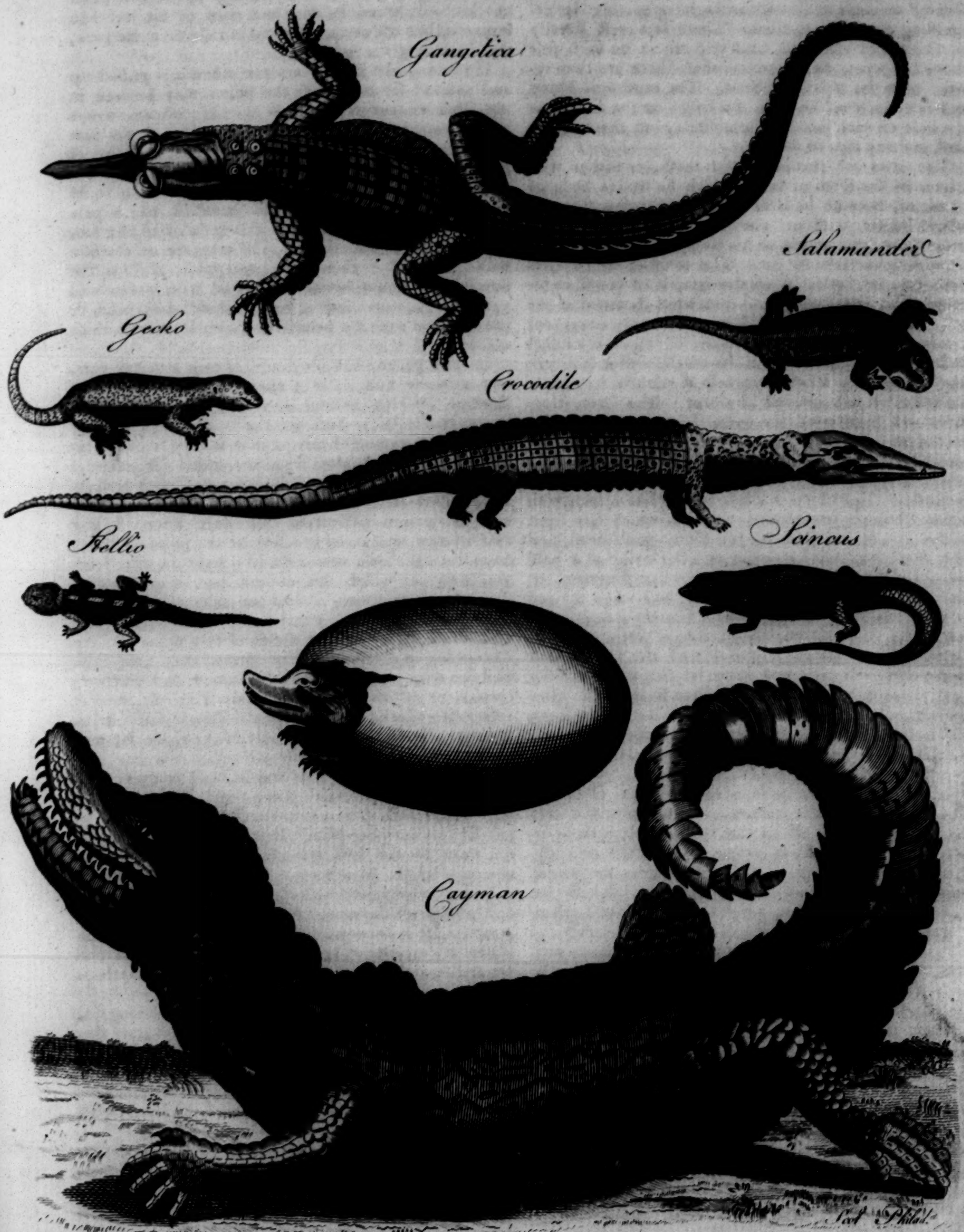
9. The gecko, has a cylindrical tail, concave ears, and a warty body. It is the Indian ſalamander of Bontius. "This animal is very frequent in Cairo (ſays Haſſelquiſt), both in the houſes and without them. The poiſon of this animal is very ſingular, as it exhales from the lobuli of the toes. The animal ſeeks all places and things impregnated with ſea-ſalt, and, paſſing over them ſeveral times, leaves this very noxious poiſon behind it. In July 1750, I ſaw two women and a girl in Cairo at the point of death, from eating cheeſe new ſalted, bought in the market, and on which this animal had dropt its poiſon. Once at Cairo, I had an opportunity of obſerving how acrid the exhalations of the toes of this animal are, as it ran over the hand of a man who endeavoured to catch it; there immediately roſe little puſtules over all thoſe parts the animal had touched; theſe were red, inflamed, and ſmarted a little, greatly reſembling thoſe occaſioned by the ſtinging of nettles. It emits an odd ſound, eſpecially in the night, from its throat, not unlike that of a frog."

10. The ſcincus has a cylindrical tail compreſſed at the point, and blunt marginated toes. This animal is found in Arabia Petræa near the Red Sea, and in Upper Egypt near the Nile. It is much uſed by the inhabitants of the eaſt as an aphrodiſiac, but not at this time by the Europeans. The fleſh of the animal is given in powder, with ſome ſtimulating vehicle; broth made of the recent fleſh is likewiſe uſed by the Arabs. It is brought from upper Egypt and Arabia to Alexandria, whence it is carried to Venice and Marſeilles, and from thence to all the apothecaries ſhops of Europe.

11. The nilotica has a long tail with a triangular edge, and four lines of ſcales on the back. It is met with in the moiſt places of Egypt near the Nile. The Egyptians ſay that this lizard proceeds from the eggs of the crocodile laid in the ſand, but that the crocodile proceeds from thoſe laid in the water. Mr Haſſelquiſt hath detected the fallacy of this account.

12. The paluſtris has a lanceolated tail, and four toes on the fore-feet, and inhabits the ſtagnating waters of Europe. It has a ſlow and crawling pace. Mr Pennant mentions his having more than once found, under

LACERTA **Plate CCLX**


Gangetica
Salamander
Gecko
Crocodile
Stellio
Scincus
Cayman
Scot Philad.

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ſtones and old logs, ſome very minute lizards that had much the appearance of this kind: they were perfectly formed, and had not the leaſt veſtiges of fins; which circumſtance, joined to their being found in a dry place remote from water, ſeems to indicate, that they had never been inhabitants of that element, as it is certain many of our lizards are in their firſt ſtate. At that period they have a fin above and below their tail; that on the upper part extends along the back as far as the head; but both drop off as ſoon as the animal takes to the land, being then no longer of any uſe. Mr Ellis has remarked certain pennated fins at the gills of one very common in moſt ſtagnating waters, and which is frequently obſerved to take a bait like a fiſh.

13. The ſalamandra, or ſalamander, has a ſhort cylindrical tail, four toes on the fore-feet, and a naked porous body. This animal has been ſaid, even in the Philoſophical Tranſactions, to live in the fire; but this is found to be a miſtake. It is found in the ſouthern countries of Europe. The following account of this ſpecies is extracted from the Count de la Cepede's Natural Hiſtory of Serpents. Whilſt the hardeſt bodies cannot reſiſt the violence of fire, the world have endeavoured to make us believe that a ſmall lizard can not only withſtand the flames, but even extinguiſh them. As agreeable fables readily gain belief, every one has been eager to adopt that of a ſmall animal ſo highly privileged, ſo ſuperior to the moſt powerful agent in nature, and which could furniſh ſo many objects of compariſon to poetry, ſo many pretty emblems to love, and ſo many brilliant devices to valour. The ancients believed this property of the ſalamander, wiſhing that its origin might be as ſurpriſing as its power: and being deſirous of realizing the ingenious fictions of the poets, they have pretended that it owes its exiſtence to the pureſt of elements which cannot conſume it; and they have called it the daughter of fire, giving it however a body of ice. The moderns have followed the ridiculous tales of the ancients; and as it is difficult to ſtop when one has paſſed the bounds of probability, ſome have gone ſo far as to think that the moſt violent fire could be extinguiſhed by the land ſalamader. Quacks ſold this ſmall lizard, affirming, that when thrown into the greateſt conflagration, it would check its progreſs. It was very neceſſary that philoſophers and naturaliſts ſhould take the trouble to prove by facts what reaſon alone might have demonſtrated; and it was not till after the light of ſcience was diffuſed abroad, that the world gave over believing in this wonderful property of the ſalamander. This lizard, which is found in ſo many countries of the ancient world, and even in very high latitudes, has been however very little noticed, becauſe it is ſeldom ſeen out of its hole, and becauſe for a long time it has inſpired much terror. Even Ariſtotle ſpeaks of it as of an animal with which he was ſcarcely acquainted.

One of the largeſt of this ſpecies, preſerved in the French king's cabinet, is ſeven inches five lines in length, from the end of the muzzle to the root of the tail, which is three inches eight lines. The ſkin does not appear to be covered with ſcales, but it is furniſhed with a number of excreſcences like teats, containing a great many holes, ſeveral of which may be very plainly diſtinguiſhed by the naked eye, and through which a kind of milk oozes, that generally ſpreads itſelf in ſuch a manner as to form a tranſparent coat of varniſh above the ſkin of this oviparous quadruped, naturally dry.

The eyes of the ſalamander are placed in the upper part of the head, which is a little flatted; their orbit projects into the interior part of the palate, and is there almoſt ſurrounded by a row of very ſmall teeth, like thoſe in the jaw-bones: theſe teeth eſtabliſh a near relation between lizards and fiſhes; many ſpecies of which have alſo ſeveral teeth placed in the bottom of the mouth. The colour of this lizard is very dark: upon the belly it has a bluiſh caſt, intermixed with pretty large irregular yellow ſpots, which extend over the whole body, and even to the feet and eye-lids; ſome of theſe ſpots are beſprinkled with ſmall black ſpecks; and thoſe which are upon the back often touch without interruption, and form two long yellow bands. The colour muſt, however, be ſubject to vary; and it appears that ſome ſalamanders are found in the marſhy foreſts of Germany, which are quite black above and yellow below. To this variety we muſt refer the black ſalamander, found by Mr Laurenti in the Alps, which he conſidered as a diſtinct ſpecies.

The ſalamander has no ribs; neither have frogs, to which it has a great reſemblance in the general form of the anterior part of its body. When touched, it ſuddenly covers itſelf with that kind of coat of which we have ſpoken, and it can alſo very rapidly change its ſkin from a ſtate of humidity to a ſtate of dryneſs. The milk which iſſues from the ſmall holes in its ſurface is very acrid; when put upon the tongue one feels as it were a kind of ſcar at the part which it touched. This milk, which is conſidered as an excellent ſubſtance for taking off hair, has ſome reſemblance to that which diſtils from thoſe plants called eſula and euphorbium. When the ſalamander is cruſhed, or when it is only preſſed, it exhales a bad ſmell, which is peculiar to it.

Salamanders are fond of cold damp places, thick ſhades, tufted woods, or high mountains, and the banks of ſtreams that run through meadows: they ſometimes retire in great numbers to hollow trees, hedges, and below old rotten ſtumps; and they paſs the winter in places of high latitude, in a kind of burrows, where they are found collected, ſeveral of them being joined and twiſted together. The ſalamander being deſtitute of claws, having only four toes on each of the fore feet, and no advantage of conformation making up its deficiencies, its manner of living muſt, as is indeed the caſe, be very different from that of other lizards. It walks very ſlowly; far from being able to climb trees with rapidity, it often appears to drag itſelf with great difficulty along the ſurface of the earth. It ſeldom goes far from the place of ſhelter which it has fixed on; it paſſes its life under the earth, often at the bottom of old walls during ſummer; it dreads the heat of the ſun, which would dry it; and it is commonly only when rain is about to fall that it comes forth from its ſecret aſylum, as if by a kind of neceſſity, to bathe itſelf, and to imbibe an element to which it is analogous. Perhaps it finds then with greateſt facility thoſe inſects upon which it feeds. It lives upon flies, beetles, ſnails, and earth-worms; when it repoſes, it rolls up its body in ſeveral folds like ſerpents. It can remain ſome time in the water without danger, and it caſts a very thin pellicle of a greeniſh grey colour. Salamanders have even been kept more than ſix months in the water of a well without giving them any food; care only was taken to change the water often.

It has been remarked, that every time a ſalamander is plunged into the water, it attempts to raiſe its noſtrils above the ſurface as if to ſeek for air, which is a new proof of the need that all oviparous quadrupeds have to breathe during the time they are not in a ſtate of torpor. The ſalamander has apparently no ears, and in this it reſembles ſerpents. It has even been pretended that it does not hear, and on this account it has got the name of *ſourd* in ſome provinces of France. This is very probable, as it has never been heard to utter any cry, and ſilence in general is coupled with deafneſs.

Having then perhaps one ſenſe leſs than other animals, and being deprived of the faculty of communicating its ſenſations to thoſe of the ſame ſpecies, even by imperfect ſounds, it muſt be reduced to a much inferior degree of inſtinct: it is therefore very ſtupid; and not bold, as has been reported: it does not brave danger, as is pretended, but it does not perceive it. Whatever geſtures one makes to frighten it, it always advances without turning aſide; however, as no animal is deprived of that ſentiment neceſſary for its preſervation, it ſuddenly compreſſes its ſkin, as is ſaid, when tormented, and ſpurts forth upon thoſe who attack it that corroſive milk which is under it. If beat, it begins to raiſe its tail: afterwards it becomes motionleſs, as if ſtunned by a kind of paralytic ſtroke; for we muſt not, with ſome naturaliſts, aſcribe to an animal ſo devoid of inſtinct, ſo much art and cunning as to counterfeit death. In ſhort, it is difficult to kill it; but when dipped in vinegar, or ſurrounded with ſalt reduced to powder, it expires in convulſions, as is the caſe with ſeveral other lizards and worms.

It ſeems one cannot allow a being a chimerical quality, without refuſing it at the ſame time a real property. The cold ſalamander has been conſidered as an animal endued with the miraculous power of reſiſting, and even of extinguiſhing, fire; but at the ſame time, it has been debaſed as much as elevated by this ſingular property. It has been made the moſt fatal of animals: the ancients, and even Pliny, have devoted it to a kind of anathema, by affirming that its poiſon is the moſt dangerous of all. They have written, that infecting with its poiſon almoſt all the vegetables of a large country, it might cauſe the deſtruction of *whole nations*. The moderns alſo for a long time believed the ſalamander to be very poiſonous; they have ſaid, that its bite is mortal, like that of the viper; they have ſought out and preſcribed remedies for it; but they have at length had recourſe to obſervations, by which they ought to have begun. The famous Bacon wiſhed naturaliſts would endeavour to aſcertain the truth reſpecting the poiſon of the ſalamander. Geſner proved by experiments that it did not bite, whatever means were uſed to irritate it; and Wurfbainus ſhowed that it might ſafely be touched, and that one might without danger drink the water of thoſe wells which it inhabited. M. de Maupertuis ſtudied alſo the nature of this lizard. In making reſearches to diſcover what might be its pretended poiſon, he demonſtrated experimentally, that fire acted upon the ſalamander in the ſame manner as upon all other animals. He remarked, that it was ſcarcely upon the fire, when it appeared to be covered with the drops of its milk, which rarified by the heat, iſſued through all the pores of the ſkin, but in greater quantity from the head and dugs, and that it immediately became hard. It is needleſs to ſay, that this milk is not ſufficiently abundant to extinguiſh even the ſmalleſt fire. M. de Maupertuis, in the courſe of his experiments, in vain irritated ſeveral ſalamanders: none of them ever opened their mouths; he was obliged to open them by force. As the teeth of this lizard are very ſmall, it was very difficult to find an animal with a ſkin ſufficiently fine to be penetrated by them: he tried without ſucceſs to force them into the fleſh of a chicken ſtripped of its feathers; he in vain preſſed them againſt the ſkin: they were diſplaced, but they could not enter. He however made a ſalamander bite the thigh of a chicken, after he had taken off a ſmall part of the ſkin. He made ſalamanders newly caught bite alſo the tongue and lips of a dog, as well as the tongue of a turkey; but none of theſe animals received the leaſt injury M. de Maupertuis afterwards made a dog and a turkey ſwallow ſalamanders whole, or cut into pieces; and yet neither of them appeared to be ſenſible of the leaſt uneaſineſs.—Mr Laurenti ſince made experiments with the ſame view: he forced grey lizards to ſwallow the milk proceeding from the ſalamander, and they died very ſuddenly. The milk, therefore, of the ſalamander, taken internally, may hurt, and even be fatal to certain animals, eſpecially thoſe which are ſmall; but it does not appear to be hurtful to large animals.

It was long believed that the ſalamander was of no ſex; and that each individual had the power of engendering its like, as ſeveral ſpecies of worms. This is not the moſt abſurd fable which has been imagined with reſpect to the ſalamander; but if the manner in which they come into the world is not ſo marvellous as has been written, it is remarkable in this, that it differs from that in which moſt other lizards are brought forth, as it is analogous to that in which the chalcide and the ſeps, as well as vipers and ſeveral kinds of ſerpents, are produced. On this account the ſalamander merits the attention of naturaliſts much more than on account of the falſe and brilliant reputation which it has ſo long enjoyed. M. de Maupertuis having opened ſome ſalamanders, found eggs in them, and at the ſame time ſome young perfectly formed; the eggs were divided into two long bunches like grapes, and the young were encloſed in two tranſparent bags; they were equally well formed as the old ones, and much more active. The ſalamander, therefore, brings forth young from an egg hatched within its belly as the viper; and her fecundity is very great: naturaliſts have long written that ſhe has forty or fifty at one time, and M. de Maupertuis found 42 young ones in the body of a female ſalamander, and 54 in another.

The young ſalamanders are generally of a black colour,

lour, almoſt without ſpots; and this colour they preſerve ſometimes during their whole lives in certain countries, where they have been taken for a diſtinct ſpecies, as we have ſaid. Mr Thunberg has given, in the Memoirs of the Academy of Sweden, the deſcription of a lizard, which he calls the *Japaneſe lizard*, and which appears not to differ from our ſalamander but in the arrangement of its colours. This animal is almoſt black, with ſeveral whitiſh and irregular ſpots, both on the upper part of the body and below the paws; on the back there is a ſtrip of dirty white, which becomes narrower to the point of the tail. This whitiſh ſtripe is interſperſed with very ſmall ſpecks which form the diſtinguiſhing characteriſtic of our land ſalamander. We are of opinion, therefore, that we may conſider this Japaneſe lizard, deſcribed by Mr Thunberg, as a variety of the ſpecies of our land ſalamander, modified a little, perhaps, by the climate of Japan. It is in the largeſt iſland of that empire, named *Niphon*, that this variety is found. It inhabits the mountains there, and rocky places. The Japaneſe conſider it as a powerful ſtimulant, and a very active remedy; and on this account, in the neighbourhood of Jedo, a number of theſe Japaneſe ſalamanders may be ſeen dried, hanging from the ceiling of the ſhops.

14. The baſiliſkus, has a long cylindrical tail, a radiated fin on the back, and a creſt on the throat. It is a native of the Indies. It is a very harmleſs creature; and altogether deſtitute of thoſe wonderful qualities which have been attributed to the fabulous animal of the ſame name. See the article Baslisk.

15. The ſex-lineata, or lion-lizard, is about ſix inches long; the body of a grey colour, marked lengthwiſe on each ſide with three whitiſh lines: the legs are long; and it has a very long tail, which it curls up, looking fierce at the ſame time, whence probably it has received its Engliſh name. It inhabits South Carolina and the greater Antilles. It is very inoffenſive, and remarkably agile; but is a prey to rapacious birds.

16. The *green* lizard of Carolina is ſo denominated from its colour. This ſpecies is very ſlender; the tail is near double the length of the body, and the whole length about five inches. It inhabits Carolina; where it is domeſtic, familiar, and harmleſs. It ſports on tables and windows, and amuſes with its agility in catching flies. Cold affects the colours: in that uncertain climate, when there is a quick tranſition in the ſame day from hot to cold, it changes inſtantly from the moſt brilliant green to a dull brown. They are a prey to cats and ravenous birds. They appear chiefly in ſummer; and at the approach of cold weather they retire to their winter receſſes, and lie torpid in the hollows and crevices of rotten trees. It frequently happens that a few warm ſunſhiny days ſo invigorate them, that they will come out of their holes and appear abroad; when on a ſudden the weather changing to cold, ſo enfeebles them, that they are unable to return to their retreats, and will die of cold.

17. The iguana, or guana, with the top of the back and tail ſtrongly ſerrated, and the gullet ſerrated in the ſame manner, is ſometimes found to be five feet long. It has ſmall teeth, and will bite hard. It inhabits the rocks of the Bahama iſlands, and lurks in cliffs or hollow trees. It feeds entirely on vegetables and fruits; and the fat of the abdomen aſſumes the colour of that which it has laſt eaten. It is ſlow of motion, and has a moſt diſguſting look; yet it is eſteemed a moſt delicate and wholeſome food, noxious only to venereal patients, according to Linnæus. It is not amphibious, yet on neceſſity will continue long under water; it ſwims by means of the tail, keeping its legs cloſe to the body. Guanas are the ſupport of the natives of the Bahama iſlands, who go in their ſloops from rock to rock in ſearch of them. They are taken with dogs trained for the purpoſe; and as ſoon as caught, their mouths are ſewed up, to prevent them from biting. Some are carried alive for ſale to Carolina; others ſalted and barrelled for home-conſumption.

18. The bullaris, or green lizard of Jamaica, is about ſix inches long, of a ſhining graſs-green colour. It is common in Jamaica, frequenting hedges and trees. When approached to, theſe animals, by filling their throat with wind, ſwell it into a globular form with a ſcarlet colour; which, when contracted, the ſcarlet diſappears, and the part returns to the colour of the reſt of the body. The figure repreſents the animal with its throat thus inflated. This ſwelling action ſeems to proceed from menacing, or deterring one from coming near them, though they are very inoffenſive.

19. The muricata, or prickly lizard, has a long rounded tail; its body, which is of a browniſh grey colour, is covered with ſharp-pointed ſcales, and the whole upper part marked with tranſverſe duſky bars. The ſcales are furniſhed with a prominent line on the upper ſurface, and toward the back part of the head almoſt run into a ſort of weak ſpines.

20. The laticauda, or broad-tailed lizard, has a flattened lanceolate tail, ſomewhat ſpiny on the margin. It is about four inches and a half in length. The head is diſproportionably large. The upper ſurface of the body is of a duſky grey colour, and beſet with ſmall tubercles, which in ſome parts ſharpen into a point. The colour of the under ſurface of the body is pale, or almoſt white. This and the preceding ſpecies are inhabitants of New South Wales.

There are above 60 other ſpecies of this genus; two of which, the *ſeps* and *chalcides*, being very different from the other ſpecies, and approaching in form to the ſerpent tribe, figures of them are added in the Plates. A ſimilar ſpecies is the *bipes*, transferred to this genus, in the laſt edition of the Syſtema Naturæ, from the *Anguis* of former editions, where it was called the *anguis bipes*. See Anguis.

LACHES, (from the French, *laſcher*, i. e. *laxare*, or *laſche, ignavus)*, in the Engliſh law ſignifies ſlackneſs or negligence, as it appears in Littleton, where *laches of entry* is a neglect of the heir to enter. And probably it may be an old Engliſh word: for where we ſay there is a *laches* of entry, it is all one as if it were ſaid there is a *lack* of entry; and in this ſignification it is uſed. No *laches* ſhall be adjudged in the heir within age; and regularly, *laches* ſhall not bar infants or femme coverts for not entry or claim, to avoid deſcents; but *laches* ſhall be accounted in them for non-performance of a condition annexed to the ſtate of the land.

LACHESIS, in mythology, one of the Parcæ.

Her name is derived from λαχειν, *to meaſure out by lot.* She preſided over futurity, and was repreſented as ſpinning the thread of life, or, according to others, holding the ſpindle. She generally appeared covered with a garment variegated with ſtars, and holding ſpindles in her hand.

LACHISH, (anc. geog.), a city ſouthward of the tribe of Judah. Euſebius and St Jerom tell us, that in their time there was a village called *Lachiſh*, ſeven miles from Eleutheropolis, ſouthward. Sennacherib beſieged Lachiſh, but did not take it. From thence it was that he ſent Rabſhakeh againſt Jeruſalem. Here King Amaziah was ſlain by his rebel ſubjects.

LACHNEA, in botany: A genus of the monogynia order, belonging to the octandria claſs of plants; and in the natural method ranking under the 31ſt order, *Veprecula*. There is no calyx; the corolla is quadrifid with the limb unequal; there is one ſeed a little reſembling a berry.

LACHRYMAL, in anatomy, an appellation given to ſeveral parts of the eye. See ANATOMY, p. 766. col. 1.

LACHRYMATORY, in antiquity, a veſſel wherein were collected the tears of a deceaſed perſon's friends, and preſerved along with the aſhes and urn. They were ſmall glaſs or earthern bottles chiefly in the form of phials. At the Roman funerals, the friends of the deceaſed, or the *preficæ*, women hired for that purpoſe, uſed to fill them with their tears, and depoſit them very carefully with the aſhes in teſtimony of their ſorrow, imagining the manes of the deceaſed were thereby greatly comforted. Many ſpecimens of them are preſerved in the cabinets of the curious, particularly in the Britiſh Muſeum.

LACINIUM (anc. geog.), a noble promontory of the Brutii in Italy, the ſouth boundary of the Sinus Tarentinus and the Adriatic; all to the ſouth of it being deemed the Ionian Sea: it was famous for a rich temple of Juno, ſurnamed *Lacinia*, with a pillar of ſolid gold ſtanding in it; which Hannibal intending to carry off, was, according to Cicero, diſſuaded by a dream. Now *Capo delle Colonne*, from the columns of Juno's temple ſtill ſtanding on the north-eaſt coaſt of the Calabria ultra.

LACK OF RUPEES, is 100,000 rupees; which, ſuppoſing them ſtandard, or ſiccas, at 2 s. 6 d. amounts to 12,500 l. Sterling.

LACONIA, or LACONICA, a country on the ſouthern parts of Peloponneſus, having Argos and Arcadia on the north, Meſſenia on the weſt, the Mediterranean on the ſouth, and the bay of Argos at the eaſt. Its extent from north to ſouth was about 50 miles. It was watered by the river Eurotas. The capital was called Sparta, or Lacedæmon: (See LACEDÆMON and SPARTA.) The brevity with which the Laconians always expreſſed themſelves is now become proverbial; and by the epithet of *Laconic*, we underſtand whatever is conciſe, and is not loaded with unneceſſary words.

LACONICUM, (whence our term *laconic*), a ſhort pithy ſententious ſpeech, ſuch as the Lacedemonians were remarkable for: Their way of delivering themſelves was very conciſe, and much to the purpoſe. See the preceding article.

LACQUERS, are varniſhes applied upon tin, braſs, and other metals, to preſerve them from tarniſhing, and to improve their colour. The baſis of lacquers is a ſolution of the reſinous ſubſtance called *ſeed lac*, in ſpirit of wine. The ſpirit ought to be very much dephlegmated, in order to diſſolve much of the lac. For this purpoſe, ſome authors direct dry potaſh to be thrown into the ſpirit. This alkali attracts the water, with which it forms a liquid that ſubſides diſtinctly from the ſpirit at the bottom of the veſſel. From this liquid the ſpirit may be ſeparated by decantation. By this method the ſpirit is much dephlegmated; but, at the ſame time, it becomes impregnated with part of the alkali, which depraves its colour, and communicates a property to the lacquer of imbibing moiſture from the air. Theſe inconveniences may be prevented by diſtilling the ſpirit; or, if the artiſt has not an opportunity of performing that proceſs, he may cleanſe the ſpirit in a great meaſure from the alkali, by adding to it ſome calcined alum; the acid of which uniting with the alkali remaining in the ſpirit, forms with it a vitriolated tartar, which, not being ſoluble in ſpirit of wine, falls to the bottom together with the earth of the decompoſed alum. To a pint of the dephlegmated and purified ſpirit, about three ounces of powdered ſhell-lac are to be added; and the mixture to be digeſted during ſome days with a moderate heat. The liquor ought then to be poured off, ſtrained, and cleared by ſettling. This clear liquor is now fit to receive the required colour from certain reſinous colouring ſubſtances, the principal of which are gamboge and annotto; the former of which gives a yellow, and the latter an orange colour. In order to give a golden colour, two parts of gamboge are added to one of annotto; but theſe colouring ſubſtances may be ſeparately diſſolved in the tincture of lac, and the colour required may be adjuſted by mixing the two ſolutions in different proportions. When ſilver leaf or tin are to be lacquered, a larger quantity of the colouring materials are requiſite than when the lacquer is intended to be laid on braſs.

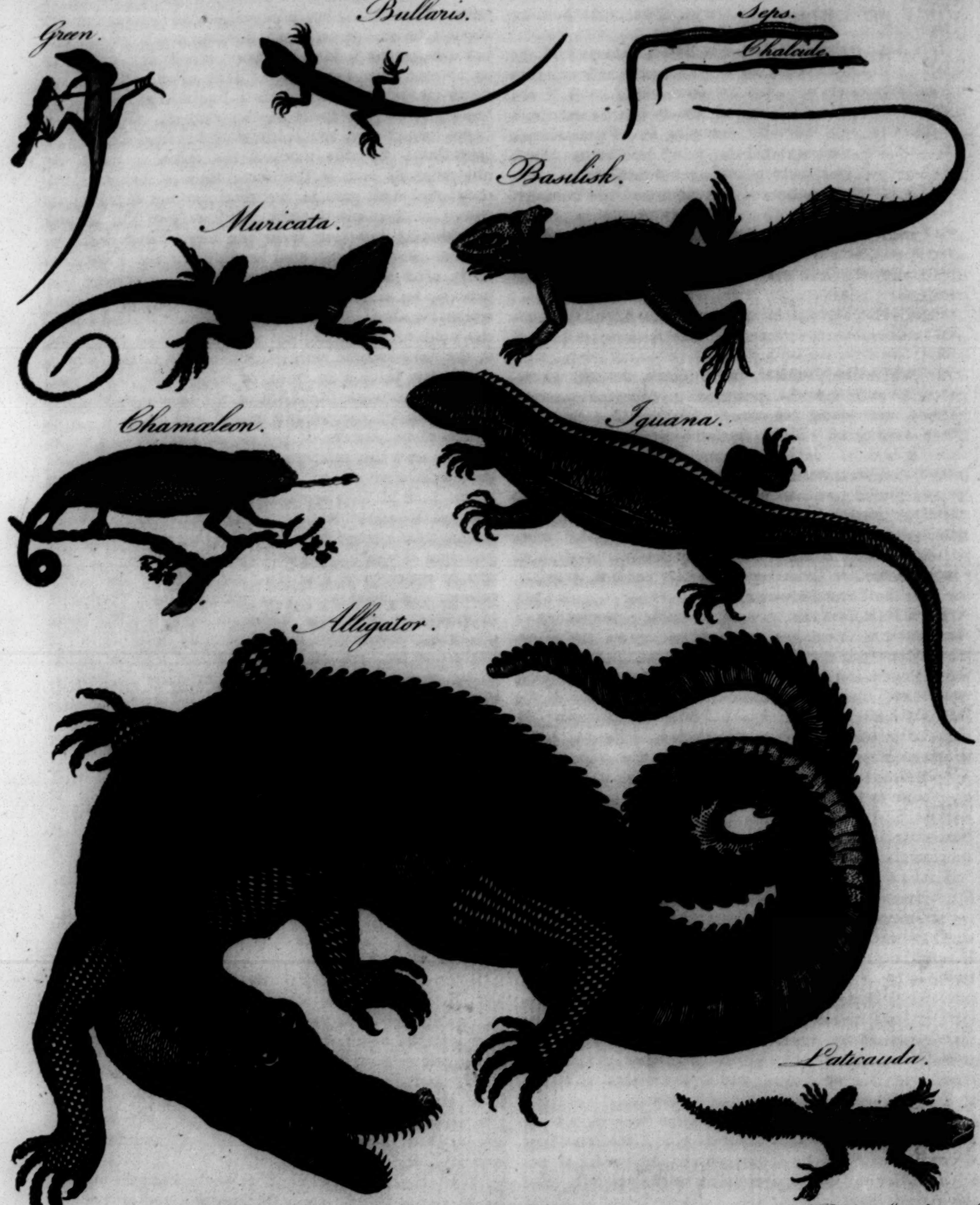
LACTATIO, LACTATION, among medical writers, denotes the *giving ſuck*. The mother's breaſt, if poſſible, ſhould be allowed the child, at leaſt during the firſt month; for thus the child is more peculiarly benefited by what it ſucks, and the mother is preſerved from more real inconveniences than the falſely delicate imagine they would ſuffer by compliance herewith: but if by reaſon of an infirm conſtitution, or other cauſes, the mother cannot ſuckle her child, let dry nurſing under the mother's eye be purſued.

Motherby's Medical Dictionary.

When women loſe their appetite by giving ſuck, both the children and themſelves are thereby injured; wet nurſes are to be preferred, who, during the time they give the breaſt, have rather an increaſed appetite and digeſt more quickly; the former are apt to waſte away, and ſometimes die conſumptive. In ſhort, thoſe nurſes with whom lactation may for a while agree, ſhould wean the child as ſoon as their appetite leſſens, their ſtrength ſeems to fail, or a tendency to hyſteric ſymptoms are manifeſt.

When the new-born child is to be brought up by the mother's breaſt, apply it thereto in ten or twelve

LACERTA. Plate CCLXI.


Green.
Bullaris.
Seps.
Chalcide.
Basilisk.
Muricata.
Chamæleon.
Iguana.
Alligator.
Laticauda.

T. Trenchard sculp.

BRITISH MUSEUM

hours after delivery; thus the milk is ſooner and more eaſily ſupplied, and there is leſs hazard of a fever than when the child is not put to it before the milk begins to flow of itſelf.

If the mother does not ſuckle her child, her breaſts ſhould be kept ſo warm with flannels, or with a hare-ſkin, that a conſtant perſpiration may be ſupported; thus there rarely will ariſe much inconvenience from the milk.

The child, notwithſtanding all our care in dry nurſing, ſometimes pines if a breaſt is not allowed. In this caſe a wet nurſe ſhould be provided, if poſſible one that hath not been long delivered of a child. She ſhould be young, of a healthy habit, and an active diſpoſition, a mild temper, and whoſe breaſts are well filled with milk. If the milk is good, it is ſweetiſh to the taſte, and totally free from ſaltneſs; to the eye it appears thin, and of a bluiſh caſt. That the woman hath her menſes, if in other reſpects objections are not made, this need not be any; and as to the cuſtom with many, of abſtaining from venery while they continue to ſuckle a child, it is ſo far without reaſon to ſupport it, that the truth is, a rigorous chaſtity is as hurtful and often more pernicious, than an immoderate uſe of venery. Amongſt the vulgar errors, is that of red-haired women being improper for wet nurſes.

If the menſes do not appear during the firſt months, but after ſix or eight months ſuckling they begin to deſcend, the child ſhould be weaned.

Wet nurſes ſhould eat at leaſt one hearty meal of animal food every day; with this a proper quantity of vegetables ſhould be mixed. Thin broth or milk are proper for their breakfaſts and their ſuppers; and if the ſtrength ſhould ſeem to fail a little, a draught of good ale ſhould now and then be allowed: but ſpirituous liquors muſt in general be forborne; not but a ſpoonful of rum may be allowed in a quart of milk and water, (*i. e.* a pint of each), which is a proper common drink.

Though it is well obſerved by Dr Hunter, that the far greater number of thoſe women who have cancers in the breaſt or womb are old maids, and thoſe who refuſe to give ſuck to their children; yet it is the unhappineſs of ſome willing mothers not to be able: for inſtance, thoſe with tender conſtitutions, and who are ſubject to nervous diſorders; thoſe who do not eat a ſufficient quantity of ſolid food, nor enjoy the benefit of exerciſe and air: if children are kept at their breaſts, they either die whilſt young, or are weakly and ſickly after childhood is paſt, and ſo on through remaining life.

LACTANTIUS, (Lucius Cælius Firmianus), a celebrated author at the beginning of the 4th century, was, according to Baronius, an African; but, according to others, was born at Fermo in the marquiſate of Ancona, from whence it is imagined he was called *Firmianus*. He ſtudied rhetoric under Arnobius; and was afterwards a profeſſor of that ſcience in Africa and Nicomedia, where he was ſo admired, that the emperor Conſtantine choſe him preceptor to his ſon Criſpus Cæſar. Lactantius was ſo far from ſeeking the pleaſures and riches of the court, that he lived there in poverty, and, according to Euſebius, frequently wanted neceſſaries. His works are written in elegant Latin. The principal of which are, 1. *De ira divina.* 2. *De operibus Dei*, in which he treats of the creation of man, and of divine providence. 3. Divine Inſtitutions, in ſeven books. This is the moſt conſiderable of all his works: he there undertakes to prove the truth of the Chriſtian religion, and to refute all the difficulties that had been raiſed againſt it; and he ſolidly, and with great ſtrength, attacks the illuſions of Paganiſm. His ſtyle is pure, clear, and natural, and his expreſſions noble and elegant, on which account he has been called the *Cicero of the Chriſtians*. There is alſo attributed to him a treatiſe *De morte Perſecutorum;* but ſeveral of the learned doubt its being written by Lactantius. The moſt copious edition of Lactantius's works is that of Paris in 1748, 2 vols 4to.

LACTEALS, or LACTEAL VESSELS, a kind of long ſlender tubes for the conveyance of the chyle from the inteſtines to the common reſervatory. See ANATOMY, nº 105.

LACTIFEROUS, an appellation given to plants abounding with a milky juice, as the ſow-thiſtle and the like. The name of *lactiferous*, or *lacteſcent*, is given to all thoſe plants which abound with a thick-coloured juice, without regarding whether it is white or not. Moſt lactiferous plants are poiſonous, except thoſe with compound flowers, which are generally of an innocent quality.

Of the poiſonous lacteſcent plants the moſt remarkable are ſumach, agaric, maple, burning thorny plant, caſſada, celandine, puccoon, prickly poppy, and the plants of the natural order *contortæ*, as ſwallow-wort, apocynum, cynanchum, and cerbera.

The bell-ſhaped flowers are partly noxious, as cardinal flower; partly innocent, as campanula.

Among the lacteſcent plants with compound flowers that are innocent in their quality, may be mentioned dandelion, picris, hyoſerus, wild lettuce, gum-ſuccory, hawk-weed, baſtard hawk-weed, hypochœris, goat's-beard, and moſt ſpecies of lettuce: we may ſay moſt ſpecies, becauſe the prickly ſpecies of that genus are ſaid to be of a very virulent and poiſonous nature; though Mr Lightfoot denies this, and affirms that they are a ſafe and gentle opiate, and that a ſyrup made from the leaves and ſtalks is much preferable to the common diacodium.

LACTUCA, in botany: A genus of the polygamia æqualis order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is naked; the calyx imbricated, cylindrical, with a membranaceous margin; the pappus is ſimple, ſtipated, or ſtalked. There are ſeveral ſpecies, moſt of which are plants of no uſe, and never cultivated but in botanic gardens for variety. Thoſe commonly cultivated in the kitchen-garden for uſe, are, 1. The common or garden lettuce. 2. Cabbage lettuce. 3. Sileſia lettuce. 4. Dutch brown lettuce. 5. Aleppo lettuce. 6. Imperial lettuce. 7. Green capuchin lettuce. 8. Verſailles or upright white Cos lettuce. 9. Black Cos. 10. Red Cos. 11. Red capuchin lettuce. 12. Roman lettuce. 13. Prince lettuce. 14. Royal lettuce. 15. Egyptian Cos lettuce.

Culture, &c. The firſt of theſe ſorts is very common in all gardens, and is commonly ſown for cutting very young, to mix with other ſalad herbs in ſpring; and the ſecond, or cabbage lettuce, is only this mended by culture. It may be ſown at all times of the year, but in the hot months requires to be ſown in ſhady borders. The cabbage lettuce may alſo be ſown at different ſeaſons, to have a continuation of it through the ſummer. The firſt crop ſhould be ſown in February, in an open ſituation; the others at three weeks diſtance; but the later ones under covert, but not under the drippings of trees. The Sileſia, imperial, royal, black, white, and upright Cos lettuces, may be firſt ſown in the latter end of February or the beginning of March, on a warm light ſoil, and in an open ſituation; when the plants are come up, they muſt be thinned to 15 inches diſtance every way, they will then require no farther care than the keeping them clear of weeds; and the black Cos, as it grows large, ſhould have its leaves tied together to whiten the inner part. Succeeding crops of theſe ſhould be ſown in April, May, and June; and toward the latter end of Auguſt they may be ſown for a winter crop, to be preſerved under glaſſes, or in a bed arched over with hoops and covered with mats. The moſt valuable of all the Engliſh lettuces are the white Cos or the Verſailles, the Sileſia, and the black Cos. The brown Dutch and the green capuchin are very hardy, and may be ſown late under walls, where they will ſtand the winter, and be valuable when no others are to be had. The red capuchin, Roman, and prince lettuce, are very early kinds, and are ſown for variety; as are alſo the Aleppo ones for the beauty of their ſpotted leaves.

Properties. The ſeveral ſorts of garden lettuces are very wholeſome, emollient, cooling ſalad herbs, eaſy of digeſtion, and ſomewhat looſening the belly. Moſt writers ſuppoſe that they have a narcotic quality; and indeed in many caſes they contribute to procure reſt; this they effect by abating heat, and relaxing the fibres. The ſeeds are in the number of the four leſſer cold ſeeds.

The viroſa, or ſtrong-ſcented wild lettuce, which is indigenous in Britain, and grows in ſome places in conſiderable abundance, differs very eſſentially in its qualities from the garden lettuce. Although it has not been introduced into any of the modern pharmacopœias, yet it has of late been highly extolled for ſome purpoſes in medicine. It ſmells ſtrongly of opium, and reſembles it in ſome of its effects; and its narcotic power, like that of the poppy heads, reſides in its milky juice. An extract from the expreſſed juice is recommended in ſmall doſes in dropſy. In dropſies of long ſtanding, proceeding from viſceral obſtructions, it has been given to the extent of half an ounce a-day. It is ſaid to agree with the ſtomach, to quench thirſt, to be gently laxative, powerfully diuretic, and ſomewhat diaphoretic. Plentiful dilution is allowed during its operation. Dr Collin of Vienna aſſerts, that out of 24 dropſical patients, all but one were cured by this medicine.

LACUNÆ, among anatomiſts, certain excretory canals in the genital parts of women.

LACUNAR, in architecture, an arched roof or ceiling, more eſpecially the planking or flooring above porticoes or piazzas.

LACYDES, a Greek philoſopher, born at Cyrene, was the diſciple of Arceſilaus, and his ſucceſſor in the academy. He taught in a garden given him by Attalus king of Pergamus; but that prince ſending for him to court, he replied, "That the pictures of kings ſhould be viewed at a diſtance." He imitated his maſter in the pleaſure he took in doing good without caring to have it known: he had a gooſe which followed him every where by night as well as by day; and when ſhe died, he made a funeral for her, which was as magnificent as if it had been for a ſon or a brother. He taught the ſame doctrine as Arceſilaus; and pretended that we ought to determine nothing, but always to ſuſpend our opinion. He died 212 B. C.

LADDER, a frame made with a number of ſteps, by means of which people may aſcend as on a ſtair to places otherwiſe inacceſſible.

Scaling LADDERS, in the military art, are uſed in ſcaling when a place is to be taken by ſurpriſe. They are made ſeveral ways: in Britain they make them of flat ſtaves, ſo that they may move about their pins, and ſhut like a parallel ruler, for conveniently carrying them: the French make them of ſeveral pieces, ſo as to be joined together, and to be made of any neceſſary length: ſometimes they are made of ſingle ropes, knotted at proper diſtances, with iron hooks at each end, one to faſten them upon the wall above, and the other in the ground; and ſometimes they are made with two ropes, and ſtaves, between them, to keep the ropes at a proper diſtance, and to tread upon. When they are uſed in the action of ſcaling walls, they ought to be too long rather than too ſhort, and to be given in charge only to the ſtouteſt of the detachment. The ſoldiers ſhould carry theſe ladders with the left arm paſſed through the ſecond ſtep, taking care to hold them upright cloſe to their ſides, and very ſhort below, to prevent any accident in leaping into the ditch.

The firſt rank of each diviſion, provided with ladders, ſhould ſet out with the reſt at the ſignal, marching reſolutely with their firelocks ſlung, to jump into the ditch; when they are arrived they ſhould apply their ladders againſt the parapet, obſerving to place them towards the ſalient angles rather than the middle of the curtain, becauſe the enemy have leſs force there. Care muſt be taken to place the ladders within a foot of each other, and not to give them too much nor too little ſlope, ſo that they may not be overturned or broke with the weight of the ſoldiers mounting upon them.

The ladders being applied, they who have carried them, and they who come after, ſhould mount up, and ruſh upon the enemy ſword-in-hand: if he who goes firſt, happens to be overturned, the next ſhould take care not to be thrown down by his comerade; but, on the contrary, immediately mount himſelf, ſo as not to give the enemy time to load his piece.

As the ſoldiers who mount firſt may be eaſily tumbled over, and their fall may cauſe the attack to fail, it would perhaps be right to protect their breaſts with the fore-parts of cuiraſſes; becauſe, if they can penetrate, the reſt may eaſily follow.

The ſucceſs of an attack by ſcaling is infallible, if they mount the four ſides at once, and take care to ſhower a number of grenades amongſt the enemy, eſpecially when ſupported by ſome grenadiers and picquets, who ſhare the attention and the fire of the enemy.

LADEN, in the ſea-language, the ſtate of a ſhip when ſhe is charged with a weight or quantity of any ſort of merchandiſe, or other materials, equal to her tonage or burden. If the cargo with which ſhe is laden is extremely heavy, her burden is determined by the weight of the goods; and if it is light, ſhe carries as much as ſhe can *ſtow*, to be fit for the purpoſes of navigation. As a ton in meaſure is generally eſtimated at 2000lb. in weight, a veſſel of 200 tons ought accordingly to carry a weight equal to 400,000lb. when the matter of which the cargo is compoſed is ſpecifically heavier than the water in which ſhe floats; or, in other words, when the cargo is ſo heavy that ſhe cannot float high enough with ſo great a quantity of it as her hold will contain.

Laden in Bulk, the ſtate of being freighted with a cargo which is neither in caſks, boxes, bales, nor caſes, but lies looſe in the hold; being defended from the moiſture or wet of the hold, by a number of mats and a quantity of *dunage*. Such are uſually the cargoes of corn, ſalt, or ſuch materials.

LADENBURG, a town of Germany in the Palatinate of the Rhine, ſeated on the river Neckar, in E. Long. 8. 42. N. Lat. 49. 27. It belongs to the biſhopric of Worms, and the elector Palatine.

LADISLAUS, the name of ſeveral kings of Poland. See POLAND.

LADOGA, a town of the Ruſſian empire, ſeated on a great lake of the ſame name, which has a communication with the gulph of Finland, by the river Nieva: and it abounds in fiſh, particularly ſalmon. E. Long. 33. 29. N. Lat. 60. 0.

LADOGNA, or LACEDOGNA, a town of Italy, in the kingdom of Naples, and in the Capitanata, with a biſhop's ſee. E. Long. 15. 12. N. Lat. 41. 16.

LADON (anc. geog.) a river of Arcadia falling into the ALPAEUS. The metamorphoſis of Daphne into a laurel, and of Syrinx into a reed happened near banks.

LADRONE or MARIAN iſlands, a cluſter of twelve iſlands lying in the Pacific Ocean, in about 145° of eaſt longitude, and between the 11th and 21ſt degree of north latitude. They were firſt diſcovered by Magellan, who ſailed round the world through the Straits which bear his name. He gave them the name of *Ladrone Iſlands*, or the *Iſlands of Thieves*, from the thieviſh diſpoſition of the inhabitants. At the time theſe iſlands were diſcovered by the Europeans, the natives were totally unacquainted with any other country beſides their own; and having no traditionary accounts of their own origin, they imagined that the author of their race was formed of a piece of the rock of Funa, one of their ſmalleſt iſlands. Many things looked upon by us as abſolutely neceſſary to our exiſtence, were utterly unknown to theſe people. They had no animals of any ſort; and would not even have had any idea of them, had it not been for the birds; and even of them they had but one ſpecies, ſomewhat like the turtle-dove, which they never killed for eating, but only tamed them, and taught them to ſpeak. They were much aſtoniſhed on ſeeing a horſe which a Spaniſh captain left among them in 1673, and could not for a long time be ſatisfied with admiring him. But what is moſt ſurpriſing and incredible in their hiſtory is, that they were utterly unacquainted with the element of fire till Magellan, provoked by their repeated thefts, burned one of their villages. When they ſaw their wooden houſes blazing, they firſt thought that the fire was a beaſt which fed upon the wood; and ſome of them who came too near, being burnt, the reſt ſtood at a diſtance, leſt they ſhould be devoured or poiſoned by the breathing of this terrible animal.

The inhabitants of the Ladrones are olive-coloured, but not of ſuch a deep die as thoſe of the Philippine iſlands; their ſtature is good, and their limbs well proportioned. Though their food conſiſts entirely of fiſh, fruits, and roots, yet they are ſo fat, that to ſtrangers they appear ſwelled; but this does not render them leſs nimble and active. They often live to 100 years or more, yet retain the health and vigour of men of 50. The men go ſtark naked, but the women are covered. They are not ill-looked, and take great care of their beauty, though their ideas on that ſubject are very different from ours. They love black teeth and white hair. Hence one of their principal occupations is to keep their teeth black by the help of certain herbs, and to whiten their hair, ſprinkling upon it a certain water for this purpoſe. The women have their hair very long; but the men generally ſhave it cloſe, except a ſingle lock on the crown of the head, after the manner of the Japaneſe. Their language much reſembles that of the people called *Tagales* in the Philippine iſlands. It is agreeable to the ear, with a ſoft and eaſy pronunciation. One of its chief graces conſiſts in the facility of tranſpoſing words, and even all the ſyllables of one word; and thus furniſhing a variety of double meanings, with which theſe people are greatly delighted. Though plunged in the deepeſt ignorance, and deſtitute of every thing valued by the reſt of mankind, no nation ever ſhowed more preſumption, or a greater conceit of themſelves, than theſe iſlanders, looking on their own nation as the only wiſe, ſenſible, and poliſhed one in the world, and beholding every other people with the greateſt contempt. Though they are ignorant of the arts and ſciences, yet, like every other nation, they have their fables which ſerve them for hiſtory, and ſome poems which they greatly admire. A poet is with them a character of the firſt eminence, and greatly reſpected.

We neither know at what time nor from what place the Ladrone iſlands were firſt peopled. As Japan lies within ſix or ſeven days ſail of them, ſome have been induced to believe, that the firſt inhabitants of the Ladrones came from Japan. But from their greater reſemblance to the inhabitants of the Philippine iſlands than to the Japaneſe, it is more probable that they came from the former than the latter. Formerly moſt of the iſlands were inhabited; and about 90 years ago, the three principal iſlands, Guam, Tinian, and Rota, are ſaid to have contained 50,000 people; but ſince that time, Tinian hath been entirely depopulated, and only 200 or 300 Indians left at Rota to cultivate rice for the iſland of Guam, which alone is inhabited by Europeans, and where the Spaniards have a governor and a garriſon: here alſo the annual Manilla ſhip touches for refreſhments in her paſſage from Acapulco to the Philippines. The iſland of Tinian afforded an aſylum to commodore Anſon in 1742; and the maſterly manner in which the author of that voyage paints the natural beauties of the country, hath given a degree of eſtimation not only to this iſland, but to all the reſt, which they had not before. Commodore Byron, in 1765, continued nine weeks at Tinian, and anchored in the very ſpot where the Centurion lay; but gives a much leſs favourable account of this climate and country than the former navigator. The water, he ſays, is brackiſh and full of worms; many of his men were ſeized with fevers, occaſioned by the intenſe heat; the thermometer, which was kept on board the ſhip, generally ſtood at 86°, which is but 10 or 11 degrees leſs than the heat of the blood at the heart; and had the inſtrument been aſhore, he imagines it would have ſtood much higher than it did. It was with the greateſt difficulty that they could penetrate through the woods; and when they had fortunately killed a bull, and with prodigious labour dragged it through the foreſts to the beach, it ſtunk, and was full of fly-blows by the time it reached the ſhore. The poultry was ill-taſted; and within an hour after it was killed, the fleſh became as green as graſs, and ſwarmed with maggots. The wild hogs were very fierce; and ſo large, that a carcaſe frequently weighed 200 pounds. Cotton and indigo were found on the iſland. Captain Wallis continued here a month in 1767, but makes no ſuch complaints.

LADY. This title is derived from two Saxon words, which ſignify *loaf-day*, which words have in time been contracted into the preſent apppellation. It properly belongs only to the daughters of earls, and all of higher rank; but cuſtom has made it a word of complaiſance for the wives of knights and of all eminent women.

As to the original application of this expreſſion, it may be obſerved, that heretofore it was the faſhion for thoſe families, whom God had bleſſed with affluence, to live conſtantly at their manſion-houſes in the country, and that once a-week, or oftener, the lady of the manor diſtributed to her poor neighbours, *with her own hands*, a certain quantity of bread; but the practice which gave riſe to this title is now as little known as the meaning of it; however, it may be from that hoſpitable cuſtom, that to this day the ladies alone ſerve the meat at their own table.

Lady's Bedſtraw. See Gallium

Lady's Mantle. See Alchemilla.

Lady's Smock. See Cardamine.

Lady's Slipper. See Cypripedium.

Lady's Traces. Soe Ophrys.

Lady-Day, in law, the 25th of March, being the annunciation of the Holy Virgin. See Annunciation.

LÆLIUS (Caius), a Roman conſul and great orator, ſurnamed the *Wiſe*, diſtinguiſhed himſelf in Spain in the war againſt Viriathus the Spaniſh general. He is highly praiſed by Cicero, who gives an admirable deſcription of the intimate friendſhip which ſubſiſted between Lælius and Scipio Africanus the Younger. His eloquence, his modeſty, and his abilities, acquired him a great reputation; and he is thought to have aſſiſted Terence in his comedies. He died about 126 B. C.

LÆNA, in antiquity, was a gown worn by the Roman augurs, and peculiar to their office. In this gown they covered their heads when they made their obſervations on the flight of birds, &c. See Augur.

LAER. See Bamboccio.

LÆSTRYGONES, the moſt ancient inhabitants of Sicily. Some ſuppoſe them to be the ſame as the people of Leontinum, and to have been neighbours to the Cyclops. They fed on human fleſh; and when Ulyſſes came on their coaſts, they ſunk his ſhips and devoured his companions. They were of a gigantic ſtature, according to Homer's deſcription. A colony of them, as ſome ſuppoſe, paſſed over into Italy with Lamus at their head, where they built the town of Formiæ, whence the epithet of *Læſtrygonia* is often uſed for that of *Formiana*.

LAET (John de), a writer in the 17th century, born at Antwerp, was director of the Weſt India company. He acquired great ſkill in the languages, in hiſtory, and geography; and had the management of Elzevir's edition of A Deſcription of moſt Kingdoms in the World, printed in Latin. He wrote in French, A deſcription of the Eaſt Indies, and other works; and died in 1649.

LAETIA, in botany. A genus of the monogynia order, belonging to the polyandria claſs of plants; and in the natural method ranking with thoſe of which the order is doubtful. The corolla is pentapetalous, or none; the calyx is pentaphyllous; the fruit unilocular and trigonal; the ſeeds have a pulpy arillus or coat. There are two ſpecies, both natives of America. One of them, the apetala, or gum-wood, Dr Wright informs us, is very common in the woodlands and copſes of Jamaica, where it riſes to a conſiderable height and thickneſs. The trunks are ſmooth and white; the leaves are three inches long, a little ſerrated, and ſomewhat hairy. The ſtamina are yellow, without petals: the fruit is as large as a plum; and when ripe, opens and ſhows a number of ſmall ſeeds in a reddiſh pulp. Pieces of the trunk or branches, ſuſpended in the heat of the ſun, diſcharge a clear turpentine or balſam, which concretes into a white reſin, and which ſeems to be the ſame as gum ſandarach. Pounce is there made of it; and our author is of opinion, that it might be uſeful in medicine like other gums of the ſame nature.

LÆVINUS (Torrentius), commonly called *Vander Bekin*, or *Torrentin*, was a native of Ghent, and bred in the univerſity of Louvain. He afterwards made the tour of Italy, where his virtues obtained him the friendſhip of the moſt illuſtrious perſonages of his time. On his return to the Low Countries; he was made canon of Leige, and vicar-general to Erneſt de Baviere, biſhop of that ſee. At length, having executed a ſucceſsful embaſſy to Philip II. of Spain, he was rewarded with the biſhopric of Antwerp; from whence he was tranſlated to the metropolitan church of Mechlin, and died there in 1595. He founded a college of Jeſuits at Louvain, to which he left his library, medals and curioſities. He wrote ſeveral poems that procured him the character of being, after Horace, the prince of the lyric poets.

LÆVIUS, a Latin poet. It is not well known when he lived, but probably he was more ancient than Cicero. He made a poem intitled *Erotopagnia*, i. e. *love games*. Aulus Gellius quotes two lines of it. Apuleius alſo quotes ſix lines from the ſame poet; but he does not tell from that work he borrowed them. Lævius had alſo compoſed a poem intitled *The Centaurs*, which Feſtus quotes under the title of *Petrarum*.

LAGAN, or Lagon. See Flotsom.

LAGEMAN (*lagammannus*), *homo habens legem*, or *homo legalis ſeu legitimus*; ſuch as we call now "good men of the jury." The word is frequently uſed in Domeſday, and the laws of Edward the Confeſſor, cap. 38.

LAGEN (*lagena*), in ancient time, was a meaſure of wine, containing ſix ſextarii: whence probably is derived our *flagon*. The lieutenant of the tower of London has the privilege to take *unam lagenam vini ante malum & retro*, of all wine ſhips that come upon the Thames; and Sir Peter Leiceſter, in his Antiquities of Cheſhire, interprets *lagena vini*, "a bottle of wine."

LAGERSTROEMIA, in botany; a genus of the monogynia order, belonging to the polyandria claſs of plants. The corolla is hexapetalous, and curled; the calyx ſexfid, and campanulated; there are many ſtamina, and of theſe the ſix exterior ones thicker than the reſt, and longer than the petals.

LAGNY, a town of the iſle of France, with a famous benedictine abbey. It is ſeated on the river Marne, in E. Long. 2. 45. N. Lat. 48. 50.

LAGOECIA, in botany: a genus of the monogynia order, belonging to the pentandria claſs of plants. The involucrum is univerſal and partial; the petals bifid; the ſeeds ſolitary, inferior.

LAGOON island, one of the new diſcovered iſlands in the South Sea, lying in S. Lat. 18. 47. W. Long. 139. 28. It is of an oval form, with a lake in the middle, which occupies much the greateſt part of it. The whole iſland is covered with trees of different growth. It is inhabited by a race of Indians, tall, of a copper colour, with long black hair. Their weapons are poles or ſpikes, which are twice as long as themſelves. Their habitations were ſeen under ſome clumps of palm trees, which formed very beautiful groves. This iſland was diſcovered by Captain Cook in April 1769.

LAGOPUS, in ornithology. See Tetrao.

LAGOS, a ſea-port town of Portugal, in the province of Algarva, with a caſtle near the ſea, where there is a good harbour, and where the Engliſh fleets bound to the Straits uſually take in freſh water. W. Long. 8. 5. N. Lat. 36. 45.

LAGUNA, or *San Chriſtoval de Laguna*, a conſiderable town in the iſland of Teneriff, near a lake of the ſame name, on the declivity of a hill. It has very handſome buildings, and a fine ſquare. W. Long. 16. 24. N. Lat. 28. 30.

LAGUNES of Venice, are marſhes or lakes in Italy on which Venice is ſeated. They communicate with the ſea, and are the ſecurity of the city. There are about 60 iſlands in theſe Lagunes, which together make a biſhop's ſee. Eurano is the moſt conſiderable, next to thoſe on which Venice ſtands.

LAGURUS, in botany: A genus of the digynia order, belonging to the triandria claſs of plants; and in the natural method ranking under the 4th order, *Gramina*. The calyx is bivalved, with a villous awn; the exterior petal of the corolla terminated by two awns, with a third on its back retorted.

LAHOLM, a ſea-port town of Sweden, in the province of Gothland, and territory of Holland, ſeated near the Baltic Sea, with a caſtle and a harbour, in E. Long. 13. 13. N. 56. 35.

LAHOR, a large town of Aſia, in Indoſtan, and capital of a province of the ſame name, and one of the moſt conſiderable in the Mogul's dominions. It is of a vaſt circumference, and contains a great number of moſques, public baths, caravanſeras, and pagods. It was the reſidence of the Great Mogul; but ſince the removal of the court, the fine palace is going to decay. There is a magnificent walk of ſhady trees, which runs from this to Agra, that is upwards of 300 miles. Here they have manufactures of cotton cloths and ſtuffs of all kinds, and they make very curious carpets. E. Long. 75. 55. N. Lat. 31. 40.

LAINEZ (James), a Spaniard, companion of Ignatius of Loyola, ſecond general of the Jeſuits, and a man of a more daring and political character. Having procured from pope Paul IV. the perpetual generalſhip of the new order of Jeſuits, after the death of Ignatius, he got the following privileges ratified by that pontiff, which ſhow that he was in fact the founder of the worſt part of their inſtitution: 1. The right of making all ſorts of contracts (without the privity of the community) veſted in the generals and their delegates. 2. That of giving authenticity to all comments and explanations of their conſtitutions. 3. The power of making new, and altering the old: this opened the door to their bloody political tenets, not to be attributed to Loyola. 4. That of having priſons independent of the ſecular authority, in which they put to death refractory brethren. Lainez died in 1565, aged 53.

LAIRESSE (Gerard), an eminent Flemiſh painter, born at Leige in 1640. He received the principal part of his inſtruction from his father Reniere de Laireſſe, though he is alſo accounted a diſciple of Bartolet. He firſt ſettled at Utrecht, where he lived in diſtreſſed circumſtances; but an accidental recommendation carrying him to Amſterdam, he ſoon exchanged want and obſcurity for affluence and reputation. He was a perfect maſter of hiſtory; his deſigns are diſtinguiſhed by the grandeur of the compoſition; and the back grounds, wherever the ſubjects required it, are rich in architecture, which is an uncommon circumſtance in that country. He had the unhappineſs to loſe his ſight ſeveral years before his death, which happened in 1711; ſo that the treatiſe on deſign and colouring, which paſſes under his name, was not wrote by him, but collected from his obſervations after he was blind, and publiſhed after his death. He had three ſons, two of whom were painters; and alſo three brothers, Erneſt, James, and John: Erneſt and John painted animals, and James was a flower-painter. He engraved a good deal in aquafortis: his works conſiſt of 256 plates, above half of which were done with his own hand. He wrote an excellent book on the art, which has been tranſlated into Engliſh, and printed at London both in 4to and 8vo.

LAIS, a celebrated courtezan, daughter of Timandra the miſtreſs of Alcibiades, born at Hyccara in Sicily. She was carried away from her native Greece, when Nicias the Athenian general invaded Sicily. She firſt began to ſell her favours at Corinth for 10,000 drams, and the immenſe number of princes, noblemen, philoſophers, orators, and plebeians which courted her embraces, ſhow how much commendation is owed to her perſonal charms. The expenſes which attended her pleaſures, gave riſe to the proverb of *Non cuivis homini contingit adire Corinthum.* Even Demoſthenes himſelf viſited Corinth for the ſake of Lais; but when he was informed by the courtezan, that admittance to her bed was to be bought at the enormous ſum of about 200l. Engliſh money, the orator departed, and obſerved that he would not buy repentance at ſo dear a price. The charms which had attracted Demoſthenes to Corinth, had no influence upon Xenocrates. When Lais ſaw the philoſopher unmoved by her beauty, ſhe viſited his houſe herſelf; but there ſhe had no reaſon to boaſt of the licentiouſneſs or eaſy ſubmiſſion of Xenocrates. Diogenes the cynic was one of her warmeſt admirers, and though filthy in his dreſs and manners, yet he gained her heart and enjoyed her moſt unbounded favours. The ſculptor Mycon alſo ſolicited the favours of Lais, but he met with coldneſs: he, however, attributed the cauſe of his ill reception to the whiteneſs of his hair, and dyed it of a brown colour, but to no purpoſe: "Fool that thou art (ſaid the courtezan) to aſk what I refuſed yeſterday to thy father." Lais ridiculed the auſterity of philoſophers, and laughed at the weakneſs of thoſe who pretend to have gained a ſuperiority over their paſſions, by obſerving, that the ſages and philoſophers of the age were not above the reſt of mankind, for ſhe found them at her door as often as the reſt of the Athenians. The ſucceſs which her debaucheries met at Corinth encouraged Lais to paſs into Theſſaly, and more particularly to enjoy the company of a favourite youth called Hippoſtratus. She was however diſappointed: the women of the place, jealous of her charms, and apprehenſive of her corrupting the fidelity of their huſbands, aſſaſſinated her in the temple of Venus, about 340 years before the Chriſtian era. Some ſuppoſe that there were two perſons of this name, a mother and her daughter.

LAITY, the people as diſtinguiſhed from the clergy; (ſee CLERGY). The lay part of his Britannic majeſty's ſubjects is divided into three diſtinct ſtates; the civil, the military, and the maritime. See CIVIL, MILITARY, MARITIME.

LAKE, a collection of waters contained in ſome cavity in an inland place, of a large extent, ſurrounded with land, and having no communication with the ocean. Lakes may be divided into four kinds. 1. Such as neither receive nor ſend forth rivers. 2. Such as emit rivers, without receiving any. 3. Such as receive rivers, without emitting any. And, 4. Such as both receive and ſend forth rivers. Of the firſt kind, ſome are temporary and others perennial. Moſt of thoſe that are temporary owe their origin to the rain, and the cavity or depreſſion of the place in which they are lodged: thus in India there are ſeveral ſuch lakes made by the induſtry of the natives, of which ſome are a mile, and ſome two, in circuit; theſe are ſurrounded with a ſtone-wall, and being filled in the rainy months, ſupply the inhabitants in dry ſeaſons, who live at a great diſtance from ſprings or rivers. There are alſo ſeveral of this kind formed by the inundations of the Nile and the Niger; and in Muſcovy, Finland, and Lapland, there are many lakes formed, partly by the rains, and partly by the melting of the ice and ſnow: but moſt of the perennial lakes, which neither receive nor emit rivers, probably owe their riſe to ſprings at the bottom, by which they are conſtantly ſupplied. The ſecond kind of lakes, which emit without receiving rivers, is very numerous. Many rivers flow from theſe as out of ciſterns: where their ſprings being ſituated low within a hollow place, firſt fills the cavity and make it a lake, which not being capacious enough to hold all the water, it overflows and forms a river: of this kind is the Wolga, at the head of the river Wolga; the lake Odium, at the head of the Tanais; the Adac, from whence one branch of the river Tigris flows; the Ozero, or White lake, in Muſcovy, is the ſource of the river Shakſna. The great lake Chaamay, which emits four very large rivers, which water the countries of Siam, Pegu, &c. *viz.* the Menan, the Aſa, the Caipoumo, and the Laquia, &c. The third ſpecies of lakes, which receive rivers but emit none, apparently owe their origin to thoſe rivers which, in their progreſs from their ſource, falling into ſome extenſive cavity, are collected together, and form a lake of ſuch dimenſions as may loſe as much by exhalation as it continually receives from theſe ſources; of this kind is that great lake improperly called the *Caſpian Sea;* the lake of Aſphaltites, alſo called the *Dead Sea;* the lake of Geneva, and ſeveral others. Of the fourth ſpecies, which both receive and emit rivers, we reckon three kinds, as the quantity they emit is greater, equal or leſs, than they receive. If it be greater, it is plain that they muſt be ſupplied by ſprings at the bottom; if leſs, the ſurplus of the water is probably ſpent in exhalations; and if it be equal, their ſprings juſt ſupply what is evaporated by the ſun.

Lakes are alſo divided into thoſe of freſh water and thoſe of ſalt. Dr Halley is of opinion, that all great perennial lakes are ſaline, either in a greater or leſs degree; and that this ſaltneſs increaſes with time: and on this foundation he propoſes a method for determining the age of the world.

Large lakes anſwer the moſt valuable purpoſes in the northern regions, the warm vapours that ariſe from them moderating the pinching cold of thoſe climates; and what is ſtill a greater advantage, when they are placed in warmer climates at a great diſtance from the ſea, the exhalations raiſed from them by the ſun cauſe the countries that border upon them to be refreſhed with frequent ſhowers, and conſequently prevent their being barren deſarts.

LAKE, or *Laque*, a preparation of different ſubſtances into a kind of magiſtery for the uſe of painters. One of the fineſt and firſt invented of which was that of *gum-lacca*, or *lacque;* from which all the reſt, as made by the ſame proceſs, are called by the common name *lacques*. See LACCA.

The method of preparing theſe, in general, may be known by the example of that of the curcuma-root of the ſhops, called *turmeric root;* the proceſs for the making of which is this: Take a pound of turmeric-root in fine powder, three pints of water, and an ounce of ſalt of tartar; put all into a glazed earthen veſſel, and let them boil together over a clear gentle fire, till the water appears highly impregnated with the root, and will ſtain a paper to a beautiful yellow. Filtre this liquor, and gradually add to it a ſtrong ſolution of roch alum in water, till the yellow matter is all curdled together and precipitated; after this pour the whole into a filtre of paper, and the water will run off and leave the yellow matter behind. It is to be waſhed many times with freſh water, till the water comes off inſipid, and then is obtained the beautiful yellow called *lacque of turmeric*, and uſed in painting.

In this manner may a lake be made of any of the tinging ſubſtances that are of a ſomewhat ſtrong texture, as madder, logwood, &c. but it will not ſucceed in the more tender ſpecies, as the flowers of roſes, violets, &c. as it deſtroys the nice arrangement of parts in thoſe ſubjects on which the colour depends.

A yellow lake for painting is to be made from broom-flowers in the following manner: Make a ley of pot-aſhes and lime reaſonably ſtrong; in this boil, at a gentle fire, freſh broom-flowers till they are white, the ley having extracted all their colour; then take out the flowers, and put the ley to boil in earthen veſſels over the fire; add as much allum as the liquor will diſſolve; then empty this ley into a veſſel of clean water, and it will give a yellow colour at the bottom. Let all ſettle, and decant off the clear liquor. Waſh this powder, which is found at the bottom, with more water, till all the ſalts of the ley are waſhed off; then ſeparate the yellow matter, and dry it in the ſhade. It proves a very valuable yellow.

Handmaid to the Arts, vol. I. p. 61, &c.

Lake is at preſent ſeldom prepared from any other ſubſtance than ſcarlet rags, cochineal, and Braſil wood. The beſt of what is commonly ſold is made from the colour extracted from ſcarlet rags, and depoſited on the cuttle-bone; and this may be prepared in the following manner: Diſſolve a pound of the beſt pearl-aſhes in two quarts of water, and filtre the liquor thro' paper; add to this ſolution two more quarts of water and a pound of clean ſcarlet ſhreds, and boil them in a pewter boiler till the ſhreds have loſt their ſcarlet colour; take out the ſhreds and preſs them, and put the coloured water yielded by them to the other: in the ſame ſolution boil another pound of the ſhreds, proceeding in the ſame manner; and likewiſe a third and fourth pound. Whilſt this is doing, diſſolve a pound and a half of cuttle-fiſh bone in a pound of ſtrong aquafortis in a glaſs receiver; adding more of the bone if it appear to produce any ebullition in the aquafortis; and pour this ſtrained ſolution gradually into the other; but if any ebullition be occaſioned, more of the cuttle-fiſh bone muſt be diſſolved as before, and added till no ebullition appears in the mixture. The crimſon ſediment depoſited by the liquor thus prepared is the lake: pour off the water; and ſtir the lake in two gallons of hard ſpring water, and mix the ſediment in two gallons of freſh water; let this method be repeated four or five times. If no hard water can be procured, or the lake appears too purple, half an ounce of alum, ſhould be added to each quantity of water before it be uſed. Having thus ſufficiently freed the lake from the ſalts, drain off the water through a filtre, covered with a worn linen cloth. When it has been drained to a proper dryneſs, let it be dropped through a proper funnel on clean boards, and the drops will become ſmall cones or pyramids, in which form the lake muſt be ſuffered to dry, and the preparation is completed.

Lake may be prepared from cochineal, by gently boiling two ounces of cochineal in a quart of water; filtering the ſolution through paper, and adding two ounces of pearl-aſhes diſſolved in half a pint of warm water and filtered through paper. Make a ſolution of cuttle-bone as in the former proceſs; and to a pint of it add two ounces of alum diſſolved in half a pint of water. Put this mixture gradually to that of the cochineal and pearl-aſhes, as long as any ebullition appears to ariſe, and proceed as above.—A beautiful lake may be prepared from Brazil wood, by boiling three pounds of it for an hour in a ſolution of three pounds of common ſalt in three gallons of water, and filtering the hot fluid through paper; add to this a ſolution of five pounds of alum in three gallons of water. Diſſolve three pounds of the beſt pearl-aſhes in a gallon and a half of water, and purify it by filtering; put this gradually to the other, till the whole of the colour appear to be precipitated, and the fluid be left clear and colourleſs. But if any appearance of purple be ſeen, add a freſh quantity of the ſolution of alum by degrees, till a ſcarlet hue be produced. Then purſue the directions given in the firſt proceſs with regard to the ſediment. If half a pound of ſeed lac be added to the ſolution of pearl-aſhes, and diſſolved in it before its purification by the filtre, and two pounds of the wood, and a proportional quantity of the common ſalt and water be uſed in the coloured ſolution, a lake will be produced that will ſtand well in oil or water, but is not ſo tranſparent in oil as without the ſeed-lac. The lake with Brazil wood may be alſo made by adding half an ounce of anotto to each pound of the wood; but the anotto muſt be diſſolved in the ſolution of pearl-aſhes. There is a kind of beautiful lake brought from China; but as it does not mix well with either water or oil, though it diſſolves entirely in ſpirit of wine, it is not of any uſe in our kinds of painting. This has been erroneouſly called *ſafflower*.

Orange LAKE, is the tinging part of anotto precipitated together with the earth of alum. This pigment, which is of a bright orange colour and fit for varniſh painting, where there is no fear of flying, and alſo for putting under cryſtal to imitate the vinegar garnet, may be prepared by boiling four ounces of the beſt anotto and one pound of pearl-aſhes half an hour in a gallon of water; and ſtraining the ſolution through paper. Mix gradually with this a ſolution of a pound and a half of alum in another gallon of water; deſiſting when no ebullition attends the commixture. Treat the ſediment in the manner already directed for other kinds of lake, and dry it in ſquare bits or round lozenges.

LAMA, a ſynonyme of the camelus pacos. See CAMELUS.

LAMA, the ſovereign pontiff, or rather god, of the

Aſiatic Tartars, inhabiting the country of Barantola. The lama is not only adored by the inhabitants of the country, but alſo by the kings of Tartary, who ſend him rich preſents, and go in pilgrimage to pay him adoration, calling him *lama congiu*, i. e. "god, the everlaſting father of heaven." He is never to be ſeen but in a ſecret place of his palace, amidſt a great number of lamps, ſitting croſs-legged upon a cuſhion, and adorned all over with gold and precious ſtones; where at a diſtance they proſtrate themſelves before him, it not being lawful for any to kiſs even his feet. He is called the *great lama*, or *lama of lamas*; that is, "prieſt of prieſts." The orthodox opinion is, that when the grand lama ſeems to die either of old age or infirmity, his ſoul in fact only quits a crazy habitation to look for another younger or better; and it is diſcovered again in the body of ſome child, by certain tokens known only to the lamas or prieſts, in which order he always appears.

The following account of the ceremonies attending the inauguration of the infant lama in Thibet is extracted from the firſt volume of the *Aſiatic Reſearches*.

The emperor of China appears on this occaſion to have aſſumed a very conſpicuous part in giving teſtimony of his reſpect and zeal for the great religious father of his faith. Early in the year 1784, he diſmiſſed ambaſſadors from the court of Pekin to Teeſhoo Loomboo, to repreſent their ſovereign in ſupporting the dignity of the high prieſt, and do honour to the occaſion of the aſſumption of his office. Dalia Lama and the viceroy of Laſſa, accompanied by all the court, one of the Chineſe generals ſtationed at Laſſa with a part of the troops under his command, two of the four magiſtrates of the city, the heads of every monaſtery throughout Thibet, and the emperor's ambaſſadors, appeared at Teeſhoo Loomboo to celebrate this epocha in their theological inſtitutions. The 28th day of the ſeventh moon, correſponding nearly, as their year commences with the vernal equinox, to the middle of October 1784, was choſen as the moſt auſpicious for the ceremony of inauguration: a few days previous to which the lama was conducted from Terpaling, the monaſtery in which he had paſſed his infancy, with every mark of pomp and homage that could be paid by an enthuſiaſtic people. So great a concourſe as aſſembled either from curioſity or devotion was never ſeen before, for not a perſon of any condition in Thibet was abſent who could join the ſuite. The proceſſion was hence neceſſarily conſtrained to move ſo ſlow, that though Terpaling is ſituated at the diſtance of 20 miles only from Teeſhoo Loomboo, three days expired in the performance of this ſhort march. The firſt halt was made at Tſondue: the ſecond at Summaar, about ſix miles off, whence the moſt ſplendid parade was reſerved for the lama's entry on the third day, the account of which is given by a perſon who was preſent in the proceſſion. The road, he ſays, was previouſly prepared by being whitened with a waſh, and having piles of ſtones heaped up with ſmall intervals between on either ſide. The retinue paſſed between a double row of prieſts who formed a ſtreet extending all the way from Summaar to the gates of the palace. Some of the prieſts held lighted rods of a perfumed compoſition that burn like decayed wood, and emit an aromatic ſmoke; the reſt were furniſhed with the different muſical inſtruments which they uſe at their devotions, ſuch as the gong, the cymbal, hautboy, trumpets, drums, and ſea-ſhells, which were all ſounded in union with the hymn they chanted. The crowd of ſpectators were kept without the ſtreet, and none admitted on the high road but ſuch as properly belonged to or had a preſcribed place in the proceſſion, which was arranged in the following order.

The van was led by three military commandants or governors of diſtricts at the head of 6000 or 7000 horſemen armed with quivers, bows, and matchlocks. In their rear followed the ambaſſador with his ſuite, carrying his diploma as is the cuſtom of China, made up in the form of a large tube, and faſtened on his back. Next the Chineſe general advanced with the troops under his command, mounted and accoutered after their way with fire arms and ſabres; then came a very numerous group bearing the various ſtandards and inſignia of ſtate; next to them moved a full band of wind and other ſonorous inſtruments; after which were led two horſes richly capariſoned, each carrying two large circular ſtoves diſpoſed like panniers acroſs the horſe's back and filled with burning aromatic woods. Theſe were followed by a ſenior prieſt, called a *lama*, who bore a box containing books of their form of prayer and ſome favourite idols. Next nine ſumptuary horſes were led loaded with the lama's apparel; after which came the prieſts immediately attached to the lama's perſon for the performance of daily offices in the temple, amounting to about 700; following them were two men each carrying on his ſhoulder a large cylindrical gold inſignium emboſſed with emblematical figures (a gift from the emperor of China). The Duhunniers and Soopoons, who were employed in communicating addreſſes and diſtributing alms, immediately preceded the lama's bier, which was covered with a gaudy canopy, and borne by eight of the 16 Chineſe appointed for this ſervice. On one ſide of the bier attended the regent, on the other the lama's father. It was followed by the heads of the different monaſteries, and as the proceſſion advanced, the prieſts who formed the ſtreet fell in the rear and brought up the ſuite, which moved at an extremely ſlow pace, and about noon was received within the confines of the monaſtery, amidſt an amazing diſplay of colours, the acclamations of the crowd, ſolemn muſic, and the chanting of their prieſts.

The lama being ſafely lodged in the palace, the regent and Soopoon Choomboo went out, as is a cuſtomary compliment paid to viſitors of high rank on their near approach, to meet and conduct Dalai Lama and the viceroy of Laſſa who were on the way to Teeſhoo Loomboo. Their retinues encountered the following morning at the foot of Painom caſtle, and the next day together entered the monaſtery of Teeſhoo Loomboo, in which both Dalai Lama and the viceroy were accommodated during their ſtay.

The following morning, which was the third after Teeſhoo Lama's arrival, he was carried to the great temple, and about noon ſeated upon the throne of his progenitors; at which time the emperor's ambaſſador delivered his diploma, and placed the preſents with which he had been charged at the lama's feet.

2 The

The three next enſuing days, Dalai Lama met Teeſhoo Lama in the temple, where they were aſſiſted by all the prieſts in the invocation and public worſhip of their gods. The rites then performed, completed, as we underſtand, the buſineſs of inauguration. During this interval all who were at the capital were entertained at the public expence, and alms were diſtributed without reſerve. In conformity likewiſe to previous notice circulated every where for the ſame ſpace of time, univerſal rejoicings prevailed throughout Thibet. Banners were unfurled on all their fortreſſes, the peaſantry filled up the day with muſic and feſtivity, and the night was celebrated by general illuminations. A long period was afterwards employed in making preſents and public entertainments to the newly inducted lama, who, at the time of his acceſſion to the Muſnud, or if we may uſe the term, pontificate of Teeſhoo Loomboo, was not three years of age. The ceremony was begun by Dalai Lama, whoſe offerings are ſaid to have amounted to a greater value, and his public entertainments to have been more ſplendid than the reſt. The ſecond day was dedicated to the viceroy of Laſſa. The third to the Chineſe general. Then followed the *culloong* or magiſtrates of Laſſa, and the reſt of the principal perſons who had accompanied Dalai Lama. After which the regent of Teeſhoo Loomboo, and all that were dependent on that government, were ſeverally admitted, according to pre-eminence of rank, to pay their tributes of obeiſance and reſpect. As ſoon as the acknowledgements of all thoſe were received who were admiſſible to the privilege, Teeſhoo Lama made in the ſame order ſuitable returns to each, and the conſummation laſted 40 days.

Many importunities were uſed with Dalai Lama to prolong his ſtay at Teeſhoo Loomboo; but he excuſed himſelf from encumbering the capital any longer with ſo numerous a concourſe of people as attended on his movements, and deeming it expedient to make his abſence as ſhort as poſſible from the ſeat of his authority, at the expiration of 40 days he withdrew with all his ſuite to Laſſa, and the emperor's ambaſſador received his dimiſſion to return to China, and thus terminated this famous feſtival.

LAMB, in zoology, the young of the ſheep kind. See Ovis.

A male lamb of the firſt year is called a *wedder-hog*, and the female a *ewe-hog*; the ſecond year it is called a *wedder*, and the female a *ſheave*. If a lamb be ſick, mare's milk with water may be given it; and by blowing into the mouth, many have been recovered, after appearing dead. The beſt ſeaſon for weaning them is when they are 16 or 18 weeks old; and about Michaelmas the males ſhould be ſeparated from the females, and ſuch males as are not deſigned for rams, gelded. "Lamb (ſays Dr Cullen) appears a more fibrous kind of meat, and upon that account is leſs eaſily ſoluble than veal. In Scotland, houſe-lamb is never reared to advantage."

Scythian Lamb, a kind of moſs, which grows about the roots of fern in ſome of the northern parts of Europe and Aſia, and ſometimes aſſumes the form of a quadruped; ſo called from a ſuppoſed reſemblance in ſhape to that animal. It has ſomething like four feet, and its body is covered with a kind of down. Travellers report that it will ſuffer no vegetable to grow within a certain diſtance of its ſeat. Sir Hans Sloan read a memoir upon this plant before the Society; for which thoſe who think it worth while may conſult their Tranſactions, N° 245. p. 461. Mr Bell, in his "Account of a Journey from St Peterſburgh to Iſaphan," informs us that he ſearched in vain for this plant in the neighbourhood of Aſtrachan, when at the ſame time the more ſenſible and experienced amongſt the Tartars treated the whole hiſtory as fabulous. See Plate CCLIX.

LAMBECIUS (Peter), born at Hamburg in 1628, was one of the moſt learned men of his time. He went very young to ſtudy in foreign countries, at the expence of his uncle the learned Holſtenius. He was choſen profeſſor of hiſtory at Hamburg in 1652, and rector of the college of that city in 1660. He had taken his degree of doctor of law in France before. He ſuffered a thouſand vexations in his own country; becauſe his enemies charged him with atheiſm, and cenſured his writings bitterly. He married a rich lady, but who was ſo very covetous, that he left her in diſguſt within a fortnight. He went to Vienna, and from thence to Rome, where he publicly profeſſed the Catholic religion. He returned to Vienna in 1662, where he was kindly received by the emperor, who appointed him his ſublibrary-keeper, and afterwards his principal librarian, with the title of *counſellor and hiſtoriographer*; in which employment he continued till his death, and gained a great reputation by the works he publiſhed, viz. 1. *An Eſſay on Aulus Gellius*. 2. *The Antiquities of Hamburg*. 3. *Remarks on Codinus's Antiquities of Conſtantinople*, &c.

LAMBERT of Aſchaffenburg, a Benedictine monk, in the 11th century, wrote ſeveral works; among which is a hiſtory of Germany, from the year 1050 to 1077, which is eſteemed.

Lambert (John), general of the parliament's forces in the civil wars of the laſt century, was of a good family, and for ſome time ſtudied the law in one of the inns of court; but upon the breaking out of the rebellion, went into the parliament-army, where he ſoon roſe to the rank of colonel, and by his conduct and valour performed many eminent ſervices. But when Cromwell ſeemed inclined to aſſume the title of king, Lambert oppoſed it with great vigour, and even refuſed to take the oath required by the aſſembly and council to be faithful to the government; on which Cromwell deprived him of his commiſſion, but granted him a penſion of 2000 l. a-year. This was an act of prudence rather than of generoſity; as he well knew, that ſuch a genius as Lambert's, rendered deſperate by poverty, was capable of attempting any thing.

Lambert being now diveſted of all employment, retired to Wimbleton-houſe; where turning floriſt, he had the fineſt tulips and gilliflowers that could be got for love or money. Yet amidſt theſe amuſements he ſtill nouriſhed his ambition: for when Richard Cromwell ſucceeded his father, he acted ſo effectually with Fleetwood, Deſborough, Vane, Berry, and others, that the new protector was obliged to ſurrender his authority; and the members of the long-parliament, who had continued ſitting till the 20th of April 1653, when Oliver diſmiſſed them, were reſtored to their ſeats, and Lambert was immediately appointed one of the council of ſtate, and colonel of a regiment of horſe and another of foot. For this ſervice the parliament preſented him 1000 l. to buy a jewel; but he diſtributed it among his officers. This being ſoon known to the parliament, they concluded that he intended to ſecure a party in the army. They therefore courteouſly invited him to come to London; but reſolved, as ſoon as he ſhould arrive, to ſecure him from doing any further harm. Lambert, apprehenſive of this, delayed his return, and even refuſed to reſign his commiſſion when it was demanded of him and of eight of the other leading officers; and, marching up to London with his army, diſloged the parliament by force in October 1659. He was then appointed, by a council of the officers, major-general of the army, and one of the new council for the management of public affairs, and ſent to command the forces in the north. But General Monk marching from Scotland into England to ſupport the parliament, againſt which Lambert had acted with ſuch violence, the latter, being deſerted by his army, was obliged to ſubmit to the parliament, and by their order was committed priſoner to the tower; whence eſcaping he ſoon appeared in arms with four troops under his command, but was defeated and taken priſoner by Colonel Ingoldſby.

At the Reſtoration he was particularly excepted out of the act of indemnity. Being brought to his trial on the 4th of June 1662, for levying war againſt the king, this daring general behaved with more ſubmiſſion than the meaneſt of his fellow-priſoners, and was by his majeſty's favour reprieved at the bar, and confined during his life in the iſland of Guernſey.

Lambert (Anna Thereſa de Marguenat de Courcelles, marchioneſs of), an elegant moral writer, was the only daughter of Stephen Marguenat lord of Courcelles. In 1666 ſhe married Henry de Lambert, who at his death was lieutenant-general of the army; and ſhe afterwards remained a widow with a ſon and a daughter, whom ſhe educated with great care. Her houſe was a kind of academy, to which perſons of diſtinguiſhed abilities regularly reſorted. She died at Paris in 1733, aged 86. Her works, which are written with much taſte, judgment, and delicacy, are printed in two volumes. The advice of a mother to her ſon and daughter are particularly eſteemed.

LAMBIN (Dennis), an eminent claſſical commentator, was born at Montreuil-ſur-Mer, in Picardy, and acquired great ſkill in polite literature. He lived for a long time at Rome: and at his return to Paris was made royal profeſſor of the Greek language. He died in 1572, aged 56, of pure grief at the death of his friend Ramus, who was murdered at the maſſacre on St Bartholomew's day. He wrote commentaries on Plautus, Lucretius, Cicero, and Horace, and other works. His commentary on Horace is more particularly eſteemed.

LAMECH, of the race of Cain, was the ſon of Methuſael, and father of Jabal, Jubal, Tubal-cain, and Naamah. Gen. iv. 18, 19, 20, &c. Lamech is celebrated in ſcripture for his polygamy, whereof he is thought to be the firſt author in the world. He married Adah and Zillah. Adah was the mother of Jabal, and Jubal; and Zillah of Tubal-cain, and Naamah his ſiſter. One day Lamech ſaid to his wives, "Hear me, ye wives of Lamech; I have ſlain a man to my wounding, and a young man to my hurt. If Cain ſhall be avenged ſeven fold, truly Lamech ſeventy and ſeven fold." Theſe words are an unintelligible riddle. The reader may conſult the commentators. There is a tradition among the Hebrews, that Lamech growing blind, ignorantly killed Cain, believing him to be ſome wild beaſt; and that afterwards he ſlew his own ſon Tubal-cain, who had been the cauſe of this murder, becauſe he had directed him to ſhoot at a certain place in the thickets where he had ſeen ſomething ſtir. See Cain.

Several other ſuppoſitions are produced in order to explain this paſſage concerning Lamech, and all almoſt equally uncertain and abſurd.

Lamech, the ſon of Methuſelah, and father of Noah. He lived a hundred fourſcore and two years before the birth of Noah, (Gen. v. 25, 31.); and after that, he lived five hundred and ninety-five years longer: thus the whole time of his life was ſeven hundred ſeventy-ſeven years, being born in the year of the world 874, and dying in the year of the world 1651.

LAMELLÆ, in natural hiſtory, denotes very thin plates, ſuch as the ſcales of fiſhes are compoſed of.

LAMENTATIONS, a canonical book of the Old Teſtament, written by the prophet Jeremiah, according to archbiſhop Uſher and ſome other learned men, who follow the opinion of Joſephus and St Jerom, on occaſion of Joſiah's death. But this opinion does not ſeem to agree with the ſubject of the book, the lamentation compoſed by Jeremiah on that occaſion being probably loſt. The fifty-ſecond chapter of the book of Jeremiah was probably added by Ezra, as a preface or introduction to the Lamentations: the two firſt chapters are employed in deſcribing the calamities of the ſiege of Jeruſalem: in the third the author deplores the perſecutions he himſelf had ſuffered: the fourth treats of the deſolation of the city and temple, and the misfortunes of Zedekiah: the fifth chapter is a prayer for the Jews in their diſperſion and captivity: and at the cloſe of all he ſpeaks of the cruelty of the Edomites, who had inſulted Jeruſalem in her miſery. All the chapters of this book, except the laſt, are in metre, and digeſted in the order of the alphabet; with this difference, that in the firſt, ſecond, and fourth chapters, the firſt letter of every verſe follows the order of the alphabet; but in the third the ſame initial letter is continued for three verſes together. This order was probably adopted, that the book might be more eaſily learnt and retained. The ſubject of this book is of the moſt moving kind; and the ſtyle throughout lively, pathetic, and affecting. In this kind of writing the prophet Jeremiah was a great maſter, according to the character which Grotius gives of him, *Mirus in affectibus concitandis.*

LAMIA (anc. geog.) a town of the Phthiotis, a diſtrict of Theſſaly; famous for giving name to the *Bellum Lamiacum*, waged by the Greeks on the Macedonians after Alexander's death.

LAMIACUM bellum happened after the death of Alexander, when the Greeks, and particularly the Athenians, incited by their orators, reſolved to free Greece from the garriſons of the Macedonians. Leoſthenes was appointed commander of a numerous force, and marched againſt Antipater, who then preſided over Macedonia. Antipater entered Theſſaly at the head of 13,000 foot and 600 horſe, and was beaten by the ſuperior force of the Athenians and of their Greek confederates. Antipater after this blow fled to Lamia, where he reſolved, with all the courage and ſagacity of a careful general, to maintain a ſiege with about 8000 or 9000 men that had eſcaped from the field of battle. Leoſthenes, unable to take the city by ſtorm, began to make a regular ſiege. His operations were delayed by the frequent ſallies of Antipater; and Leoſthenes being killed by the blow of a ſtone which he received, Antipater made his eſcape out of Lamia, and ſoon after, with the aſſiſtance of the army of Craterus brought from Aſia, he gave the Athenians battle near Cranon; and though only 500 of their men were ſlain, yet they became ſo diſpirited, that they ſued for peace from the conqueror. Antipater at laſt with difficulty conſented, provided they raiſed taxes in the uſual manner, received a Macedonian garriſon, defrayed the expences of the war, and, laſtly, delivered into his hands Demoſthenes and Hyperides, the two orators whoſe prevailing eloquence had excited their countrymen againſt him. Theſe diſadvantageous terms were accepted by the Athenians, yet Demoſthenes had time to eſcape and poiſon himſelf. Hyperides was carried before Antipater, who ordered his tongue to be cut off, and afterwards to be put to death.

LAMIÆ, a ſort of demons who had their exiſtence in the imaginations of the heathens, and were ſuppoſed to devour children. Their form was human, reſembling beautiful women. Horace makes mention of them in his Art of Poetry. The name, according to ſome, is derived from *lanio* "to tear;" or according to others, is a corruption of a Hebrew word ſignifying to devour. They are alſo called *Larvæ*, or *Lemures*.

LAMINÆ, in phyſiology, thin plates, or tables, whereof any thing conſiſts; particularly the human ſkull, which are two, the one laid over the other.

LAMINIUM, (anc. geog.), a town of the Carpetani in the Hither Spain; at the diſtance of ſeven miles from the head of the Anas or Guadiana: Now *Montiel*, a citadel of New-Caſtile; and the territory called *Ager Laminitanus*, is now *el Campo de Montiel*, (Cluſius.)

LAMIUM, *Dead-Nettle*, in botany: A genus of the gymnoſpermia order, belonging to the didynamia claſs of plants; and in the natural method ranking under the 42d order, *Verticillatæ*. The upper lip of the corolla is entire, arched, the under lip bilobous; the throat with a dent or tooth on each ſide the margin. There are eight ſpecies; of which only two, viz. the album, white archangel or dead-nettle, and the purpureum or red archangel, deſerve notice. The firſt grows frequently under hedges and in waſte places; the ſecond is very common in gardens and corn-fields. The flowers of the firſt, which appear in April and May, have been particularly celebrated in uterine fluors and other female weakneſſes, and alſo in diſorders of the lungs; but they appear to be of very weak virtue; and they are at preſent ſo little uſed in Britain as to have now no place in the pharmacopœias. The young leaves of both ſpecies are boiled and eaten in ſome places like greens.

LAMMAS-DAY, the firſt of Auguſt; ſo called, as ſome will have it, becauſe lambs then grow out of ſeaſon, as being too big. Others derive it from a Saxon word, ſignifying "loaf-maſs," becauſe on that day our forefathers made an offering of bread made with new wheat.

On this day the tenants who formerly held lands of the cathedral church in York, were bound by their tenure to bring a lamb alive into the church at high-maſs.

LAMOIGNON (Chretien Francis de), marquis of Baville, and preſident of the parliament of Paris, was born in 1644. His father would not truſt the education of his ſon to another, but took it upon himſelf, and entered into the minuteſt particulars of his firſt ſtudies: the love of letters and a ſolid taſte were the fruits the ſcholar reaped from this valuable education. He learned rhetoric in the Jeſuit's college, made the tour of England and Holland, and returned home the admiration of thoſe meetings regularly held by perſons of the firſt merit at his father's houſe. The ſeveral branches of literature were however only his amuſement: the law was his real employ; and the eloquence of the bar at Paris owes its reformation from bombaſt and affected erudition to the plain and noble pleadings of M. Lamoignon. He was appointed the king's advocate general in 1673; which he diſcharged until 1698, when the preſidentſhip of the parliament was conferred on him. This poſt he held nine years, when he was allowed to reſign in favour of his eldeſt ſon: he was choſen preſident of the royal academy of inſcriptions in 1705. The only work he ſuffered to ſee the light was his *Pleader*, which is a monument of his eloquence and inclination to polite letters. He died in 1709.

LAMP, a veſſel containing oil, with a lighted wick.

Lamps were in general uſe amongſt the Jews, Greeks, and Romans. The candleſtick with ſeven branches, placed in the ſanctuary by Moſes, and thoſe which Solomon afterwards prepared for the temple, were cryſtal lamps filled with oil, and fixed upon the branches. The lamps or candleſticks made uſe of by the Jews in their own houſes were generally put into a very high ſtand on the ground. The lamps ſuppoſed to be uſed by the fooliſh virgins, &c. in the goſpel, were of a different kind.—According to critics and antiquaries, they were a ſort of torches, made of iron or potter's earth, wrapped about with old linen, and moiſtened from time to time with oil. Matth. xxv. 1, 2. The lamps of Gideon's ſoldiers were of the ſame kind. The uſe of wax was not unknown to the Romans, but they generally burnt lamps; hence the proverb *Tempus et oleum perdidi*, "I have loſt my labour." Lamps were ſometimes burnt in honour of the dead, both by Greeks and Romans.

Dr St Clair, in the Philoſ. Tranſ. n° 245, gives the deſcription of an improvement on the common lamp. He propoſes that it ſhould be made two or three inches deep, with a pipe coming from the bottom almoſt as high as the top of the veſſel. Let it be filled ſo high with water that it may cover the hole of the pipe at the bottom, that the oil may not get in at the pipe and ſo be loſt. Then let the oil be poured in ſo as to fill the veſſel almoſt brim-full; and to the veſſel muſt be adapted a cover having as many holes as there are to be wicks. When the veſſel is filled and the wicks lighted, if water falls in by drops at the pipe, it will always keep the oil at the ſame height or very near it; the weight of the water being to that of the oil as 20 $\frac{8}{11}$ to 19, which in two or three inches makes no great difference. If the water runs faſter than the oil waſtes, it will only run over at the top of the pipe, and what does not run over will come under the oil, and keep it at the ſame height.

From experiments made in order to aſcertain the expence of burning chamber oil in lamps, it appears, that a taper lamp, with eight threads of cotton in the wick, conſumes in one hour $\frac{325}{1000}$ oz. of ſpermaceti oil, at 2s. 6d. per gallon; ſo that the expence of burning 12 hours is 4.57 farthings. This lamp gives as good a light as the candles of eight and ten in the pound; it ſeldom wants ſnuffing, and caſts a ſtrong and ſteady light. A taper, chamber, or watch lamp, with four ordinary threads of cotton in the wick, conſumes 0.1664 oz. of ſpermaceti oil in one hour; the oil at 2s. 6d. per gallon, makes the expence of burning 12 hours only 2.34 farthings.

Perpetual LAMPS. The teſtimonies of Pliny, St Auſtin, and others, have led many to believe that the ancients had the invention of perpetual lamps; and ſome moderns have attempted to find out the ſecret, but hitherto in vain. Indeed it ſeems no eaſy matter to find out either a perpetual wick or a perpetual oil. The curious may read Dr Plot's conjectures on the ſubject in the Philoſ. Tranſ. nº 166; or in Lowthorp's abridgment, vol. iii. p. 636. But few, we believe, will give themſelves the trouble of ſearching for the ſecret, when they conſider that the credulity of Pliny and of St Auſtin was ſuch, that their teſtimony does not ſeem a ſufficient inducement to us to believe that a lamp was ever formed to burn 1500 or 1000 years: much leſs is it credible that the ancients had the ſecret of making one burn for ever.

Rolling LAMP: A machine AB, with two moveable circles DE, FG, within it; whoſe common centre of motion and gravity is at K, where their axes of motion croſs one another. If the lamp KC, made pretty heavy and moveable about its axis HI, and whoſe centre of gravity is at C, be fitted within the inner circle, the common centre of gravity of the whole machine will fall between K and C; and by reaſon of the pivots A, B, D, E, H, I, will be always at liberty to deſcend: hence, though the whole machine be rolled along the ground, or moved in any manner, the flame will always be uppermoſt, and the oil cannot ſpill.

Plate CCLIX.

It is in this manner they hang the compaſs at ſea; and thus ſhould all the moon-lanterns be made, that are carried before coaches, chaiſes, and the like.

Argand's LAMP. This is a very ingenious contrivance, and the greateſt improvement in lamps that has yet been made. It is the invention of a citizen of Geneva; and the principle on which the ſuperiority of the lamp depends, is the admiſſion of larger quantity of air to the flame than can be done in the common way. This is accompliſhed by making the wick of a circular form; by which means a current of air ruſhes through the cylinder on which it is placed with great force; and, along with that which has acceſs to the outſide, excites the flame to ſuch a degree that the ſmoke is entirely conſumed. Thus both the light and heat are prodigiouſly increaſed, at the ſame time that there is a very conſiderable ſaving in the expence of oil, the conſumption of the phlogiſton being exceedingly augmented by the quantity of air admitted to the flame; ſo that what in common lamps is diſſipated in ſmoke is here converted into a brilliant flame.

This lamp is now very much in uſe; and is applied not only to the ordinary purpoſes of illumination, but alſo to that of a lamp furnace for chemical operations, in which it is found to exceed every other contrivance yet invented. It conſiſts of two parts, *viz.* a reſervoir for the oil, and the lamp itſelf. The reſervoir is uſually in the form of a vaſe, and has the lamp proceeding from its ſide. The latter conſiſts of an upright metallic tube about one inch and ſix-tenths in diameter, three inches in length, and open at both ends. Within this is another tube about an inch in diameter, and nearly of an equal length; the ſpace betwixt the two being left clear for the paſſage of the air. The internal tube is cloſed at the bottom, and contains another ſimilar tube about half an inch in diameter, which is ſoldered to the bottom of the ſecond. It is perforated throughout, ſo as to admit a current of air to paſs through it; and the oil is contained in the ſpace betwixt the tube and that which ſurrounds it. A particular kind of cotton cloth is uſed for the wick, the longitudinal threads of which are much thicker than the others, and which nearly fills the ſpace into which the oil flows; and the mechaniſm of the lamp is ſuch, that the wick may be raiſed or depreſſed at pleaſure. When the lamp is lighted, the flame is in the form of a hollow cylinder; and by reaſon of the ſtrong influx of air through the heated metallic tube, becomes extremely bright, the ſmoke being entirely conſumed for the reaſons already mentioned. The heat and light are ſtill farther increaſed, by putting over the whole a glaſs cylinder nearly of the ſize of the exterior tube. By diminiſhing the central aperture, the heat and light are proportionably diminiſhed, and the lamp begins to ſmoke. The acceſs of air both to the external and internal ſurfaces of the flame is indeed ſo very neceſſary, that a ſenſible difference is perceived when the hand is held even at a diſtance of an inch below the lower aperture of the cylinder; and there is alſo a certain length of wick at which the effect of the lamp is ſtrongeſt. If the wick be very ſhort, the flame, tho' white and brilliant, emits a diſagreeable and pale kind of light; and if very long, the upper part becomes brown, and ſmoke is emitted.

The ſaving of expence in the uſe of this inſtrument for common purpoſes is very conſiderable. By ſome experiments it appears that the lamp will continue to burn three hours for the value of one penny: and the following was the reſult of the compariſon between the light emitted by it and that of a candle. The latter having been ſuffered to burn ſo long without ſnuffing, that large lumps of coally matter were formed upon the wick, gave a light at 24 inches diſtance equal to the lamp at 129 inches; whence it appeared that the light of the lamp was equal to 28 candles in this ſtate. On ſnuffing the candle, however, its light was ſo much augmented, that it became neceſſary to remove it to the diſtance of 67 inches before its light became equal to that of the lamp at 129 inches; whence it was concluded that the light of the lamp was ſomewhat leſs than that of four candles freſh ſnuffed. At another trial, in which the lamp was placed at the diſtance of 131$\frac{1}{2}$ inches, and a candle at the diſtance of 55 inches, the lights were equal. In theſe experiments the candles made uſe of were 10$\frac{3}{4}$ inches long, and 2$\frac{6}{10}$ inches in diameter. When the candle was newly ſnuffed, it appeared to have the advantage; but the lamp ſoon got the ſuperiority; and on the whole it was concluded, that the lamp is at leaſt equivalent to half a dozen of tallow candles of ſix in the pound; the expence of the one being only two pence halfpenny, and the other eight pence in ſeven hours.

The beſt method of comparing the two lights together ſeems to be the following. Place the greater light at a conſiderable diſtance from a white paper, the ſmaller one being brought nearer or removed farther off as occaſion requires. If an angular body be held before the paper, it will project two ſhadows: theſe two ſhadows can coincide only in part; and their angular extremities will, in all poſitions but one, be at ſome diſtance from each other; and being made to coincide in a certain part of their bulk, they will be bordered by a lighter ſhadow, occaſioned by the excluſion of the light from each of the two luminous bodies reſpectively. Theſe lighter ſhadows, in fact, are ſpaces of the white paper illuminated by the different luminous bodies, and may eaſily be compared together, becauſe at a certain point they actually touch one another. If the ſpace illuminated by the ſmaller light appear brighteſt, the light muſt be removed farther off, but the contrary if it appear more obſcure.

On cutting open one of Argand's wicks longitudinally, and thus reducing the circular flame to a ſtraight lined one, the lights appeared quite equal in power; but the circular one had by far the greateſt effect in dazzling the eyes; though when the long flame was made to ſhine on the paper, not by the broadſide, but in the direction of its length, it appeared more dazzling than the other. On placing this long flame at right angles to the ray of Argand's lamp, it projected no ſhadow; but when its length was placed in the direction of the ray, it gave a ſhadow bordered with two broad, well defined, and bright lines.

The broad-wicked lamp ſeems to have the advantage of the other, as requiring leſs apparatus; and indeed by this contrivance we may at the moſt trifling expence have a lamp capable of giving any degree of light we pleaſe. The only diſadvantage attending either the one or the other is, that they cannot eaſily be carried from one place to another; and in this reſpect it does not ſeem poſſible by any means to bring lamps to an equality with candles.

Lamp-Black, among colourmen. See *Colour-Making*, n° 18, 19.—Subſtances painted with lamp black and oil, are found to reſiſt the effects of electricity to a ſurpriſing degree; ſo that in many caſes even lightning itſelf ſeems to have been repelled by them. See Lightning; Thunder; Chemistry, n° 700. and Electricity. p. 478. col. 1.

LAMPADARY, an officer in the ancient church of Conſtantinople, ſo called from his employment, which was to take care of the lamps, and to carry a taper before the emperor or patriarch when they went to church or in proceſſions.

LAMPAS, in farriery. See there, § xxxv.

LAMPREY. See Petromyzon.

LAMPRIDIUS (Ælius), a Latin hiſtorian, who lived under the emperors Diocleſian and Conſtantine the Great. We have, of his writing, the lives of four emperors, Antoninus, Commodus, Diadumenus, and Heliogabalus. Some attribute the life of Alexander Severus to him; but the MS. in the palatine library aſcribes it to Spartian.

Lampridius (Benedict), of Cremona, a celebrated Latin poet of the 16th century. He taught Greek and Latin at Rome and at Padua, until he was invited to Mantua by Frederic Gonzaga to undertake the tuition of his ſon. We have epigrams and lyric verſes of this writer, both in Greek and Latin, which were printed ſeparately, as well as among the *Deliciæ* of the Italian poets.

LAMPSACUS, or Lampsacum, (anc. geog.), a conſiderable city of Myſia; more anciently called *Pilyea*, (Homer), becauſe abounding in pine-trees, a circumſtance confirmed by Pliny; ſituated at the north end or entrance of the Helleſpont into the Propontis, with a commodious harbour, oppoſite to Callipolis in the Thracian Cherſoneſus. It was aſſigned by Artaxerxes to Themiſtocles, for furniſhing his table with wine, in which the country abounded. It was ſaved from the ruin threatened by Alexander becauſe in the intereſt of Perſia, by the addreſs of Anaximenes the hiſtorian, ſent by his fellow-citizens to avert the king's diſpleaſure; who hearing of it, ſolemnly declared he would do the very reverſe of Anaximenes's requeſt, who therefore begged the king utterly to deſtroy it, which he could not do becauſe of his oath. *Lampſacius* the epithet, denoting *laſcivus*, the character of the people: ſtill called *Lampſacus* E. Long. 28°. N. Lat. 40. 12.

LAMPYRIS, the fire-fly, a genus of inſects belonging to the coleoptera order; the characters of which are: The antennæ are filiform; the elytra are flexible; the thorax is flat, of a ſemiorbicular form, ſurrounding and concealing the head. The ſegments of the abdomen terminate in papillæ, which are turned up towards the elytra, and partly fold one over the other. The females in general are apterous.

There are 18 ſpecies; of which the moſt remarkable is the noctiluca. The male of this inſect is leſs than the female: its head is ſhaped exactly in the ſame manner, and covered likewiſe by the plate of the thorax, only it appears rather longer than that of the female. Both the head and antennæ are black. The thorax of the male, which is ſmaller and ſhorter than that of the female, has the folds and papillæ on its ſides much leſs remarkable: but the greateſt difference that is found between the two ſexes is, that the male is covered with brown elytra, ſhagreened and marked with two lines longitudinally. The elytra are longer than the abdomen, and under them lye the wings. The two laſt rings of the abdomen are not ſo bright as thoſe of the female, only there appear four luminous points, two upon each of the two laſt rings. Plate CCVIII.

The inſect called *glow-worm*, and which is frequently met with towards evening, in the month of June, in woods and meadows, is the female belonging to this ſpecies. By the ſhining light which it emits, it attracts the male; a wonderful inſtance of the divine providence. It is apparent that their ſhining light depends on a liquor placed at the lower extremity of the inſect, which when in motion, the light is more lively and ſhining, and of a finer green. This light the inſect withdraws at pleaſure, either by unfolding or contracting itſelf. As a proof that the light depends on a phoſphorous matter, you may cruſh the animal, which, though dead and bruiſed, leaves a luminous ſubſtance on the hand, that only loſes its luſtre when dried.

Barbut on Inſects.

The perfect inſect flies about during the evening in autumn, and frequents the graſſy plantations of juniper trees.

LAMY, or Lami, (Bernard), was born at Mons in 1640, and ſtudied there under the fathers of the oratory; with whoſe way of life he was ſo pleaſed, that he went to Paris in 1658, and entered into the inſtitution. He had a great taſte for the ſciences, and ſtudied them all; he entered into the prieſthood in 1667, and taught philoſophy at Saumur and Angiers; which latter place he was obliged to quit by an order procured from court for adopting the new philoſophy inſtead of that of Ariſtotle. In 1676 he went to Grenoble, where cardinal Camus was then biſhop; who conceived ſuch an eſteem for him, that he retained him near his perſon, and derived conſiderable ſervices from him in the government of his dioceſe. After continuing many years there, he went to reſide at Rouen, where he died in 1715. He wrote ſeveral ſcientifical works, beſides others in divinity.

LANCARIM ſpring, the name of a medicated water of Glamorganſhire, in South Wales. It has its name from a town near which it riſes; and has been very long famous in the place for the cure of the king's evil. The body of water is about an ell broad, and runs between two hills covered with wood. About 12 yards from this ſpring the rill falls from a rock of about eight or nine feet high, with a conſiderable noiſe. The ſpring is very clear, and riſes out of a pure white marle. The cures that have been performed there, are proofs of a real power in the water; but there is ſome queſtion whether the water, or its motion and coldneſs, does the good; for the people who come for relief always drink of the ſpring, and bathe the part afterward in the fall below. It is generally ſuppoſed that the lime-ſtone rocks communicate a virtue to it by which it cures internally; but it has been often found, that the holding a limb diſordered with the evil in the ſtrong current of a mill tail has cured it, and there is the ſame advantage in the fall of this water.

LANCASHIRE, a large maritime province of England, waſhed by the Iriſh ſea on the weſt, bordering on the north with part of Cumberland and Weſtmoreland; bounded on the eaſt by the Weſt Riding of Yorkſhire, and on the weſt by Cheſhire; extending 73 miles in length and 41 in breadth, comprehending 6 hundreds, 63 pariſhes, 27 market-towns, 894 villages, about 43,000 houſes, and about 260,000 inhabitants.

The eaſtern parts of the province are rocky, and in the northern diſtricts we ſee many ſingle mountains remarbably high, ſuch as Ingle-borough-hill, Cloughbohill, Pendle-hill, and Longridge-hill. Nor is there any want of wood in this country, either for timber or fuel; witneſs Wierſdale foreſt and Bowland foreſt to the northward, and Simon's wood in the ſouthern part of Lancaſhire.

This country is well watered with rivers and lakes. Among the lakes or meres of Lancaſhire, we reckon the Winander-mere, and the Kiningſton-mere, which, though neither ſo large nor ſo well ſtored with fiſh, yet affords plenty of excellent char. There was on the ſouth ſide of the Ribble another lake called *Marton*, ſeveral miles in circumference, which is now drained, and converted into paſture ground. In this operation, the workmen found a great quantity of fiſh, together with eight canoes, reſembling thoſe of America, ſuppoſed to have been uſed by the ancient Britiſh fiſhermen. Beſides theſe meres or lakes, this county abounds with moraſſes and moſſes, from which the inhabitants dig excellent peat or turf for fuel, as well as marle for manuring the ground, and trunks of old fir-trees, ſuppoſed to have lain there ſince the general deluge. Some of theſe are ſo impregnated with turpentine, that when divided into ſplinters, they burn like candles, and are uſed for that purpoſe by the common people. There is a great variety of mineral waters in this county, ſome periodical ſprings, and one inſtance of a violent eruption of water at Kirby in Fourneſs. The moſt remarkable chalybeate ſpaws are thoſe of Latham, Wigan, Stockport, Burnley, Bolton, Plumpton, Middleton, Srangeways, Lancaſter, Larbrick, and Chorly. At Ancliff, in the neighbourhood of Wigan, is a fountain called the *Burning Well*, from whence a bituminous vapour exhales, which being ſet on fire by a candle burns like brandy, ſo as to produce a heat that will boil eggs to a hard conſiſtence, while the water itſelf retains its original coldneſs *. There is at Barton a fountain of ſalt-water, ſo ſtrongly impregnated with the mineral, as to yield ſix times as much as can be extracted from the ſame quantity of ſea-water. At Rogham, in Fourneſs, there is a purging ſaline fountain; and in the neighbourhood of Raſſal, where the ground is frequently overflowed by the ſea, a ſtream deſcends from Hagbur-hills, which in the ſpace of ſeven years is ſaid to convert the marle into a hard freeſtone fit for building. The air of Lancaſhire is pure, healthy, and agreeable, except among the fens and on the ſea-ſhore, where the atmoſphere is loaded with putrid exhalations, producing malignant and intermitting fevers, ſcurvy, rheumatiſm, dropſy, and conſumption. The ſoil is various in different parts of the county, poor and rocky on the hills, fat and fertile in the valleys and champaign country. The colour of the peat is white, grey, or black, according to the nature of the compoſition and the degree of putrefaction which the ingredients have undergone. There is a bituminous earth about Ormſkirk, that ſmells like the oil of amber, and indeed yields an oil of the ſame nature, both in its ſcent and medicinal effects, which moreover reduces raw fleſh to the conſiſtence of mummy; this earth burns like a torch, and is uſed as ſuch by the country people. The metals and minerals of this county ty conſiſt of lead, iron, copper, antimony, black lead, lapis calaminaris, ſpar, green vitriol, alum, ſulphur, pyrites, freeſtone, and pit and cannel-coal.

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* See *Burning Well.*

The level country produces plenty of wheat and barley, and the ſkirts of the hills yield good harveſts of excellent oats: very good hemp is raiſed in divers parts of the province; and the paſture which grows in the valley is ſo peculiarly rich, that the cattle which feed upon it are much larger and fatter than in any other part of England. There is not any part of the world better ſupplied than Lancaſhire with proviſions of all kinds at a very reaſonable rate; ſuch as beef, veal, mutton, lamb, pork, poultry, and game of all ſorts, caught upon the moors, heaths, and commons, in the hilly part of the ſhire. Beſides the ſea-fowl common to the ſhires of England, ſuch as ducks, eaſterlings, teal, and plover, many uncommon birds are obſerved on the coaſt of Lancaſhire, the ſea-crow, variegated with blue and black, the puffin, the cormorant, the curlew, the razor-bill, the copped wren, the red-ſhanks, the ſwan, the tropic bird, the king's fiſher, &c.

The chief manufactures of this county are woollen and cotton cloths of various kinds, tickings, and cotton velvets, for which Mancheſter is particularly famous. The principal rivers are the Merſey, which parts Cheſhire and this county; and the Ribble, which riſes in Yorkſhire, and enters this county at Clithero, running ſouth weſt by Preſton into the Iriſh ſea. Beſides theſe there are many leſſer ſtreams. The navigation made by his grace the duke of Bridgewater in this county, is highly worthy of notice. This was begun ſo lately as about 20 years ago; it bears veſſels of 60 tons burden, and is carried over two rivers, the Merſey and the Irwell. The ſough, or adit, which was neceſſary to be made, in order to drain the water from the coal-mines, is rendered navigable for boats of 6 or 7 tons burden, and forms a kind of ſubterraneous river, which runs about a mile and a half under ground, and communicates with the canal. This river leads to the head of the mines, is arched over with brick, and is juſt wide enough for the paſſages of the boats: at the mouth of it are two folding doors, which are cloſed as ſoon as you enter, and you then proceed by candle-light, which caſts a livid gloom, ſerving only to make darkneſs viſible. But this diſmal gloom is rendered ſtill more awful by the ſolemn echo of this ſubterraneous water, which returns various and diſcordant ſounds. One while you are ſtruck with the grating noiſe of engines, which by a curious contrivance let down the coals into the boats; then again you hear the ſhock of an exploſion, occaſioned by the blowing up the hard rock, which will not yield to any other force than that of gunpowder; the next minute your ears are ſaluted by the ſongs of merriment from either ſex, who thus beguile their labours in the mine. You have no ſooner reached the head of the works, than a new ſcene opens to your view. There you behold men and women almoſt in the primitive ſtate of nature, toiling in different capacities, by the glimmering of a dim taper, ſome digging coal out of the bowels of the earth; ſome again loading it in little waggons made for the purpoſe; others drawing thoſe waggons to the boats. To perfect this canal, without impeding the public roads, bridges are built over it, and where the earth has been raiſed to preſerve the level, arches are formed under it: but what principally ſtrikes every beholder, is a work raiſed near Barton-bridge, to convey the canal over the river Merſey. This is done by means of three ſtone arches, ſo ſpacious and lofty as to admit veſſels ſailing through them; and indeed nothing can be more ſingular and pleaſing, than to obſerve large veſſels ſailing through them; and indeed at the ſame time the duke of Bridgewater's veſſels ſailing over all, near fifty feet above the navigable river. By this inland navigation communication has been made with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles in the counties of Lincoln, Nottingham, York, Lancaſter, Weſtmoreland, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c.

Lancaſhire was erected into a county-palatine by Edward III. who conferred it as an appendage on his ſon John of Ghaunt, thence called *duke of Lancaſter*: but the duchy contained lands that are not in Lancaſhire, and among other demeſnes, the palace of the Savoy, and all that diſtrict in London, which indeed belong to it to this day. The revenues of this duchy are adminiſtered by a court which ſits at Weſtminſter, and a chancery-court at Preſton, which has a ſeal diſtinct from that of the county-palatine. The title of *Lancaſter* diſtinguiſhed the poſterity of John of Ghaunt from thoſe of his brother, who ſucceeded to the duchy of York, in their long and bloody conteſt for the crown of England.—Lancaſhire ſends two members to parliament for the county: and 12 for the ſix boroughs of Lancaſter, Preſton, Newton, Wigan, Clitheroe, and Liverpool.

LANCASTER, the capital of the county of Lancaſhire in England, is pleaſantly ſituated on the ſouth ſide of the river Lun, over which there is a handſome ſtone-bridge. It is an ancient town, and is ſuppoſed to have been the *Longovicum* of the Romans. King John confirmed to the burgeſſes all the liberties he had granted to thoſe of Briſtol; and Edward III. granted that pleas and ſeſſions ſhould be held here, and no where elſe in the county. It is governed by a mayor, recorder, 7 aldermen, 2 bailiffs, 12 capital burgeſſes, 12 common burgeſſes, a town clerk, and 2 ſerjeants at mace. The aſſizes are held in the caſtle, where is alſo the county goal. It trades to America with hard-ware and woollen manufactures in veſſels of 70 tons. There is a market on Wedneſday by grant, and another on Saturday by preſcription, beſides one every other Wedneſday throughout the year for cattle; and three fairs; in May, July, and October. The caſtle is not large, but neat and ſtrong. Not very long ago, in digging a cellar, there were found ſeveral Roman utenſils and veſſels for ſacrifices, as alſo the coins of Roman emperors; ſo that it is ſuppoſed there was here a Roman fortreſs. On the top of the caſtle is a ſquare tower, called *John of Gaunt's Chair*, whence there is a charming proſpect of the adjacent country, and eſpecially towards the ſea, where is an extenſive view even to the Iſle of Man. There is but one church, a fine

Gothic building. It is placed on the ſame elevation, and from ſome points of view forms one group, with the caſtle, which gives the mind a moſt magnificent idea of this important place. The late conſiderable additional new ſtreets and a new chapel, with other improvements, give an air of elegance and proſperity to the town; and the new bridge of 5 equal elliptical arches, in all 549 feet in length, adds not a little to the embelliſhments and conveniency of the place. Adjoining to the caſtle, the new gaol is erected on an improved plan. On the ſide of the hill below it, hangs a piece of a Roman wall, called *Wery-wall.* Here is a cuſtom-houſe. By the late inland navigation, it has communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extend above 500 miles in the counties of Lincoln, Nottingham, York, Weſtmoreland, Cheſter, Stafford, Warwick, Leiceſter, Oxford, Worceſter, &c. For its peculiar government, ſee *Duchy-Court.*

LANCE, Lancea, a ſpear; an offenſive weapon worn by the ancient cavaliers, in form of a half pike. The lance conſiſted of three parts, the ſhaft or handle, the wings, and the dart. Pliny attributes the invention of lances to the Ætolians. But Varro and Aulus Gellius ſay the word lance is Spaniſh; whence others conclude the uſe of this weapon was borrowed by the people of Italy from the Spaniards. Diodorus Siculus derives it from the Gauliſh, and Feſtus from the Greek λογχη, which ſignifies the ſame.

Lance, in ichthyology. See Ammodytes.

LANCEOLATED leaf. See Botany, p. 442.

LANCET, a chirurgical inſtrument, ſharp-pointed and two-edged, chiefly uſed for opening veins in the operation of phlebotomy or bleeding; alſo for laying open abſceſſes, tumours, &c.

LANCH, a peculiar ſort of long boat, uſed by the French, Spaniſh, and Italian ſhipping, and in general by thoſe of other European nations when employed in voyaging in the Mediterranean ſea.

A lanch is proportionably longer, lower, and more flat-bottomed than the long-boat; it is by conſequence leſs fit for ſailing, but better calculated for rowing and approaching a flat ſhore. Its principal ſuperiority to the long-boat, however, conſiſts in being by its conſtruction much fitter to under-run the cable; which is a very neceſſary employment in the harbours of the Levant ſea, where the cables of different ſhips are faſtened acroſs each other, and frequently render this exerciſe extremely neceſſary.

Lanch, is alſo the movement by which a ſhip or boat deſcends from the ſhore, either when ſhe is at firſt built, or at any time afterwards.

To facilitate the operation of lanching, and prevent any interruption therein, the ſhip is ſupported by two ſtrong platforms, laid with a gradual inclination to the water, on the oppoſite ſides of her keel, to which they are parallel. Upon the ſurface of this declivity are placed two correſponding ranges of planks, which compoſe the baſe of a frame called the *cradle,* whoſe upper part envelopes the ſhip's bottom, whereto it is ſecurely attached. Thus the lower ſurface of the cradle, conforming exactly to that of the frame below, lies flat upon it lengthwiſe, under the oppoſite ſides of the ſhip's bottom; and as the former is intended to ſlide downwards upon the latter, carrying the ſhip along with it, the planes or faces of both are well daubed with ſoap and tallow.

The neceſſary preparations for the lanch being made, all the blocks and wedges, by which the ſhip was formerly ſupported, are driven out from under her keel, till her whole weight gradually ſubſides upon the platforms above deſcribed, which are accordingly called the *ways.* The ſhores and ſtanchions, by which ſhe is retained upon the ſtocks till the period approaches for lanching, are at length cut away, and the ſcrews applied to move her if neceſſary. The motion uſually begins on the inſtant when the ſhores are cut, and the ſhip ſlides downward along the ways, which are generally prolonged under the ſurface of the water, to a ſufficient depth to float her as ſoon as ſhe arrives at the fartheſt end thereof.

When a ſhip is to be lanched, the enſign, jack, and pendant, are always hoiſted, the laſt being diſplayed from a ſtaff erected in the middle of the ſhip.

Ships of the firſt rate are commonly conſtructed in dry docks, and afterwards floated out, by throwing open the flood-gates, and ſuffering the tide to enter as ſoon as they are finiſhed.

LANCEROTA, one of the Canary iſlands, ſubject to Spain, and ſituated in W. Long. 13. 5. N. Lat. 28. 40. It is about 32 miles in length and 22 in breadth. The ancient inhabitants were negroes, very ſtrong, active, and ſwift of foot. There is a ridge of hills runs quite through it, on which are fed a good number of ſheep and goats. They have but few black cattle, ſtill fewer camels, and a very few ſmall horſes. The valleys are dry and ſandy, yet they produce a ſmall quantity of wheat and barley. This iſland was firſt diſcovered in 1417. In 1596 it was taken by the Engliſh under the command of the earl of Cumberland; after which it was better fortified than before. There is in this iſland a city called alſo *Lancerota,* which, at the time the earl of Cumberland was there, conſiſted only of about 100 houſes, all poor buildings, generally of one ſtory, and covered with reeds or ſtraw laid upon a few rafters, and over all a coat of dirt hardened by the ſun. There was alſo a church which had no windows in it, and was ſupplied with light only by the door.

LANCIANO, a conſiderable town of Italy, in the kingdom of Naples, and in the Hither Abruzzo, with an archbiſhop's ſee; famous for its fairs, which are held in July and Auguſt. It is ſeated on the river Feltrino near that of Sangor. E. Long. 15 5. N. Lat 42. 12.

LANCISI (John Marca), an eminent Italian phyſician, was born at Rome in 1654. From his earlieſt years he had a turn to natural hiſtory; and ſtudied botany, chemiſtry, anatomy, and medicine, with great vigour. In 1688 Pope Innocent XI. appointed him his phyſicians and private chamberlain, notwithſtanding his youth; and cardinal Altieri Camerlinga made him his vicar for the inſtallation of doctors in phyſic, which Pope Clement XI. gave him as long as he lived, as well as continued to him the appointments conferred on him by his predeceſſor. He died in 1710, after giving his fine library of more than 20,000 volumes to the hoſpital of the Holy Ghoſt for the uſe of the public. This noble benefaction was opened in 1716, in the preſence of the pope and moſt of the cardinals. He wrote many works which are eſteemed, the principal of which were collected together, and printed at Geneva in 1718, in two volumes quarto.

LANCRET (Nicholas), a French painter, born at Paris in 1690. He was the diſciple of Watteau and Gillot, and painted converſations. He was indefatigable in his profeſſion, executed with great truth after Nature, grouped his figures well, and handled a light pencil. He died in 1743.

LANCRINCK (Proſper Henry), a painter of conſiderable note, born in 1628, and educated in the ſchool at Antwerp. He ſtudied principally after Titian and Salvator Roſa; and met with encouragement in England ſuitable to his merit. His landſcapes ſhow a good invention, good colouring, and harmony: they are chiefly of rough rude country, with broken ground and uncommon ſcenery. He gave way too much to pleaſure, and died in 1692.

LAND, in a general ſenſe, denotes *terra firma*, as diſtinguiſhed from *ſea*.

Land, in a limited ſenſe, denotes arable ground. See Agriculture.

Land, in the ſea-language, makes part of ſeveral compound terms; thus, *land-laid*, or, *to lay the land*, is juſt to loſe ſight of it. *Land-locked*, is when land lies all round the ſhip, ſo that no point of the compaſs is open to the ſea. If ſhe is at anchor in ſuch a place, ſhe is ſaid to ride *land-locked*, and is therefore concluded to ride ſafe from the violence of the winds and tides. *Land-mark*, any mountain, rock, ſteeple, trees, &c. that may ſerve to make the land known at ſea. *Land is ſhut in*, a term uſed to ſignify that another point of land hinders the ſight of that from which the ſhip came. *Land-to*, or the ſhip *lies land-to*; that is, ſhe is ſo far from ſhore, that it can only juſt be diſcerned. *Land-turn* is a wind that in almoſt all hot countries blows at certain times from the ſhore in the night. *To ſet the Land*; that is, to ſee by the compaſs how it bears.

Land-Tax, one of the annual taxes raiſed upon the ſubject. See Tax.

The land-tax, in its modern ſhape, has ſuperſeded all the former methods of rating either property or perſons in reſpect of their property, whether by tenths or fifteenths, ſubſidies on land, hydages, ſcutages, or talliages; a ſhort explication of which will, however, greatly aſſiſt us in underſtanding the ancient laws and hiſtory.

In England Tenths and fifteenths were temporary aids iſſuing out of perſonal property, and granted to the king by parliament. They were formerly the real tenth or fifteenth part of all the moveables belonging to the ſubject; when ſuch moveables, or perſonal eſtates, were a very different and a much leſs conſiderable thing than what they uſually are at this day. Tenths are ſaid to have been firſt granted under Henry II. who took advantage of the faſhionable zeal for croiſades to introduce this new taxation, in order to defray the expence of a pious expedition to Paleſtine, which he really or ſeemingly had projected againſt Saladine emperor of the Saracens, whence it was originally denominated the *Saladine tenth*. But afterwards fifteenths were more uſually granted than tenths. Originally the amount of theſe taxes was uncertain, being levied by aſſeſſments new-made at every freſh grant of the commons, a commiſſion for which is preſerved by Matthew Paris: but it was at length reduced to a certainty in the eighth year of Edward III. when, by virtue of the king's commiſſion, new taxations were made of every townſhip, borough, and city in the kingdom, and recorded in the exchequer; which rate was, at the time, the fifteenth part of the value of every townſhip, the whole amounting to about 29,000l. and therefore it ſtill kept up the name of a *fifteenth*, when, by the alteration of the value of money and the increaſe of perſonal property, things came to be in a very different ſituation. So that when, of later years, the commons granted the king a fifteenth, every pariſh in England immediately knew their proportion of it; that is, the ſame identical ſum that was aſſeſſed by the ſame aid in the eighth of Edward III.; and then raiſed it by a rate among themſelves, and returned it into the royal exchequer.

The other ancient levies were in the nature of a modern land-tax: for we may trace up the original of that charge as high as to the introduction of the military tenures; when every tenant of a knight's fee was bound, if called upon, to attend the king in his army for 40 days in every year. But this perſonal attendance growing troubleſome in many reſpects, the tenants found means of compounding for it, by firſt ſending others in their ſtead, and in proceſs of time by making a pecuniary ſatisfaction to the crown in lieu of it. This pecuniary ſatisfaction at laſt came to be levied by aſſeſſments, at ſo much for every knight's fee, under the name of ſcutages; which appear to have been levied for the firſt time in the fifth year of Henry II. on account of his expedition to Toulouſe, and were then (Sir Wm. Blackſtone apprehends) mere arbitrary compoſitions, as the king and the ſubject could agree. But this precedent being afterwards abuſed into a means of oppreſſion (by levying ſcutages on the landholders by the king's authority only, whenever the kings went to war, in order to hire mercenary troops and pay their contingent expences), it became thereupon a matter of national complaint; and king John was obliged to promiſe in his *magna carta*, that no ſcutage ſhould be impoſed without the conſent of the common council of the realm.

Of the ſame nature with ſcutages upon knights-fees were the aſſeſſments of hydage upon all other lands, and of talliage upon cities and burghs. But they all gradually fell into diſuſe, upon the introduction of ſubſidies, about the time of King Richard II. and King Henry IV. Theſe were a tax, not immediately impoſed upon property, but upon perſons in reſpect of their reputed eſtates, after the nominal rate of 4s. in the pound for lands, and 2s. 6d. for goods; and for thoſe of aliens in a double proportion. But this aſſeſſment was alſo made according to an ancient valuation; wherein the computation was ſo very moderate, and the rental of the kingdom was ſuppoſed to be ſo exceeding low, that one ſubſidy of this ſort did not, according to Sir Edward Coke, amount to more than

70,000 l. whereas a modern land-tax at the ſame rate produces two millions. It was anciently the rule never to grant more than one ſubſidy and two fifteenths at a time: but this rule was broke through for the firſt time on a very preſſing occaſion, the Spaniſh invaſion in 1588; when the parliament gave Queen Elizabeth two ſubſidies and four fifteenths. Afterwards, as money ſunk in value, more ſubſidies were given; and we have an inſtance, in the firſt parliament of 1640, of the king's deſiring 12 ſubſidies of the commons, to be levied in three years; which was looked upon as a a ſtartling propoſal: though Lord Clarendon tells us, that the ſpeaker, ſerjeant Glanvile, made it manifeſt to the houſe, how very inconſiderable a ſum 12 ſubſidies amounted to, by telling them he had computed what he was to pay for them; and when he named the ſum, he being known to be poſſeſſed of a great eſtate, it ſeemed not worthy any further deliberation. And, indeed, upon calculation, we ſhall find, that the total amount of theſe 12 ſubſidies, to be raiſed in three years, is leſs than what is now raiſed in one year by a land-tax of 2 s. in the pound,

The grant of ſcutages, talliages, or ſubſidies by the commons, did not extend to ſpiritual preferments; thoſe being uſually taxed at the ſame time by the clergy themſelves in convocation: which grants of the clergy were confirmed in parliament; otherwiſe they were illegal, and not binding as the ſame noble writer obſerves of the ſubſidies granted by the convocation, which continued ſitting after the diſſolution of the firſt parliament in 1640. A ſubſidy granted by the clergy was after the rate of 4 s. in the pound, according to the valuation of their livings in the king's books; and amounted, Sir Edward Coke tells us, to about 20,000 l. While this cuſtom continued, convocations were wont to ſit as frequently as parliaments: but the laſt ſubſidies, thus given by the clergy, were thoſe confirmed by ſtatute 15 Car. II. c. 10. ſince which another method of taxation has generally prevailed, which takes in the clergy as well as the laity: in recompence for which, the beneficed clergy have from that period been allowed to vote at the election of knights of the ſhire; and thenceforward alſo the practice of giving eccleſiaſtical ſubſidies hath fallen into total diſuſe.

The lay-ſubſidy was uſually raiſed by commiſſioners appointed by the crown, or the great officers of ſtate: and therefore in the beginning of the civil wars between Charles I. and his parliament, the latter, having no other ſufficient revenue to ſupport themſelves and their meaſures, introduced the practice of laying weekly and monthly aſſeſſments of a ſpecific ſum upon the ſeveral counties of the kingdom; to be levied by a pound-rate on lands and perſonal eſtates: which were occaſionally continued during the whole uſurpation, ſometimes at the rate of 120,000 l. a month, ſometimes at inferior rates. After the Reſtoration, the ancient method of granting ſubſidies, inſtead of ſuch monthly aſſeſſments, were twice, and twice only, renewed; viz. in 1663, when four ſubſidies were granted by the temporality and four by the clergy; and in 1670, when 800,000 l. was raiſed by way of ſubſidy, which was the laſt time of raiſing ſupplies in that manner. For the monthly aſſeſſments being now eſtabliſhed by cuſtom, being raiſed by commiſſioners named by parliament, and producing a more certain revenue; from that time forwards we hear no more of ſubſidies, but occaſional aſſeſſments were granted as the national emergencies required. Theſe periodical aſſeſſments, the ſubſidies which preceded them, and the more ancient ſcutage, hydage, and talliage, were to all intents and purpoſes a land-tax; and the aſſeſſments were ſometimes expreſsly called ſo. Yet a popular opinion has prevailed, that the land-tax was firſt introduced into England in the reign of King William III.; becauſe in the year 1692 a new aſſeſſment or valuation of eſtates was made throughout the kingdom; which, though by no means a perfect one, had this effect, that a ſupply of 500,000 l. was equal to 1 s. in the pound of the value of eſtates given in. And, according to this enhanced valuation, from the year 1693 to the preſent, a period of near a century, the land-tax has continued an annual charge upon the ſubject; about half the time at 4 s. in the pound, ſometimes at 3 s. ſometimes at 2 s. twice at 1 s. but without any total intermiſſion. The medium has been 3 s. 3 d. in the pound; being equivalent to 23 ancient ſubſidies, and amounting annually to more than a million and a half of money. The method of raiſing it is by charging a particular ſum upon each county, according to the valuation given in, A. D. 1692; and this ſum is aſſeſſed and raiſed upon individuals (their perſonal eſtate, as well as real, being liable thereto), by commiſſioners appointed in the act, being the principal land holders in the county and their officers.

An act paſſes annually for the raiſing, in general, 2,037,627 l. 9 s. 10½ d. by the above ſaid tax at 4 s. in the pound; whereof there ſhall be raiſed in the ſeveral counties in England, according to the proportions expreſſed in the act, 1,989,673 l. 7 s. 10¼ d.; and in Scotland, 47,954 l. 1 s. 2 d. by an eight months ceſs of 5994 l. 5 s. 1¼ d. *per menſem*, to be raiſed out of the land-rent, and to be paid at four terms, as ſpecified in the act, by two months amount each time.

Land-Waiter, an officer of the cuſtom-houſe, whoſe duty is, upon landing any merchandiſe, to examine, taſte, weigh, meaſure them, &c. and to take an account thereof. In ſome ports they alſo execute the office of a coaſt-waiter. They are in Britain occaſionally ſtyled *ſearchers*, and are to attend and join with the patent ſearcher in the execution of all cockets for the ſhipping of goods to be exported to foreign parts; and in caſes where drawbacks or bounties are to be paid to the merchant on the exportation of any goods, they, as well as the patent ſearchers, are to certify the ſhipping thereof on the debentures.

LANDAFF, a town or village of Glamorganſhire in South Wales, with a biſhop's ſee, and on that account has the title of a *city*. It is ſeated upon an aſcent on the river Taff, or Tave, near Cardiff; but the cathedral ſtands on a low ground, and is a large ſtately building. The original ſtructure was built about the beginning of the 12th century. The building now uſed as the cathedral includes part of the body of the ancient one; but is in other reſpects as modern as the preſent century, about the middle of which the old church underwent ſuch reparation as was almoſt equivalent to rebuilding. The ruins are at the weſt end of the modern church, and conſiſt of the original weſtern door-way, and part of the north and ſouth ſides. The arch over the door is circular, and has a well carved epiſcopal ſtatue immediately over it. On the upper part of the front under which this door ſtands is a whole length figure of the Virgin Mary, with a croſs on the apex of the building. In this front are two rows of neat-pointed arches for windows; and on the north and ſouth ſides abovementioned are two circular door-caſes half ſunk in the earth. Theſe ruins exhibit an aſpect very different from the preſent cathedral, the new part of which the architect formed principally on the Roman model, without conſidering how incongruous this ſtyle of architecture is with the plan purſued in the ancient part.—Landaff is a place of but ſmall extent, and has no market. It is a port town, however, and carries on a good trade, as it has a very tolerable harbour that opens into the Severn river about four miles diſtant. The ruins of the biſhop's palace ſhow it to have been caſtellated. It was built in 1120, and was deſtroyed by Henry IV. W. Long. 3. 20. N. Lat. 51. 33.

LANDAU, an ancient, handſome, and very ſtrong town of France, in Lower Alſace. It was formerly imperial, and belonged to Germany, till the treaty of Munſter, when it was given up to France. It is ſeated on the river Zurich, in a pleaſant fertile country. E. Long. 8. 12. N. Lat. 49. 12.

LANDEN, a town of the Auſtrian Netherlands, in Brabant, famous for a battle gained over the French by the allies, in July 1693, when 20,000 men were killed. It is ſeated on the river Beck, in E. Long. 5. 5. N. Lat. 52. 45.

LANDEN (JOHN, F. R. S.) an eminent mathematician, was born at Peakirk, near Peterborough in Northamptonſhire, in January 1719. He became very early a proficient in the mathematics, for we find him a very reſpectable contributor to the Ladies Diary in 1744; and he was ſoon among the foremoſt of thoſe who then contributed to the ſupport of that ſmall but valuable publication, in which almoſt every Engliſh mathematician, who has arrived at any degree of eminence for the laſt half century, has contended for fame at one time of his life or other. Mr Landen continued his contributions to it at times, and under one ſignature or other, till within a few years of his death.

It has been frequently obſerved, that the hiſtories of literary men conſiſt chiefly of an hiſtory of their writings, and the obſervation was never more fully verified than it will be in this article concerning Mr Landen.

In the 48th volume of the Philoſophical Tranſactions for the year 1754, Mr Landen gave "An inveſtigation of ſome theorems which ſuggeſt ſeveral very remarkable properties of the circle, and are at the ſame time of conſiderable uſe in reſolving fractions, the denominators of which are certain multinomicils into more ſimple ones, and by that means facilitate the computation of fluents." This ingenious paper was handed to the Society by that eminent mathematician the late Thomas Simpſon of Woolwich, a circumſtance which will convey to thoſe who are not themſelves judges of it ſome idea of its merit. In the year 1755, he publiſhed a volume of about 160 pages, intitled "Mathematical Lucubrations." The title to this publication was made choice of as a means of informing the world, that the ſtudy of the mathematics was at that time rather the purſuit of his leiſure hours than his principal employment; and indeed it continued to be ſo the greateſt part of his life, for about the year 1762 he was appointed agent to the right honourable the earl Fitzwilliam, and reſigned that employment only two years before his death. Had it been otherwiſe, it ſeems highly probable he would have extended his reſearches in the mathematics, to which he was moſt enthuſiaſtically devoted, much farther than any other perſon has done. His lucubrations contain a variety of tracts relative to the rectification of curve lines, the ſummation of ſeries, the finding of fluents, and many other points in the higher parts of the mathematics. About the latter end of the year 1757, or the beginning of 1758, he publiſhed propoſals for printing by ſubſcription "The Reſidual Analyſis, a new branch of the Algebraic art:" and in 1758 he publiſhed a ſmall tract in quarto, intitled "A diſcourſe on the Reſidual Analyſis," in which he reſolved a variety of problems, to which the method of fluxions had been uſually applied by a mode of reaſoning entirely new; compared thoſe ſolutions with ſolutions of the ſame problems, inveſtigated by the fluxionary method; and ſhowed that the ſolutions by his new method were, in general, more natural and elegant than the fluxionary ones.

In the 51ſt volume of the Philoſophical Tranſactions for the year 1760, he gave "A new method of computing the ſums of a great number of infinite ſeries." This paper was alſo preſented to the ſociety by his ingenious friend, the late Mr Thomas Simpſon. In 1764, he publiſhed the firſt book of "The Reſidual Analyſis," in a 4to volume of 218 pages, with ſeveral copperplates. In this treatiſe, beſides explaining the principles on which his new analyſis was founded, he applied it to drawing tangents and finding the properties of curve-lines; to deſcribing their involutes and evolutes, finding the radius of curvature, their greateſt and leaſt ordinates, and points of contrary fluxure; to the determination of their cuſps, and the drawing of aſſymptotes: and he propoſed in a ſecond book to extend the application of this new analyſis to a great variety of mechanical and phyſical ſubjects. The papers which were to have formed this book lay long by him; but he never found leiſure to put them in order for the preſs.

On the 16th of January 1766, Mr Landen was elected a fellow of the Royal Society, and admitted on the 24th of April following. In the 58th volume of the Philoſophical Tranſactions for the year 1768, he gave a "Specimen of a new method of comparing curvilineal areas; by means of which many areas did not appear to be comparable by any other method;" a circumſtance of no ſmall importance in that part of natural philoſophy which relates to the doctrine of motion. In the 60th volume of the ſame work for the year 1770, he gave "Some new theorems for computing the whole areas of curve lines, where the ordinates are expreſſed by fractions of a certain form," in a more conciſe and elegant manner than had been done by Cotes, De Moivre, and others who had conſidered the ſubject before him. In the 61ſt volume for 1771, he has inveſtigated ſeveral new and uſeful theorems for computing certain fluents, which are aſſignable by arcs of the conic ſections. This ſubject had been conſidered before both by Mr Maclaurin and Mr D'Alembert; but ſome of the theorems which were given by theſe celebrated mathematicians, being in part expreſſed by the difference between an arc of an hyperbola and its tangent, and that difference being not directly attainable when the arc and its tangent both become infinite, as they will do when the whole fluid is wanted, although ſuch fluent be finite; theſe theorems therefore fail in thoſe caſes, and the computation becomes impracticable without farther help. This defect Mr Landen has removed by aſſigning the *limit* of the difference between the hyperbolic arc and its tangent, while the point of contact is ſuppoſed to be removed to an infinite diſtance from the vertex of the curve. And he concludes the paper with a curious and remarkable property relating to pendulous bodies, which is deducible from thoſe theorems. In the ſame year he publiſhed, "Animadverſions on Dr Stewart's computation of the ſun's diſtance from the earth."

In the 65th volume of the Philoſophical Tranſactions for 1775, he gave the inveſtigation of a general theorem, which he had promiſed in 1771, for finding the length of any arc of a conic hyperbola by means of two elliptic arcs; and obſerves, that by the theorems there inveſtigated, both the elaſtic curve and the curve of equable receſs from a given point, may be conſtructed in thoſe caſes where Mr Maclaurin's elegant method fails. In the 67th volume for 1777, he gave "A new theory of the motion of bodies revolving about an axis in free ſpace, when that motion is diſturbed by ſome extraneous force, either percuſſive or accelerative." At this time he did not know that the ſubject had been handled by any perſon before him; and he conſidered only the motion of a ſphere's ſpheroid and cylinder. The publication of this paper, however, was the cauſe of his being told, that the doctrine of rotatory motion had been conſidered by M. D'Alembert; and purchaſing that author's *Opuſcules Mathematiques*, he there learned that M. D'Alembert was not the only one who had conſidered the matter before him; for M. D'Alembert there ſpeaks of ſome mathematician, though he does not mention his name, who, after reading what had been written on the ſubject, doubted whether there be any ſolid whatever, beſide the ſphere, in which any line, paſſing through its centre of gravity, will be a permanent axis of rotation. In conſequence of this, Mr Landen took up the ſubject again; and though he did not then give a ſolution to the general problem, *viz.* "To determine the motions of a body of any form whatever, revolving without reſtraint about any axis paſſing through its centre of gravity," he fully removed every doubt of the kind which had been ſtarted by the perſon alluded to by M. D'Alembert, and pointed out ſeveral bodies, which, under certain dimenſions, have that remarkable property. This paper is given, among many others equally curious, in a volume of Memoirs which he publiſhed in the year 1780. But what renders that volume yet more valuable, is a very extenſive appendix, containing "Theorems for the calculation of fluents." The tables which contain theſe theorems are more complete and extenſive than any which are to be found in any other author, and are chiefly of his own inveſtigating; being ſuch as had occurred to him in the courſe of a long and cloſe application to mathematical ſtudies in almoſt every branch of thoſe ſciences. In 1781, 1782, and 1783, he publiſhed three little tracts on the ſummation of converging ſeries, in which he explained and ſhowed the extent of ſome theorems which had been given for that purpoſe by M. de Moivre, Mr Sterling, and his old friend Thomas Simpſon, in anſwer to ſome things which he thought had been written to the diſparagement of theſe excellent mathematicians. It was the opinion of ſome, that Mr Landen did not ſhow leſs mathematical ſkill in explaining and illuſtrating theſe theorems, than he has done in his writings on original ſubjects; and that the authors of them were as little aware of the extent of their own theorems as the reſt of the world were before Mr Landen's ingenuity made it obvious to all.

About the beginning of the year 1782, Mr Landen had made ſuch improvements in his theory of rotatory motion, as enabled him, he thought, to give a ſolution of the general problem ſpecified above; but finding the reſult of it to differ very materially from the reſult of the ſolution which had been given of it by M. D'Alembert, and being not able to ſee clearly where that gentleman had erred, he did not venture to make his own ſolution public. In the courſe of that year, having procured the Memoirs of the Berlin Academy for 1757, which contain M. Euler's ſolution of the problem, he found that this gentleman's ſolution gave the ſame reſult as had been deduced by M. D'Alembert; but the perſpicuity of M. Euler's manner of writing enabled him to diſcover where he had erred, which the obſcurity of the other did not do. The agreement, however, of two writers of ſuch eſtabliſhed reputation, as M. Euler and M. D'Alembert made him long dubious of the truth of his own ſolution, and induced him to reviſe the proceſs again and again with the utmoſt circumſpection; and being every time more convinced that his own ſolution was right and theirs wrong, he at length gave it to the public in the 75th volume of the Philoſophical Tranſactions for 1785.

The extreme difficulty of the ſubject, joined to the conciſe manner in which Mr Landen had been obliged to give his ſolution in order to confine it within proper limits for the Tranſactions, rendered it too difficult, or at leaſt too laborious, a piece of buſineſs for moſt mathematicians to read it; and this circumſtance, joined to the eſtabliſhed reputation of Euler, induced many to think that his ſolution was right and Mr Landen's wrong; and there did not want attempts to prove it. But notwithſtanding theſe attempts were manifeſtly wrong, and that every one who peruſed them ſaw it, they convinced Mr Landen that there was a neceſſity for giving his ſolution at greater length, in order to render it more generally underſtood. About this time alſo he met by chance with the late P. Friſi's *Coſmographia Phyſicæ et Mathematicæ*; in the ſecond part of which there is a ſolution of this problem, agreeing in the reſult with thoſe of M. Euler and D'Alembert, which is not ſurpriſing, as P. Friſi employs the ſame principle that they did. Here Mr Landen learned that M. Euler had reviſed the ſolution which he had given formerly in the Berlin Memoirs, and given it another form and at greater length in a volume publiſhed at Gryphiſwald in 1765, intitled, *Theoria Motus corporum ſolidorum ſeu rigidorum.* Having therefore procured this book, Mr Landen found the ſame principles employed in it, and of courſe the ſame concluſion reſulting from them that he had found in M. Euler's former ſolution of the problems: but as the reaſoning was given at greater length, he was enabled to ſee more diſtinctively how M. Euler had been led into the miſtake, and to ſet that miſtake in a ſtronger point of view. As he had been convinced of the neceſſity of explaining his ideas on the ſubject more fully, ſo he now found it neceſſary to loſe no time in ſetting about it. He had for ſeveral years been ſeverely afflicted with the ſtone in the bladder, and toward the latter part of his life to ſuch a degree as to be confined to his bed for more than a month at a time; yet even this dreadful diſorder did not abate his ardour for mathematical ſtudies; for the ſecond volume of his Memoirs, juſt now publiſhed, was written and reviſed during the intervals of his diſorder. This volume, beſides a ſolution of the general problem concerning rotatory motion, contains the reſolution of the problem concerning the motion of a top; an inveſtigation of the motion of the equinoxes, in which Mr Landen has firſt of any one pointed out the cauſe of Sir Iſaac Newton's miſtake in his ſolution of this celebrated problem; and ſome other papers of conſiderable importance. He juſt lived to ſee this work finiſhed, and received a copy of it the day before his death, which happened on the 15th of January 1790, at Milton, near Peterborough, in the 71ſt year of his age.

LANDERNEAU, a town of France, in Lower Bretagne, ſeated on the river Elboro, 20 miles eaſt of Breſt. In an inn here is a well which ebbs and flows like the ſea, but at contrary times. E. Long. 4. 13. N. Lat. 48. 25.

LANDGRAVE (formed of the German *land* "earth," and *graff* or *grave*, "judge" or "count"); a name formerly given to thoſe who executed juſtice in behalf of the emperors, with regard to the internal policy of the country. The title does not ſeem to have been uſed before the 11th century. Theſe judges were firſt appointed within a certain diſtrict of Germany: in proceſs of time the title became hereditary, and theſe judges aſſumed the ſovereignty of the ſeveral diſtricts or countries over which they preſided. Landgrave is now applied by way of eminence to thoſe ſovereign princes of the empire who poſſeſs by inheritance certain eſtates called *landgravates*, and of which they receive the inveſtiture of the emperor. There are four princes who have this title, *viz.* thoſe of Thuringia. Heſſia, Alſace, and Leuchtenberg. There are alſo other landgraves who are not princes but counts of the empire. See Count.

LANDGRAVIATE, or Landgravate, the office, authority, juriſdiction, or territory, of a landgrave.

LANDGUARD-fort ſeems to belong to Suffolk, but is in the limits of Eſſex, and has a fine proſpect of the coaſts of both counties. It was erected, and is maintained, for the defence of the port of Harwich over againſt it; for it commands the entry of it from the ſea up the Maning-tree water, and will reach any ſhip that goes in or out. It is placed on a point of land ſo ſurrounded with the ſea at high-water, that it looks like a little iſland at leaſt one mile from the ſhore. The making its foundation ſolid enough for ſo good a fortification coſt many years labour and a prodigious expence. It was built in the reign of King James I. when it was a much more conſiderable fortification than now, having four baſtions mounted with 60 very large guns, particularly thoſe on the royal baſtion, which would throw a 28 pound ball over Harwich. Here is a ſmall garriſon, with a governor, and a platform of guns. This fort is refitted and greatly enlarged for the conveniency of the officers of ordnance, engineers, and matroſſes; and a barrack built for the ſoldiers.

LANDISFARN, or Lindesfarn. Lee *Holy-Iſland.*

LANDRECY, a town of the French Netherlands in Hainault, ceded to France by the treaty of the Pyrenees, and is now very well fortified. It was beſieged by Prince Eugene in 1712, but to no purpoſe. It is ſeated on a plain on the river Sambre, in E. Long. 3. 47. N. Lat. 50. 4.

LANDSCAPE, in painting, the view or proſpect of a country extended as far as the eye will reach. See Painting, n° 11. and 22.; and Drawing, Sect. 10.

LANDSCROON, a ſea-port town of Sweden, in South-Gothland, and territory of Schonen, ſeated on the Baltic Sea, within the Sound, 22 miles north of Copenhagen. E. Long. 14. 20. N. Lat. 55. 42.

LANDSDOWN, a place in Somerſetſhire, near Bath, with a fair on October 10th for cattle and cheeſe.

LANDSHUT, a ſtrong town of Germany in Lower Bavaria, with a ſtrong caſtle on an adjacent hill. It is ſeated on the river Iſer, in E. Long. 1. 15. N. Lat. 48. 23. There is another ſmall town of the ſame name in Sileſia, and in the duchy of Schweidnitz, ſeated on the river Zeider, which falls into the Bauber; and there is alſo another in Moravia, ſeated on the river Morave, on the confines of Hungary and Auſtria.

LANDSKIP. See Landscape.

LANERKSHIRE, a county of Scotland, called alſo *Clydeſdale*, from the river Clyde, by which it is watered. It is bounded on the north by the county of Dumbarton; on the eaſt by Stirling, Linlithgow, Edinburgh, and Peebles, ſhires; on the ſouth by Dumfries; and on the weſt by Ayr and Renfrew ſhires. Its extent from north to ſouth is about 40 miles, from eaſt to weſt 36.—The river Clyde, deſcending from the ſouthern part of this county, divides it into two almoſt equal parts; and after a courſe of about 50 miles, meets the tide a little below Glaſgow: (ſee Glasgow). Proceeding up the river from Glaſgow, the country is rich and well cultivated. Bothwell caſtle, now in ruins, ſtands on an eminence which overlooks the Clyde. Some of its walls are ſtill remaining, which meaſure 15 feet in thickneſs and 60 feet in height. This vaſt fabric was once the abode of a man

Scotland Delineated, p. 315. &c.

the moſt notoriouſly marked of any in the annals of Scotland for the audacity and ſplendor of his crimes. Between this caſtle and the priory of Blantyre on the oppoſite ſide of the Clyde, there is ſaid to have been in ancient times a ſubterraneous paſſage under the river. A little above ſtands Bothwell-bridge, noted for the defeat of the Covenanters by the duke of Monmouth in 1679.—Eaſt from Bothwell caſtle, in an elevated ſituation, ſtands the Kirk of Shots, amid a wild and barren country. This dreary waſte is covered with heath; and though a high ſituation, is flat, and very marſhy in many places. It is chiefly employed as ſheep-walks; and notwithſtanding the vicinity of coal and lime, ſeems ſcarce capable of cultivation. This want is, however, compenſated by the abundance of iron-ſtone and coal, which are here brought together by the hand of nature. Nor is this advantage confined to the barren tract in the north-eaſt corner of the ſhire. The whole county abounds with theſe valuable minerals; and two iron works are erected on the banks of the Clyde, one a little above Glaſgow, and another at Cleland near Hamilton. But the moſt conſiderable work of this kind in the county is that of Cleugh, a few miles ſouth-eaſt from the Kirk of Shots. A village is here built for the accommodation of the workmen. It is called *Wilſontown* from the name of the proprietors.—The ſmall borough of Lanerk is ſituated on the brow of a hill, on the north-eaſt ſide of the Clyde, commanding a fine proſpect over the river. In this neighbourhood are ſome of the greateſt cotton manufactories in Scotland. The Clyde near this place runs for ſeveral miles between high rocks covered with wood; and in its courſe exhibits many aſtoniſhing cataracts: (ſee the article Clyde).—From Lanerk, paſſing the village of Carſtairs, a few miles to the eaſt we meet the ſmall town of Carnwath. In this neighbourhood, and along the Clyde to the ſouth-eaſt, there is much cultivation and rich paſture.—To the ſouth of Carnwath is the town of Biggar; where is ſeen the ruin of a collegiate church founded in 1545.—The lands about the villages of Coulter and Lammington are fertile; but farther up the Clyde we meet with nothing but ſheep-walks and paſture-grounds in tracing it to its ſource.

In the ſouthern part of the ſhire, generally called Clydeſdale, the country is not leſs wild. Among the mountains here, or rather in a hollow near their ſummit, we meet with the village of Leadhills, by ſome ſaid to be the higheſt human habitation in the iſland of Great Britain. Here, however, reſide many hundreds of miners with their families. Theſe miners, though in a great meaſure excluded from ſociety by their ſituation, yet not only find means to procure a comfortable ſubſiſtence, but alſo pay more attention to the cultivation of the mind than many of their countrymen ſituated ſeemingly in more favourable circumſtances for the attainment of knowledge. As an evidence of this, they are very intelligent, and have provided a circulating library for the inſtruction and amuſement of the little community belonging to the village.—Amid theſe mountains particles of gold have ſometimes been found waſhed down by the rains and ſtreams of water; but this deſart tract is chiefly valuable for producing metals of inferior worth. "Nothing (ſays Mr Pennant) can equal the gloomy appearance of the country round. Neither tree, nor ſhrub, nor verdure, nor pictureſque rock, appear to amuſe the eye. The ſpectator muſt plunge into the bowels of theſe mountains for entertainment." The veins of lead lie moſtly north and ſouth; and their thickneſs, which ſeldom exceeds 40 feet, varies greatly in different parts. Some have been found filled with ore within two fathoms of the ſurface; others ſink to the depth of 90 fathoms. The earl of Hopeton, the proprietor, has in his poſſeſſion a ſolid maſs of lead-ore from theſe mines weighing five tons. His lordſhip has alſo, it is ſaid, a piece of native gold that weighs two ounces, which was found here. The lead ſmelted at this place is all ſent to Leith, where it has the privilege of being exported free of duty. The ſcanty paſture afforded by this barren region feeds ſome ſheep and cattle; but thoſe in the neighbourhood of the mines ſometimes periſh by drinking of the water in which the lead ore has been waſhed: for the lead ore communicates a deleterious quality to the water, though that liquid acquires no hurtful taint from remaining in leaden pipes or ciſterns. North from this mountainous region lies Crawfordmuir.

About nine miles north of Leadhills, on the eaſt ſide of the ſmall river Douglas, which falls into the Clyde a few miles below, ſtands Douglas caſtle, for many ages the reſidence of the ſecond family in Scotland. A modern building has been erected on the ſame ſite, in imitation of the ancient caſtle. Near it ſtands the town of Douglas. A few miles to the north-eaſt is Tinto, a remarkable conic mountain, round the baſe of which the Clyde makes a noble ſweep. Weſtward, beyond Douglas, the ſmall river Netham deſcends into the Clyde through the populous pariſh of Liſmahago.—Hamilton houſe, the ſeat of the duke of Hamilton, ſtands in a plain between the rivers Clyde and Avon. It is a magnificent ſtructure, ſurrounded by many venerable oaks. In the vicinity is the town of Hamilton, which contains many handſome houſes: (ſee Hamilton). Here are ſeen the ruins of a collegiate church, founded in 1451. At a little diſtance from Hamilton-houſe is an elegant appendage to it called *Chatelherault*, the name of the ancient poſſeſſions held by the family in France. This building is ſeated on the river Avon, and is ſurrounded by woods and deep dells, and every rural beauty that can produce a pleaſing effect on the imagination.—On the weſt of Hamilton is the little town of Kilbridge; and to the ſouth that of Strathavon, ſurrounded by the fertile tract from which it derives its name. In our way from Hamilton to Glaſgow we meet with the ancient borough of Rutherglen, inhabited chiefly by weavers and other manufacturers: and the village of Govan ſtands on the ſame ſide of the river on the road from Glaſgow to Renfrew.

LANESBOROUGH, a town of Ireland, ſituated in the county of Longford and province of Leinſter. It is a borough, and returns two members to parliament; patronage in the Dillon family. This place is ſituated on the river Shannon, 62 miles from Dublin; and has a barrack for a troop of horſe. There is a yearly fair here in February. The town gave title of *viſcount* to the family of Lane, and now gives title of *earl* to that of Butler. There is a bridge over the Shannon at Laneſborough into the county Roſcommon. N. Lat. 53 40. W. Long. 8. 6.

LANFRANC, an Italian, born at Pavia, became archbiſhop of Canterbury in 1070. He diſputed againſt Berengarius in the council held at Rome in 1059, and wrote againſt him concerning the real preſence in the euchariſt. He had other diſputes, &c. and died in 1089.

Lanfranc (John), an eminent Italian hiſtory-painter, born at Parma in 1581. He was firſt the diſciple of Auguſtin Caracci; and, after his death, of Hannibal, whoſe taſte in deſign and colouring he ſo happily attained, that he was intruſted to execute ſome of his deſigns in the Farneſian palace at Rome. Theſe he finiſhed in ſo maſterly a manner, that the difference is imperceptible to this day between his work and that of his maſter. His genius directed him to grand compoſitions, which he had a peculiar facility in deſigning and in painting either in freſco or in oil: he did indeed aſpire to the grace of Correggio, but could never arrive at his excellence; his greateſt power being manifeſted in compoſition and fore-ſhortening. He was deficient in correctneſs and expreſſion; and his colouring, though ſometimes admirable, was frequently too dark. By order of Pope Urban VIII. he painted in St Peter's church at Rome the repreſentation of that ſaint walking on the water, which afforded the pope ſo much ſatisfaction that he knighted him. He died in 1647.

LANGBAINE (Gerard), D. D. a learned Engliſh writer, was born in 1608. He was educated at Queen's-college, Oxford; and became keeper of the archives of that univerſity, provoſt of his college, and doctor of divinity. He was highly eſteemed by archbiſhop Uſher, Selden, and ſeveral other learned men; and died in 1657-8. He publiſhed, 1. An edition of Longinus, in Greek and Latin, with notes. 2. A review of the covenant; and other works.

Langbaine (Gerard), an eminent writer, the ſon of the former, was born in 1656. He was put apprentice to Mr Symonds, bookſeller in St Paul's church-yard: but was ſoon after called from thence by his mother upon the death of his eldeſt brother, and by her entered a gentleman-commoner of Univerſity-college, Oxford, in 1672. Here he run out a good part of his eſtate; but afterwards corrected his manner of living, and for ſome years lived in retirement near Oxford. During this time he improved his taſte for dramatic poetry; and at firſt wrote ſome ſmall pieces without his name; but afterwards publiſhed ſeveral works which he publicly owned. In 1690 he was elected inferior beadle of arts in the univerſity of Oxford; and, in January following, was choſen ſuperior beadle of law, but died ſoon after in 1692. He wrote, 1. The hunter, a diſcourſe on horſemanſhip. 2. A new catalogue of Engliſh plays, with their beſt editions, and divers remarks on the originals of moſt plays, and on the plagiaries of ſeveral authors. 3. An account of the Engliſh dramatic poets.

LANGELAND (Robert), an old Engliſh poet of the 14th century, and one of the firſt diſciples of Wickliffe the reformer. He is ſaid to have been born in Shropſhire, but we have no account of his family. He wrote *The viſions of Pierce Plowman;* a piece which abounds with imagination and humour, though dreſſed to great diſadvantage in very uncouth verſification and obſolete language. It is written without rhyme, an ornament which the poet has endeavoured to ſupply by making every verſe begin with the ſame letter. Dr Hickes obſerves, that this kind of alliterative verſification was adopted by Langeland from the practice of the Saxon poets, and that theſe viſions abound with Saxoniſms: he ſtyles him *celeberrimus ille ſatirographus, morum vindex acerrimus,* &c. Chaucer and Spencer have attempted imitations of his viſions, and the learned Selden mentions him with honour.

Langeland, an iſland of Denmark in the Baltic ſea, in the ſtrait called *the great belt,* and between Zealand, Saland, and Fyonia. It produces plenty of corn, and the principal town is Rutcoping. E. Long. 11. 10. N. Lat. 55. 0.

LANGETZ, a town of France in Touraine, noted for its excellent melons. It is ſituated on the river Loire, in E. Long. 0. 23. N. Lat. 42. 20.

LANGHORNE (John), D. D. was born at Kirkby-Stephen, in Weſtmoreland. His father was the Reverend Joſeph Langhorne of Winſton, who died when his ſon was young. After entering into holy orders, he became tutor to the ſons of Mr Cracroft, a Lincolnſhire gentleman, whoſe daughter he married. This lady in a ſhort time died: and the loſs of her was very pathetically lamented by her huſband in a monody; and by another gentleman, Mr Cartwright, in a poem entitled "Conſtantia." Dr Langhorne held the living of Blagden in Somerſetſhire at the time of his death, which happened April 1. 1779. He was the author of ſeveral literary productions; amongſt others, of Poems in two vols, 1766; Sermons in 2 vols, 1773; Effuſions of Fancy, 2 vols; Theodoſius and Conſtantia, 2 vols; Solyman and Almena; Frederick and Pharamond, or the Conſolations of Human Life, 1769; a Diſſertation on the Eloquence of the Pulpit; and another on Religious Retirement; and he was editor of the Works of St Evremond, of the Poems of Collins, and ſome other articles.

LANGIONA, a large, rich, and ſtrong town of Aſia, capital of the kingdom of Laos, with a large and magnificent palace where the king reſides. E. Long. 96. 45. N. Lat. 22. 38.

LANGOBARDI, a people of Germany ſituated between the Elbe and the Oder, in the Marche of Brandenburg, whom their paucity ennobled; in regard that being encompaſſed by many and powerful nations they preſerved themſelves, not ſo much by ſubmiſſion, as by dint of arms and encountering dangers, (Tacitus).

LANGPORT, in Somerſetſhire, 132 miles from London, is a well-frequented town on the Parrot, between Bridgewater and Crewkern. It ſent members to three parliaments, and is governed by a portreeve and a recorder. Here are lighters conſtantly fetching coals, &c. from Bridgewater; and it is a ſtage for the Taunton waggon, which drops the goods here from London to be carried farther by water. Eels are taken in vaſt plenty out of the holes of the banks of the river in froſty weather. The market here is on Saturday, and there are four fairs in the year.

LANGREL-shot, at ſea, that conſiſting of two bars of iron joined by a chain of ſhackle, and having half a ball of iron fixed on each end; by means of which apparatus it does great execution among the enemy's rigging.

LANGRES, an ancient and conſiderable town of France in Champagne, with a biſhop's ſee. The cutlery-wares made here are in high eſteem. It is ſeated on a mountain near the river Mearne, in E. Long. 4. 24. N. Lat. 47. 52.

LANGTON (Stephen), was born in England, but educated at Paris, and was greatly eſteemed for his learning by the king and nobility of France. He was chancellor of Paris, a cardinal of Rome, and in the reign of king John was made archbiſhop of Canterbury by Pope Innocent III. in oppoſition both to the monks of Canterbury and to the king. Langton was one of the moſt illuſtrious men of his age for learning; and continued archbiſhop 22 years, dying in 1228. A catalogue of his books is given by Bale and Tanner.

1 Definition.

LANGUAGE, in the proper ſenſe of the word, ſignifies the expreſſion of our ideas and their various relations by certain articulate ſounds, which are uſed as the ſigns of thoſe ideas and relations. By articulate ſounds are meant thoſe modulations of ſimple voice, or of ſound emitted from the thorax, which are formed by means of the mouth and its ſeveral organs,—the teeth, the tongue, the lips, and the palate. In a more general ſenſe, the word *language* is ſometimes uſed to denote all ſounds by which animals of any kind expreſs their particular feelings and impulſes in a manner that is intelligible to their own ſpecies.

2 Language in what reſpects different from the inſtinctive cries of animals.

Nature has endowed every animal with powers ſufficient to make known all thoſe of its ſenſations and deſires, with which it is neceſſary, for the preſervation of the individual or the continuance of the kind, that others of the ſame ſpecies ſhould be acquainted. For this purpoſe, the organs of all vocal animals are ſo formed, as, upon any particular impulſe, to utter ſounds, of which thoſe of the ſame ſpecies inſtinctively know the meaning. The ſummons of the hen is inſtantly obeyed by the whole brood of chickens; and in many others of the irrational tribes a ſimilar mode of communication may be obſerved between the parents and the offspring, and between one animal and its cuſtomary aſſociate. But it is not among animals of the ſame ſpecies only that theſe inſtinctive ſounds are mutually underſtood. It is as neceſſary for animals to know the voices of their enemies as the voices of their friends; and the roaring of the lion is a ſound of which, previous to all experience, every beaſt of the foreſt is naturally afraid. Between theſe animal voices and the language of men there is however very little analogy. Human language is capable of expreſſing ideas and notions, which there is every reaſon to believe that the brutal mind cannot conceive. "Speech (ſays Ariſtotle) is made to indicate what is expedient and what inexpedient, and in conſequence of this what is juſt and unjuſt. It is therefore given to men; becauſe it is peculiar to them that of good and evil, juſt and unjuſt, they only (with reſpect to other animals) poſſeſs a ſenſe or feeling." The voices of brutes ſeem intended by nature to expreſs, not diſtinct ideas or moral modes, but only ſuch feelings as it is for the good of the ſpecies that they ſhould have the power of making known; and in this, as in all other reſpects, theſe voices are analogous; not to our ſpeaking, but to our weeping, laughing, ſinging, groaning, ſcreaming, and other natural and audible expreſſions of appetite and paſſion.——Another difference between the language of men and the voices of brute animals conſiſts in articulation, by which the former may be reſolved into diſtinct elementary ſounds or ſyllables; whereas the latter, being for the moſt part unarticulated, is not capable of ſuch a reſolution. Hence Homer and Heſiod characterize man by the epithet μεροψ, or "voice dividing," as denoting a power peculiar to the human ſpecies: for though there are a few birds † which utter ſounds that may be divided into ſyllables, yet each of theſe birds utters but one ſuch ſound, which ſeems to be employed rather as notes of natural muſic than for the purpoſe of giving information to others; for when the bird is agitated, it utters cries which are very different, and have no articulation.——A third difference between the language of men and the ſignificant cries of brute animals, is, that the former is from art and the latter from nature. Every human language is learned by imitation, and is intelligible only to thoſe who either inhabit the country where it is vernacular, or have been taught it by a maſter or by books: but the voices in queſtion are not learned by imitation; and being wholly inſtinctive, they are intelligible to all the animals of that ſpecies by which they are uttered, though brought together from the moſt diſtant countries on earth. That a dog, which had never heard another bark, would notwithſtanding bark himſelf, and that the barking or yelps of a Lapland dog would be inſtinctively underſtood by the dogs of Spain, Calabria, or any other country, are facts which admit not of doubt: but there is no reaſon to imagine that a man who had never heard any language ſpoken would himſelf ſpeak; and it is well known that the language ſpoken in one country is unintelligible to the natives of another country where a different language is ſpoken. Herodotus indeed records a fact which, could it be depended upon, would tend to overturn this reaſoning, as it infers a natural relation between ideas and certain articulate ſounds. He tells us, that Pſammetichus king of Egypt, in order to diſcover which was the oldeſt language, cauſed two children, newly born of poor parents, to be brought up by a ſhepherd among his cattle, with a ſtrict injunction that they ſhould never hear a human voice; and that at the end of two years the children pronounced at the ſame time the word βεκκος, which in the Phrygian language ſignified *bread*. Either this is one of the many fables which that credulous hiſtorian collected among the Egyptians, or the conduct and reaſoning of Pſammetichus were very abſurd; for it is added, that from this circumſtance he inferred that the Phrygians were the moſt ancient people, and that they ſpoke the primitive language. The only rational purpoſe for which ſuch an experiment could be inſtituted, would be to diſcover, not which is the oldeſt or the lateſt language, but whether there be ſuch a thing as a language of nature or inſtinct: but in ſuch a language it is obvious that there could be no word to denote *bread*, becauſe in what is called the ſtate of nature bread is unknown. The experiment of Pſammetichus was probably never made; but in the woods of different countries ſolitary ſavages have at different times been caught, who, though they apparently poſſeſſed

3 Not from nature or inſtinct, but

† The parrot, cuckoo, and Eaſt-India bird called *cockatoo*, &c.

ſed all the ſagacity which is natural to man, and though their organs both of hearing and of ſpeech were perfect, never uſed articulate ſounds as ſigns of ſenſations or ideas. They uttered indeed the inarticulate cries which are inſtinctively expreſſive of pleaſure and pain, of joy and ſorrow, more diſtinctly and forcibly than men civilized; but with reſpect to the very rudiments of language, they were what Horace repreſents all mankind to have been originally,—*mutum et turpe pecus.* Indeed it ſeems to be obvious, that were there any inſtinctive language, the firſt words uttered by all children would be the ſame; and that every child, whether born in the deſert or in ſociety, would underſtand the language of every other child however educated or however neglected. Nay more, we may venture to affirm, that ſuch a language, though its general uſe might, in ſociety, be ſuperſeded by the prevailing dialect of art, could never be wholly loſt; and that no man of one country would find it difficult, far leſs impoſſible, to communicate the knowledge of his natural and moſt preſſing wants to the men of any other country, whether barbarous or civilized. The exerciſe of cultivated reaſon, and the arts of civil life, have indeed eradicated many of our original inſtincts, but they have not eradicated them all: (ſee INSTINCT.) There are external indications of the internal feelings and deſires, which appear in the moſt poliſhed ſociety, and which are confeſſedly inſtinctive. The paſſions, emotions, ſenſations, and appetites, are naturally expreſſed in the countenance by characters which the ſavage and the courtier can read with equal readineſs. The look ſerene, the ſmoothed brow, the dimpled ſmile, and the gliſtening eye, denote equanimity and good will in terms which no man miſtakes. The contracted brow, the glaring eye, the ſullen gloom, and the threatening air, denote rage, indignation, and defiance, as plainly and forcibly as revilings or imprecations. To teach men to diſguiſe theſe inſtinctive indications of their temper, and

> “ To carry ſmiles and ſunſhine in their face,
> “ When diſcontent ſits heavy at their heart,”

conſtitutes a great part of modern and refined education. Yet in ſpite of every effort of the utmoſt ſkill, and of every motive reſulting from intereſt, the moſt conſummate hypocrite, or the moſt hackneyed politician, is not always able to prevent his real diſpoſition from becoming apparent in his countenance. He may indeed, by long practice, have acquired a very great command both over his temper and over the inſtinctive ſigns of it; but at times nature will predominate over art, and a ſudden and violent paſſion will flaſh in his face, ſo as to be viſible to the eye of every beholder. If theſe obſervations be juſt, and we flatter ourſelves with the belief that no man will call them in queſtion, it ſeems to follow, that, if mankind were prompted by inſtinct to uſe articulate ſounds as indications of their paſſions, affections, ſenſations, and ideas, the language of nature could never be wholly forgotten, and that it would ſometimes predominate over the language of art. Groans, ſighs, and ſome inarticulate lively ſounds, are naturally expreſſive of pain and pleaſure, and equally intelligible to all mankind. The occaſional uſe of theſe no art can wholly baniſh; and if there were articulate ſounds naturally expreſſive of the ſame feelings, it is not conceivable that art or education could baniſh the uſe of them, merely becauſe by the organs of the mouth they are broken into parts and reſolvable into ſyllables.

It being thus evident that there is no inſtinctive articulated language, it has become an inquiry of ſome importance, how mankind were firſt induced to fabricate articulate ſounds, and to employ them for the purpoſe of communicating their thoughts. Children learn to ſpeak by inſenſible imitation; and when advanced ſome years in life, they ſtudy foreign languages under proper inſtructors: but the firſt men had no ſpeakers to imitate, and no formed language to ſtudy; by what means did they then learn to ſpeak? On this queſtion only two opinions can poſſibly be formed. Either language muſt have been originally revealed from heaven, or it muſt be the fruit of human induſtry. The greater part of Jews and Chriſtians, and even ſome of the wiſeſt pagans, have embraced the former opinion; which ſeems to be ſupported by the authority of Moſes, who repreſents the Supreme Being as teaching our firſt parents the *names* of animals. The latter opinion is held by Diodorus Siculus, Lucretius, Horace, and many other Greek and Roman writers, who conſider language as one of the arts invented by man. The firſt men, ſay they, lived for ſome time in woods and caves after the manner of beaſts, uttering only confuſed and indiſtinct noiſes; till, aſſociating for mutual aſſiſtance, they came by degrees to uſe articulate ſounds mutually agreed upon for the arbitrary ſigns or marks of thoſe ideas in the mind of the ſpeaker which he wanted to communicate to the hearer. This opinion ſprung from the atomic coſmogony which was framed by Mochus the Phenician, and afterwards improved by Democritus and Epicurus; and though it is part of a ſyſtem in which the firſt men are repreſented as having grown out of the earth like trees and other vegetables, it has been adopted by ſeveral modern writers (A) of high rank in the republic of letters, and is certainly in itſelf worthy of examination.

4
Either revealed from heaven, or an art invented by men.

5
Arguments for its being of human invention.

The moſt learned, and on every account the moſt reſpectable author who now ſupports this opinion, candidly acknowledges, that if language was invented it was of very difficult invention, and far beyond the reach of the groſſeſt ſavages. Accordingly he holds, that though men were originally ſolitary animals, and had no natural propenſity to the ſocial life; yet before language could be invented they muſt have been aſſociated for ages, and have carried on of concert ſome common work. Nay, he is decidedly of opinion, that before the invention of an art ſo difficult as language, men muſt not only have herded together, but have alſo formed ſome kind of civil policy, have exiſted in that political ſtate a very long time, and have acquired ſuch powers of abſtraction as to be able to form general ideas. (See LOGIC and METAPHYSICS). But it is obvious, that men could not have inſtituted civil policy, or have

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(A) Father Simon, Voltaire, L'Abbe Condillac, Dr Smith, and the author of *the Origin and Progreſs of Language*.

carried on of conſent any common work, without communicating their deſigns to each other: and there are four ways by which the author thinks that this could have been done before the invention of ſpeech; viz. 1ſt, *inarticulate cries*, expreſſive of ſentiments and paſſions; 2d, *geſtures*, and *the expreſſion of countenance*; 3d, *imitative ſounds*, expreſſive of audible things; and, 4th, *painting*, by which viſible objects may be repreſented. Of theſe four ways of communication it is plain that only two have any connection with language, viz. inarticulate cries and imitative ſounds; and of theſe the author abandons the latter as having contributed nothing to the invention of articulation, though he thinks it may have helped to advance its progreſs. "I am diſpoſed (ſays he) to believe, that the framing of words with an analogy to the ſound of the things expreſſed by them, belongs rather to languages of art than to the firſt languages ſpoken by rude and barbarous nations." It is therefore inarticulate cries only that muſt have given riſe to the formation of language. Such cries are uſed by all animals who have any uſe of voice to expreſs their wants; and the fact is, that all barbarous nations have cries expreſſing different things, ſuch as joy, grief, terror, ſurpriſe, and the like. Theſe, together with geſtures and expreſſion of the countenance, were undoubtedly the methods of communication firſt uſed by men: and we have but to ſuppoſe (ſays our author) a great number of our ſpecies carrying on ſome common buſineſs, and converſing together by ſigns and cries; and we have men juſt in a ſtate proper for the invention of language. For if we ſuppoſe their numbers to increaſe, their wants would increaſe alſo; and then theſe two methods of communication would become too confined for that larger ſphere of life which their wants would make neceſſary. The only thing then that remained to be done was to give a greater variety to the inſtinctive cries; and as the natural progreſs is from what is eaſy to what is more difficult, the firſt variation would be merely by tones from low to high, and from grave to acute. But this variety could not anſwer all the purpoſes of ſpeech in ſociety; and being advanced ſo far, it was natural that an animal ſo ſagacious as man ſhould go on farther, and come at laſt to the only other variation remaining, namely articulation. The firſt articulation would be very ſimple, the voice being broken and diſtinguiſhed only by a few vowels and conſonants. And as all natural cries are from the throat and larynx, with little or no operation of the organs of the mouth, it is natural to ſuppoſe, that the firſt languages were for the greater part ſpoken from the throat; that what conſonants were uſed to vary the cries, were moſtly guttural; and that the organs of the mouth would at firſt be very little employed. From this account of the origin of language it appears, that the firſt ſounds articulated were the natural cries by which men ſignified their wants and deſires to one another, ſuch as calling one another for certain purpoſes, and other ſuch things as were moſt neceſſary for carrying on any joint work: then in proceſs of time other cries would be articulated, to ſignify, that ſuch and ſuch actions had been performed or were performing, or that ſuch and ſuch events had happened relative to the common buſineſs. Then names would be invented of ſuch objects as they were converſant with; but as we cannot ſuppoſe ſavages to be deep in abſtraction or ſkilful in the art of arranging things according to their *genera* and *ſpecies*, all things however ſimilar, except perhaps the individuals of the loweſt ſpecies, would be expreſſed by different words not related to each other either by derivation or compoſition. Thus would language grow by degrees; and as it grew, it would be more and more broken and articulated by conſonants; but ſtill the words would retain a great deal of their original nature of animal cries. And thus things would go on, words unrelated ſtill multiplying, till at laſt the language would become too cumberſome for uſe; and then art would be obliged to interpoſe, and form a language upon a few radical words, according to the rules and method of etymology.

6 Arguments for its divine origin.

Thoſe (B) who think that language was originally revealed from heaven, conſider this account of its human invention as a ſeries of mere ſuppoſitions hanging looſely together, and the whole ſuſpended from no fixed principles. The opinions of Diodorus, Vitruvius, Horace, Lucretius, and Cicero, which are frequently quoted in its ſupport, are in their eſtimation of no greater authority than the opinions of other men; for as language was formed and brought to a great degree of perfection long before the era of any hiſtorian with whom we are acquainted, the antiquity of the Greek and Roman writers, who are comparatively of yeſterday, gives them no advantage in this inquiry over the philoſophers of France and England. Ariſtotle has defined man to be *ζωον μιμητικον*: and the definition is certainly ſo far juſt, that man is much more remarkable for imitation than invention; and therefore, ſay the reaſoners on this ſide of the queſtion, had the human race been originally *mutum et turpe pecus*, they would have continued ſo to the end of time, unleſs they had been taught to ſpeak by ſome ſuperior intelligence. That the firſt men ſprung from the earth like vegetables, no modern philoſopher has ventured to aſſert; nor does there any where appear ſufficient evidence that men were originally in the ſtate of ſavages. The oldeſt book extant contains the only rational coſmogony known to the ancient nations; and that book repreſents the firſt human inhabitants of this earth, not only as reaſoning and ſpeaking animals, but alſo as in a ſtate of high perfection and happineſs, of which they were deprived for diſobedience to their Creator. Moſes, ſetting aſide his claim to inſpiration, deſerves, from the conſiſtence of his narrative, at leaſt as much credit as Mochus, or Democritus, or Epicurus: and from his prior antiquity, if antiquity could on this ſubject have any weight, he would deſerve more, as having lived nearer to the period of which they all write. But the queſtion reſpecting the origin of language may be decided without reſting in authority of any kind, merely by conſidering the nature of ſpeech and the mental and corporeal powers of man. Thoſe who maintain it to be of human invention, ſuppoſe men at firſt to

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(B) Warburton, Delaney, Johnſon, Beattie, Blair, and Dr Stanhope Smith of New Jerſey, &c.

to have been ſolitary animals, afterwards to have herded together without government or ſubordination, then to have formed political ſocieties, and by their own exertions to have advanced from the groſſeſt ignorance to the refinements of ſcience. But ſay the reaſoners whoſe cauſe we are now pleading, this is a ſuppoſition contrary to all hiſtory and all experience. There is not upon record a ſingle inſtance well authenticated of a people emerging by their own efforts from barbariſm to civilization. There have indeed been many nations raiſed from the ſtate of ſavages; but it is known that they were poliſhed, not by their own repeated exertions, but by the influence of individuals or colonies from nations more enlightened than themſelves. The original ſavages of Greece were tamed by the Pelaſgi, a foreign tribe; and were afterwards further poliſhed by Orpheus, Cecrops, Cadmus, &c. who derived their knowledge from Egypt and the Eaſt. The ancient Romans, a ferocious and motley crew, received the bleſſings of law and religion from a ſucceſſion of foreign kings; and the conqueſts of Rome at a later period contributed to civilize the reſt of Europe. In America, the only two nations which at the invaſion of the Spaniards could be ſaid to have advanced a ſingle ſtep from barbariſm, were indebted for their ſuperiority over the other tribes, not to the gradual and unaſſiſted progreſs of the human mind, but to the wiſe inſtitutions of foreign legiſlators.

This is not the proper place for tracing the progreſs of man from the ſavage ſtate to that of political ſociety (See *Savage State*); but experience teaches us, that in every art it is much eaſier to improve than to invent. The human mind, when put into the proper track, is indeed capable of making great advances in arts and ſciences; but if any credit be due to the records of hiſtory, it has not, in a people ſunk in ignorance and barbarity, ſufficient vigour to diſcover that track, or to conceive a ſtate different from the preſent. If the rudeſt inhabitants of America and other countries have continued, for ages in the ſame unvaried ſtate of barbariſm; how is it imaginable that people ſo much ruder than they, as to be ignorant of all language, ſhould think of inventing an art ſo difficult as that of ſpeech, or even to frame a conception of the thing? In building, fiſhing, hunting, navigating, &c. they might imitate the inſtinctive arts of other animals; but there is no other animal that expreſſes its ſenſations and affections by arbitrary articulate ſounds.—It is ſaid, that before language could be invented, mankind muſt have exiſted for ages in large political ſocieties, and have carried on of concert ſome common work: but if inarticulate cries, and the natural viſible ſigns of the paſſions and affections were modes of communication ſufficiently accurate to keep a large ſociety together for ages, and to direct its members in the execution of ſome common work, what would be their inducement to the invention of an art ſo uſeleſs and difficult as that of language? Let us however ſuppoſe, ſay the advocates for the cauſe which we are now ſupporting, that different nations of ſavages ſet about inventing an art of communicating their thoughts, which experience had taught them was not abſolutely neceſſary; how came they all, without exception, to think of the one art of articulating the voice for this purpoſe? Inarticulate cries, out of which language is fabricated, have indeed an inſtinctive connection with our paſſions and affections; but there are geſtures and expreſſions of countenance with which our paſſions and affections are in the ſame manner connected. If the natural cries of paſſion could be ſo modified and enlarged as to be capable of communicating to the hearer every idea in the mind of the ſpeaker, it is certain that the natural geſtures could be ſo modified as to anſwer the very ſame purpoſe (ſee Pantomime); and it is ſtrange that among the ſeveral nations who invented languages, not one ſhould have ſtumbled upon fabricating viſible ſigns of their ideas, but that all ſhould have agreed to denote them by articulated ſounds. Every nation whoſe language is narrow and rude ſupplies its defects by violent geſticulation; and therefore, as much leſs genius is exerted in the improvement of any art than was requiſite for its firſt invention, it is natural to ſuppoſe, that, had men been left to deviſe for themſelves a method of communicating their thoughts, they would not have attempted any other than that by which they now improve the language tranſmitted by their fathers. It is vain to urge that articulate ſounds are fitter for the purpoſe of communicating thought than viſible geſticulation: for though this may be true, it is a truth which could hardly occur to ſavages, who had never experienced the fitneſs of either; and if, to counterbalance the ſuperior fitneſs of articulation, its extreme difficulty be taken into view, it muſt appear little leſs than miraculous that every ſavage tribe ſhould think of it rather than the eaſier method of artificial geſticulation. Savages, it is well known, are remarkable for their indolence, and for always preferring eaſe to utility; but their modes of life give ſuch a pliancy to their bodies, that they could with very little trouble bend their limbs and members into any poſitions agreed upon as the ſigns of ideas. This is ſo far from being the caſe with reſpect to the organs of articulation, that it is with extreme difficulty, if at all, that a man advanced in life can be taught to articulate any ſound which he has not been accuſtomed to hear. No foreigner who comes to England after the age of thirty, ever pronounces the language tolerably well; an Engliſhman of that age can hardly be taught to utter the guttural ſound which a Scotchman gives to the Greek χ, or even the French ſound of the vowel *u*: and of the ſolitary ſavages who have been caught in different foreſts, we know not that there has been one who, after the age of manhood, learned to articulate any language ſo as to make himſelf readily underſtood. The preſent age has indeed furniſhed many inſtances of deaf perſons being taught to ſpeak intelligibly by ſkilful maſters moulding the organs of the mouth into the poſitions proper for articulating the voice: but who was to perform this taſk among the inventors of language, when all mankind were equally ignorant of the means by which articulation is effected? In a word, daily experience informs us, that men who have not learned to articulate in their childhood, never afterwards acquire the faculty of ſpeech but by ſuch helps as ſavages cannot obtain; and therefore, if ſpeech was invented at all, it muſt have been either by children who were incapable of invention, or by men who were incapable of ſpeech. A thouſand, nay a million, of children could not think of inventing a language. While the organs are pliable, there is not underſtanding enough to frame the conception of a language; and by the time that there is underſtanding, the organs are become too ſtiff for the taſk. And therefore, ſay the advocates for the divine origin of language, reaſon as well as hiſtory intimates, that mankind in all ages muſt have been ſpeaking animals; the young having conſtantly acquired this art by imitating thoſe who were elder; and we may warrantably conclude, that our firſt parents received it by immediate inſpiration.

To this account of the origin of language an objection readily offers itſelf. If the firſt language was communicated by inſpiration, it muſt have been perfect, and held in reverence by thoſe who ſpake it, *i. e.* by all mankind. But a vaſt variety of languages have prevailed in the world; and ſome of theſe which remain are known to be very imperfect, whilſt there is reaſon to believe that many others are loſt. If different languages were originally invented by different nations, all this would naturally follow from the mixture of theſe nations; but what could induce men poſſeſſed of one perfect language of divine original, to forſake it for barbarous jargons of their own invention, and in every reſpect inferior to that with which their forefathers or themſelves had been inſpired?

7
In what circumſtances the moſt perfect and copious language muſt become narrow and rude.

In anſwer to this objection, it is ſaid, that nothing was given by inſpiration but the faculty of ſpeech and the elements of language; for when once men had language, it is eaſy to conceive how they might have modified it by their natural powers, as thouſands can improve what they could not invent. The firſt language, if given by inſpiration, muſt in its principles have had all the perfection of which language is ſuſceptible; but from the nature of things it could not poſſibly be very copious. The words of language are either proper names or the ſigns of ideas and relations; but it cannot be ſuppoſed that the All-wiſe Inſtructor would load the memories of men with words to denote things then unknown, or with the ſigns of ideas which they had not then acquired. It was ſufficient that a foundation was laid of ſuch a nature as would ſupport the largeſt ſuperſtructure which they might ever after have occaſion to raiſe upon it, and that they were taught the method of building by compoſition and derivation. This would long preſerve the language radically the ſame, though it could not prevent the introduction of different dialects in the different countries over which men ſpread themſelves. In whatever region we ſuppoſe the human race to have been originally placed, the increaſe of their numbers would in proceſs of time either diſperſe them into different nations, or extend the one nation to a vaſt diſtance on all ſides from what we may call the ſeat of government. In either caſe they would every where meet with new objects, which would occaſion the invention of new names; and as the difference of climate and other natural cauſes would compel thoſe who removed eaſtward or northward to adopt modes of life in many reſpects different from the modes of thoſe who travelled towards the weſt or the ſouth, a vaſt number of words would in one country be fabricated to denote complex conceptions, which muſt neceſſarily be unintelligible to the body of the people inhabiting countries where thoſe conceptions had never been formed. Thus would various dialects be unavoidably introduced into the original language, even whilſt all mankind remained in one ſociety and under one government. But after ſeparate and independent ſocieties were formed, theſe variations would become more numerous, and the ſeveral dialects would deviate farther and farther from each other, as well as from the idiom and genius of the parent tongue, in proportion to the diſtance of the tribes by whom they were ſpoken. If we ſuppoſe a few people either to have been baniſhed together from the ſociety of their brethren, or to have wandered of their own accord to a diſtance, from which through trackleſs foreſts they could not return (and ſuch emigrations have often taken place), it is eaſy to ſee how the moſt copious language muſt in their mouths have ſoon become narrow, and how the offspring of inſpiration muſt have in time become ſo deformed as hardly to retain a feature of the anceſtor whence it originally ſprung. Men do not long retain a practical ſkill in thoſe arts which they never exerciſe; and there are abundance of facts to prove, that a ſingle man caſt upon a deſart iſland, and having to provide the neceſſaries of life by his own ingenuity, would ſoon loſe the art of ſpeaking with fluency his mother-tongue. A ſmall number of men caſt away together, would indeed retain that art ſomewhat longer; but in ſpace of time not very long, it would in a great meaſure be loſt by them or their poſterity. In this ſtate of baniſhment, as their time would be almoſt wholly occupied in hunting, fiſhing, and other means within their reach to ſupport a wretched exiſtence, they would have very little leiſure, and perhaps leſs deſire, to preſerve by converſation the remembrance of that eaſe and thoſe comforts of which they now found themſelves for ever deprived; and they would of courſe ſoon forget all the words which in their native language had been uſed to denote the accommodations and elegancies of poliſhed life. This at leaſt ſeems to be certain, that they would not attempt to teach their children a part of language which in their circumſtances could be of no uſe to them, and of which it would be impoſſible to make them comprehend the meaning; for where there are no ideas, the ſigns of ideas cannot be made intelligible. From ſuch colonies as this diſperſed over the earth, it is probable that all thoſe nations of ſavages have ariſen, which have induced ſo many philoſophers to imagine that the ſtate of the ſavage was the original ſtate of man; and if ſo, we ſee that from the language of inſpiration muſt have unavoidably ſprung a number of different dialects all extremely rude and narrow, and retaining nothing of the parent tongue except perhaps the names of the moſt conſpicuous objects of nature, and of thoſe wants and enjoyments which are inſeparable from humanity. The ſavage ſtate has no artificial wants, and furniſhes few ideas that require *terms* to expreſs them. The habits of ſolitude and ſilence incline a ſavage rarely to ſpeak; and when he ſpeaks, he uſes the ſame terms to denote different ideas. Speech therefore, in this rude condition of men, muſt be extremely narrow and extremely various. Every new region, and every new climate, ſuggeſts different ideas, and creates different wants, which muſt be expreſſed either

8
Hence the variety of tongues which have prevailed in the world.

either by terms entirely new or by old terms uſed with a new ſignification. Hence muſt originate great diverſity, even in the firſt elements of ſpeech, among all ſavage nations, the words retained of the original language being uſed in various ſenſes, and pronounced, as we may believe, with various accents. When any of thoſe ſavage tribes emerged from their barbariſm, whether by their own efforts or by the aid of people more enlightened than themſelves, it is obvious that the improvement and copiouſneſs of their language would keep pace with their own progreſs in knowledge and in the arts of civil life; but in the infinite multitude of words which civilization and refinement add to language, it would be little leſs than miraculous were any two nations to agree upon the ſame ſounds to repreſent the ſame ideas. Superior refinement, indeed, may induce imitation, conqueſts may impoſe a language, and extenſion of empires may melt down different nations and different dialects into one maſs; but independent tribes naturally give riſe to diverſity of tongues, nor does it ſeem poſſible that they ſhould retain more of the original language than the words expreſſive of thoſe objects with which all men are at all times equally concerned.

The variety of tongues, therefore, the copiouſneſs of ſome, and the narrowneſs of others, furniſh no good objection to the divine origin of language in general; for whether language was at firſt revealed from heaven, or in a courſe of ages invented by men, a multitude of dialects would inevitably ariſe as ſoon as the human race was ſeparated into a number of diſtinct and independent nations.—We pretend not to decide for our readers in a queſtion of this nature: we have given the beſt arguments on both ſides which we could either deviſe or find in the writings of others: and if it be ſeen, as we doubt not it will, that our own judgment leans to the ſide of revelation, let it not be haſtily condemned by thoſe whoſe knowledge of languages extends no farther than to Greece and Rome, and France and England; for if they will carry their philological inquiries to the eaſt, they may perhaps be able to trace the remains of one original language through a great part of the globe at this day (c).

9
The language of any people an index to their minds.

Language, whatever was its origin, muſt be ſubject to perpetual changes from its very nature, as well as from the variety of incidents which affect all ſublunary things; and thoſe changes muſt always correſpond with the change of circumſtances in the people by whom the language is ſpoken. When any particular ſet of ideas becomes prevalent among any ſociety of men, words muſt be adopted to expreſs them; and from theſe the language muſt aſſume its character. Hence the language of a brave and martial people is bold and nervous, although perhaps rude and uncultivated; while the languages of thoſe nations in which luxury and effeminacy prevail, are flowing and harmonious, but devoid of force and energy of expreſſion.

10
Some exceptions to the preceding rule.

But although it may be conſidered as a general rule, that the language of any people is a very exact index of the ſtate of their minds, yet it admits of ſome particular exceptions. For a man is naturally an imitative animal, and in matters of this kind never has recourſe to invention but through neceſſity, colonies planted by any nation, at whatever diſtance from the mother-country, always retain the ſame general ſounds and *idiom* of language with thoſe from whom they are ſeparated. In proceſs of time, however, the coloniſts and the people of the mother country, by living under different climates, by being engaged in different occupations, and by adopting, of courſe, different modes of life, may loſe all knowledge of one another, aſſume different national characters, and form each a diſtinct language to themſelves, totally different in genius and ſtyle, though agreeing with one another in the fundamental ſounds and general idiom. If, therefore, this particular idiom, formed before their ſeparation, happen to be more peculiarly adapted to the genius of the mother-country than of the colonies, theſe will labour under an inconvenience on this account, which they may never be wholly able to overcome; and this inconvenience muſt prevent their language from ever attaining to that degree of perfection to which, by the genius of the people, it might otherwiſe have been carried. Thus various languages may have been formed out of one parent tongue; and thus that happy concurrence of circumſtances which has raiſed ſome languages to a high degree of perfection, may be eaſily accounted for, while many ineffectual efforts have been made to raiſe other languages to the ſame degree of excellence.

(c) Numberleſs inſtances of this might be given, but our limits will permit us to produce only a very few. In the *Shanſcrit*, or ancient language of the *Gentoos*, OUR ſignifies a *day*: (See *Halhed's preface to the code of Gentoo laws).* In other eaſtern languages, the ſame word was uſed to denote both *light* and *fire*. Thus in the *Chaldee*, UR is *fire*; in the *Egyptian*, OR is the *ſun* or *light*, *(Plut. de Oſir. et Iſid.)*: In the *Hebrew*, AUR is *light*: in the *Greek*, αηρ is the *air*, often *light*: in *Latin*, AURA is the *air*, from the Æolic Greek; and in *Iriſh* it is AEAR. From the very ſame original we have the Greek word πυρ, and the Engliſh *fire*.—In *Hebrew*, OR ſignifies to *raiſe*, *lift up one's ſelf*, or *be raiſed*: hence plainly are derived the *Greek* ορω, to *raiſe*, *excite*, and the *Latin* ORIOR *to ariſe*; whence ORIENS *the eaſt*, and Eng. *orient*, *oriental*; alſo Lat. *origo*, and Eng. *origin*, *originate*, &c.—The word KHUNT in the Shanſcrit dialect, ſignifies *a ſmall territory*, which is retained in Κυνθος, *Kent*, *Canton*, *Cantabria*. The word KHAN, KIN, CEAN, GAN, GEN, GIN, is of the ſame kind, and pervades Aſia and Europe from the *Ganges* to the *Garrone*, The word LIGHT Engliſh, LUCHT Flemiſh, LUX Roman, and λυχος Greek, has been traced to Egypt. ARETZ, AREK, ERECH, AERTHA, EARTH, and ERDE, are all one word from Paleſtine and Chaldee to Britain and Germany.—The Chaldeans turned the Hebrew word SHUR or SHOR, which ſignifies an *ox*, into THOR, as likewiſe did the Phenicians (See *Plut. Vit Syll.)*; hence the Greek ταυρος, the Latin *taurus*, the French *taureau*, and the Italian and Spaniſh *toro*. The Hebrew word BIT or BEITH, which ſignifies *cavity*, *capacity*, the *concave* or *inſide* of any place, has ſpread itſelf far and wide, ſtill retaining nearly the original ſignification; in the Perſian language it is BAD, BED, BHAD, and ſignifies a *houſe* or *abode*. In all the dialects of the Gothic tongue, BODE ſignifies the ſame thing; hence the Engliſh *abide*, *abode*, *booth*, *boat*, and the French *batteau*. In all theſe inſtances there is a ſtriking reſemblance in ſound as well as in ſenſe between the derived and the primitive words; but this is not always the caſe, even when of the legitimacy of the derivation no doubt can be entertained. It has been ſhown (ſee *Boſwell's Life of Johnſon)*, that the French JOUR, a *day*, is derived from the Latin DIES; but it may be certainly traced from a higher ſource. In many of the oriental dialects, DI, *bright*, is a name of the *ſun*; hence the Greek Δις, *Jupiter*, and the Latin DIES, a *day*. From DIES comes DIURNUS; in the pronunciation of which, either by the inaccuracy of the ſpeaker or of the hearer, *diu* is readily confounded with *giu*; then of the ablative of this adjective, corruptly pronounced *giurno*, the Italians make a ſubſtantive GIORNO, which by the French is readily contracted into GIOUR or JOUR. From the ſame root DI, comes Διος, α, ον, the Eolic ΔιϜος, the Latin DIVUS, and the Celtic DHIA, God.

As the knowledge of languages conſtitutes a great part of erudition, as their beauty and deformities furniſh employment to taſte, and as theſe depend much upon the idioms of the different tongues, we ſhall proceed to make a few remarks upon the advantages and defects of ſome of thoſe idioms of language with which we are beſt acquainted.

11 What is meant by the *idiom*, and what by the *genius*, of a language.

—As the words IDIOM and GENIUS of a language are often confounded, it will be neceſſary to inform the reader, that by IDIOM we would here be underſtood to mean *that general mode of arranging words into ſentences which prevails in any particular language;* and by the GENIUS of a language, we mean to expreſs *the particular ſet of ideas which the words of any language, either from their formation or multiplicity, are moſt naturally apt to excite in the mind of any one who hears it properly uttered.* Thus, although the *Engliſh*, *French*, *Italian*, and *Spaniſh* languages nearly agree in the ſame general IDIOM, yet the particular GENIUS of each is remarkably different: The *Engliſh* is naturally bold, nervous, and ſtrongly articulated: the *French*, is weaker, and more flowing; the *Italian*, more ſoothing and harmonious; and the *Spaniſh* more grave, ſonorous, and ſtately.

12 Two idioms among the languages eſteemed in Europe.

Now, when we examine the ſeveral languages which have been moſt eſteemed in Europe, we find that there are only two IDIOMS among them which are eſſentially diſtinguiſhed from one another; and all thoſe languages are divided between theſe two idioms, following ſometimes the one and ſometimes the other, either wholly or in part. The languages which may be ſaid to adhere to the firſt IDIOM, are thoſe which in their conſtruction follow the order of nature; that is, expreſs their ideas in the natural order in which they occur to the mind; the ſubject which occaſions the action appearing firſt; then the action, accompanied with its ſeveral modifications; and, laſt of all, the object to which it has reference.

13 The analogous and

—Theſe may properly be called ANALOGOUS languages; and of this kind are the Engliſh, French, and moſt of the modern languages in Europe.—The languages which may be referred to the other IDIOM, are thoſe which follow no other order in their conſtruction than what the taſte or fancy of the compoſer may ſuggeſt; ſometimes making the object, ſometimes the action, and ſometimes the modification of the action, to precede or follow the other parts. The confuſion which this might occaſion, is avoided by the particular manner of *inflecting* their words, by which they are made to refer to the others with which they ought to be connected, in whatever part of the ſentence they occur, the mind being left at liberty to connect the ſeveral parts with one another after the whole ſentence is concluded. And as the words may be here tranſpoſed at pleaſure, thoſe languages may be called TRANSPOSITIVE languages. To this claſs we muſt, in an eſpecial manner, refer the *Latin* and *Greek* languages.

14 The tranſpoſitive languages compared with reſpect to

—As each of theſe IDIOMS has ſeveral advantages and defects peculiar to itſelf, we ſhall endeavour to point out the moſt conſiderable of them, in order to aſcertain with greater preciſion the particular character and excellence of ſome of thoſe languages now principally ſpoken or ſtudied in Europe.

The partiality which our forefathers, at the revival of letters in Europe, naturally entertained for the Greek and Roman languages, made them look upon every diſtinguiſhing peculiarity belonging to them as *one* of the *many* cauſes of the amazing ſuperiority which thoſe languages evidently enjoyed above every other at that time ſpoken in Europe.—This blind deference ſtill continues to be paid to them, as our minds are early prepoſſeſſed with theſe ideas, and as we are taught in our earlieſt infancy to believe, that to entertain the leaſt idea of our own language being equal to the Greek or Latin in any particular whatever, would be a certain mark of ignorance or want of taſte.—Their rights, therefore, like thoſe of the church in former ages, remain ſtill to be examined; and we, without exerting our reaſon to diſcover truth from falſehood, tamely ſit down ſatisfied with the idea of their undoubted pre-eminence in every reſpect. But if we look around us for a moment, and obſerve the many excellent productions which are to be met with in almoſt every language of Europe, we muſt be ſatisfied, that *even theſe* are now poſſeſſed of *ſome* powers which might afford at leaſt a preſumption, that, if they were cultivated with a proper degree of attention, they might, in *ſome reſpects*, be made to rival, if not to excel, thoſe beautiful and juſtly admired remains of antiquity. Without endeavouring to derogate from their merit, let us, with the cool eye of philoſophic reaſoning, endeavour to bring before the ſacred tribunal of Truth ſome of thoſe opinions which have been moſt generally received upon this ſubject, and reſt the determination of the cauſe on her impartial deciſion.

The learned reader well knows, that the ſeveral changes which take place in the arrangement of the words in every TRANSPOSITIVE language, could not be admitted without occaſioning great confuſion, unleſs certain claſſes of words were endowed with particular variations, by means of which they might be made to refer to the other words with which they ought naturally to be connected. From this cauſe proceeds the neceſſity of ſeveral variations of *verbs*, *nouns*, and *adjectives;* which are not in the leaſt eſſential or neceſſary in the ANALOGOUS languages, as we have pretty fully explained under the article **GRAMMAR**, to which we refer for ſatisfaction on this head. We ſhall in this place conſider, whether theſe variations are an advantage or a diſadvantage to language.

As it is generally ſuppoſed, that every language whoſe verbs admit of *inflection*, is on that account much more perfect than one where they are varied by *auxiliaries;* we ſhall, in the firſt place, examine this with ſome degree of attention; and that what is ſaid on this head may be the more intelligible, we ſhall give examples from the Latin and Engliſh languages. We make choice of theſe languages, becauſe the Latin is more purely *tranſpoſitive* than the Greek, and the Engliſh admits of leſs *inflection* than any other language that we are acquainted with.

15 Diverſity of ſounds, variety of expreſſions, and preciſion of meaning.

If any preference be due to a language from the one or the other method of *conjugating* verbs, it muſt in a great meaſure be owing to one or more of theſe three cauſes:—Either it muſt admit of a greater variety of ſounds, and conſequently more room for harmonious diverſity of tones in the language:—or a greater freedom of expreſſion is allowed in uttering any ſimple idea, by the one admitting of a greater variety in the arrangement of the words which are neceſſary to expreſs that idea than the other does:—or, laſtly, a greater preciſion and accuracy in fixing the meaning of the perſon who uſes the language, ariſe from the uſe of one of theſe forms, than from the uſe of the other: for, as every other circumſtance which may ſerve to give a diverſity to language, ſuch as the general and moſt prevalent ſounds, the frequent repetition of any one particular letter, and a variety of other circumſtances of that nature, which may ſerve to debaſe a particular language, are not influenced in the leaſt by the different methods of varying the verbs, they cannot be here conſidered. We ſhall therefore proceed to make a compariſon of the advantages or diſadvantages which may accrue to a language by inflecting its verbs with regard to each of theſe particulars,—variety of ſound, variety of arrangement, and accuracy of meaning.

16 Diverſity of ſounds.

The *firſt* particular that we have to examine is, Whether the one method of expreſſing the variations of a verb admits of a greater variety of ſounds? In this reſpect the *Latin* ſeems, at firſt view, to have a great advantage over the *Engliſh*: for the words *amo, amabam, amaveram, amavero, amem,* &c. ſeem to be more different from one another than the Engliſh tranſlations of theſe, *I love, I did love, I had loved, I ſhall have loved, I may love,* &c.; for although the ſyllable AM is repeated in every one of the firſt, yet as the laſt ſyllable uſually ſtrikes the ear with greater force, and leaves a greater impreſſion than the firſt, it is very probable that many will think the frequent repetition of the word LOVE in the laſt inſtance, more ſtriking to the ear than the repetition of *am* in the former. We will therefore allow this its full weight, and grant that there is as great, or even a greater difference between the ſounds of the different *tenſes* of a Latin verb, than there is between the words that are equivalent to them in Engliſh. But as we here conſider the variety of ſounds of the language in general, before any juſt concluſion can be drawn, we muſt not only compare the different parts of the ſame verb, but alſo compare the different verbs with one another in each of theſe languages. And here, at firſt view, we perceive a moſt ſtriking diſtinction in favour of the *analogous* language over the *inflected*: for as it would be impoſſible to form a particular ſet of inflections different from one another for each particular verb, all thoſe languages which have adopted this method have been obliged to reduce their verbs into a ſmall number of claſſes; all the words of each of which claſſes, commonly called *conjugations*, have the ſeveral variations of the *modes, tenſes,* and *perſons,* expreſſed exactly in the ſame manner, which muſt of neceſſity introduce a ſimilarity of ſounds into the language in general, much greater than where every particular verb always retains its own diſtinguiſhing ſound. To be convinced of this, we need only repeat any number of verbs in Latin and Engliſh, and obſerve on which ſide the preference with reſpect to variety of ſounds muſt fall.

Pono	*I put.*	Moveo,	*I move.*
Dono,	*I give.*	Doleo,	*I ail.*
Cano,	*I ſing.*	Lugeo,	*I mourn.*
Sono,	*I ſound.*	Obeo,	*I die.*
Orno,	*I adorn.*	Gaudeo,	*I rejoice.*
Pugno,	*I fight.*	Incipio,	*I begin.*
Lego,	*I read.*	Facio,	*I make.*
Scribo,	*I write.*	Fodio,	*I dig.*
Puto,	*I think.*	Rideo,	*I laugh.*
Vivo,	*I live.*	Impleo,	*I fill.*
Ambulo,	*I walk.*	Abſtineo,	*I forbear.*

The ſimilarity of ſounds is here ſo obvious in the Latin, as to be perceived at the firſt glance; nor can we be ſurpriſed to find it ſo, when we conſider that all their regular verbs, amounting to 4000 or upwards, muſt be reduced to four conjugations, and even theſe differing but little from one another, which muſt of neceſſity produce the ſameneſs of ſounds which we here perceive; whereas, every language that follows the natural order, like the Engliſh, inſtead of this ſmall number of uniform terminations, have almoſt as many diſtinct ſounds as original verbs in their language.

But if, inſtead of the preſent of the indicative mood, we ſhould take almoſt any other tenſe of the Latin verb, the ſimilarity of ſounds would be ſtill more perceptible, as many of theſe tenſes have the ſame termination in all the four conjugations, particularly in the imperfect of the indicative, as below.

Pone-bam;	*I did put,*	*I put.*
Dona-bam;	*I did give,*	*I gave.*
Cane-bam;	*I did ſing,*	*I ſung.*
Sona-bam;	*I did ſound,*	*I ſounded.*
Orna-bam;	*I did adorn,*	*I adorned.*
Pugna-bam;	*I did fight,*	*I fought.*
Lege-bam;	*I did read,*	*I read.*
Scribe-bam;	*I did write,*	*I wrote.*
Puta-bam;	*I did think,*	*I thought.*
Vive-bam;	*I did live,*	*I lived.*
Ambula-bam;	*I did walk,*	*I walked.*
Move-bam;	*I did move,*	*I moved.*
Dole-bam;	*I did ail,*	*I ailed.*
Luge-bam;	*I did mourn,*	*I mourned.*
Obi-bam;	*I did die,*	*I died.*
Gaude-bam;	*I did rejoice,*	*I rejoiced.*
Incipie-bam;	*I did begin,*	*I began.*
Facie-bam;	*I did make,*	*I made.*
Fodie-bam;	*I did dig,*	*I dug.*
Ride-bam;	*I did laugh,*	*I laughed.*
Imple-bam;	*I did fill,*	*I filled.*
Abſtine-bam;	*I did forbear,*	*I forbore.*

It is unneceſſary to make any remarks on the Latin words in this example: but in the Engliſh tranſlation we have carefully marked in the firſt column the words without any inflection; and in the ſecond, have put down the ſame meaning by an inflection of our verb; which we have been enabled to do, from a peculiar excellency in our own language unknown to any other either ancient or modern. Were it neceſſary to purſue this ſubject farther, we might obſerve, that the *perfect* tenſe in all the conjugations ends univerſally in *I*, the *pluperfect* in ERAM, and the *future* in AM or BO; in the ſubjunctive mood, the *imperfect univerſally* in REM, the *perfect* in ERIM, the *pluperfect* in ISSEM, and the *future* in ERO: and as a ſtill greater ſameneſs is obſervable in the different variations for the perſons in theſe tenſes, ſeeing the firſt perſon plural in all tenſes ends in MUS, and the ſecond perſon in TIS, with little variation in the other perſons; it is evident that, in reſpect of diverſity of ſounds, this method of conjugating verbs by *inflection*, is greatly inferior to the more natural method of expreſſing the various connections and relations of the verbal attributive by different words, uſually called *auxiliaries*.

17 Variety of expreſſions.

The *ſecond* particular, by which the different methods of marking the relation of the verbal attributive can affect language, ariſes from the variety of expreſſions which either of theſe may admit of in uttering the ſame ſentiment. In this reſpect, likewiſe, the method of conjugating by inflection ſeems to be deficient. Thus the preſent of the indicative mood in Latin can at moſt be expreſſed only in two ways, viz. SCRIBO, and EGO SCRIBO; which ought perhaps in ſtrictneſs to be admitted only as one: whereas, in Engliſh, we can vary it in four different ways, viz. *1ſt*, I WRITE; *2dly*, I DO WRITE; *3dly*, WRITE I DO; *4thly*, WRITE DO I (D). And if we conſider the further variation which theſe receive in power as well as in ſound, by having the emphaſis placed on the different words; inſtead of four, we will find eleven different variations: thus, *1ſt*, I *write*, with the emphaſis upon the *I*;—*2dly*, I WRITE, with the emphaſis upon the word WRITE. Let any one pronounce theſe with the different emphaſis neceſſary, and he will be immediately ſatisfied that they are not only diſtinct from each other with reſpect to meaning, but alſo with regard to ſound; and the ſame muſt be underſtood of all the other parts of this example.

3. I *do write*,
4. *I* DO *write*,
5. *I do* WRITE,
6. WRITE *I do*,
7. *Write* I *do*,
8. *Write I* DO,
9. WRITE *do I*,
10. *Write* DO *I*,
11. *Write do* I.

None of the Latin tenſes admit of more variations than the two abovementioned: nor do almoſt any of the Engliſh admit of fewer than in the above example; and ſeveral of theſe phraſes, which muſt be conſidered as exact tranſlations of ſome of the tenſes of the Latin verb, admit of many more. Thus the imperfect of the ſubjunctive mood, which in Latin admits of the above two variations, admits in Engliſh of the following:

1. *I might have written.*
2. *Written I might have.*
3. *Have written I might.*
4. *Written might have I.*
5. *I written might have.*
6. *Have writtem might I.*

And if we likewiſe conſider the variations which may be produced by a variation of the emphaſis, they will be as under.

1. I *might have written.*
2. *I* MIGHT *have written.*
3. *I might* HAVE *written.*
4. *I might have* WRITTEN.
5. WRITTEN *I might have.*
6. *Written* I *might have.*
7. *Written I* MIGHT *have.*
8. *Written I might* HAVE.
9. HAVE *written I might.*
10. *Have* WRITTEN *I might.*
11. *Have written* I *might.*
12, *Have written I* MIGHT.
13. WRITTEN *might have I.*
14. *Written* MIGHT *have I.*
15. *Written might* HAVE *I.*
16. *Written might have* I.
17. I *written might have.*
18. *I* WRITTEN *might have.*
19. *I written* MIGHT *have.*
20. *I written might* HAVE.
21. HAVE *written might I.*
22. *Have* WRITTEN *might I.*
23. *Have written* MIGHT *I.*
24. *Have written might* I.

In all 24 variations, inſtead of two.—If we likewiſe conſider, that the Latins were obliged to employ the ſame word, not only to expreſs "I *might* have written, but alſo, "I *could*, I *would*, or I *ſhould* have written;" each of which would admit of the ſame variations as the word *might*; we have in all *ninety-ſix* different expreſſions in Engliſh for the ſame phraſe which in Latin admits only of two, unleſs they have recourſe to other forced turns of expreſſion, which the defects of their verbs in this particular has compelled them to invent.

But if it ſhould be objected, that the laſt circumſtance we have taken notice of as a defect, can only be conſidered as a defect of the Latin language, and is not to be attributed to the *inflection* of their verbs, ſeeing they might have had a particular tenſe for each of theſe different words *might*, *could*, *would*, and *ſhould*; we anſwer, that, even admitting this excuſe as valid, the ſuperiority of the analogous language, as ſuch, ſtill remains in this reſpect as 21 to 1.—Yet even this conceſſion is greater than ought to have been made: For as the difficulty of forming a ſufficient variety of words for all the different modifications which a verb may be made to undergo is too great for any rude people

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(D) We are ſufficiently aware, that the laſt variation cannot in ſtrictneſs be conſidered as good language; although many examples of this manner of uſing it in ſerious compoſitions, both in poetry and proſe, might be eaſily produced from the beſt authors in the Engliſh language.—But however unjuſtifiable it may be to uſe it in ſerious compoſition; yet, when judiciouſly employed in works of humour, this and other forced expreſſions of the like nature produce a fine effect, by giving a burleſque air to the language, and beautifully contraſting it to the purer diction of ſolid reaſoning. The ſagacious Shakeſpeake has, on many occaſions, ſhowed how ſucceſsfully theſe may be employed in compoſition, particularly in drawing the character of *ancient Piſtol* in Henry V. Without this liberty, Butler would have found greater difficulty in drawing the inimitable character of Hudibras.—Let this apology ſuffice for our having inſerted this and other variations of the ſame kind; which, although they may be often improper for ſerious compoſition, have ſtill their uſe in language.

ple to overcome; we find, that every nation which has adopted this mode of inflection, not excepting the Greeks themſelves, has been obliged to remain ſatisfied with fewer words than would have been neceſſary even to effect this purpoſe, and make the ſame word ſerve a double, treble, or even quadruple office, as in the Latin tenſe which gave riſe to theſe obſervations: So that, however in phyſical neceſſity this may not be chargeable upon this particular mode of conſtruction, yet in moral certainty it muſt always be the caſe; and therefore we may ſafely conclude, that the mode of varying verbs by *inflection* affords leſs variety in the arrangement of the words of the particular phraſes, than the method of varying them by the help of auxiliaries.

18 Preciſion of meaning, in which the Engliſh is ſuperior to the Latin language.

But if there ſhould ſtill remain any ſhadow of doubt in the mind of the reader, whether the method of varying the verbs by *inflection* is inferior to that by *auxiliaries*, with regard to diverſity of ſounds, or variety of expreſſion; there cannot be the leaſt doubt, but that with reſpect to preciſion, diſtinctneſs, and accuracy, in expreſſing any idea, the latter enjoys a ſuperiority beyond all compariſon.—Thus the Latin verb *Amo*, may be Engliſhed either by the words, *I love*, or *I do love*, and the emphaſis placed upon any of the words that the circumſtances may require; by means of which, the meaning is pointed out with a force and energy which it is altogether impoſſible to produce by the uſe of any ſingle word. The following line from Shakeſpeare's *Othello* may ſerve as an example:

———Excellent wretch!
Perdition catch my ſoul, but *I* DO *love* thee:

In which the ſtrong emphaſis upon the word DO, gives it a force and energy which conveys, in an irreſiſtible manner, a moſt perfect knowledge of the ſituation of the mind of the ſpeaker at the time.—That the whole energy of the expreſſion depends upon this ſeemingly inſignificant word, we may be at once ſatisfied of, by keeping it away in this manner:

———Excellent wretch!
Perdition catch my ſoul, but *I love* thee.

How poor—how tame—how inſignificant is this, when compared with the other! Here nothing remains but a tame aſſertion, uſhered in with a pompous exclamation which could not here be introduced with any degree of propriety. Whereas, in the way that Shakeſpeare has left it to us, it has an energy which nothing can ſurpaſs; for, overpowered with the irreſiſtible force of Deſdemona's charms, this ſtrong exclamation is extorted from the ſoul of Othello in ſpite of himſelf. Surpriſed at this tender emotion, which brings to his mind all thoſe amiable qualities for which he had ſo much eſteemed her, and at the ſame time fully impreſſed with the firm perſuaſion of her guilt, he burſts out into that ſeemingly inconſiſtent exclamation, *Excellent wretch!* and then he adds in the warmth of his ſurpriſe,—thinking it a thing moſt aſtoniſhing that any warmth of affection ſhould ſtill remain in his breaſt, he even confirms it with an oath,—*Perdition catch my ſoul but I* DO *love thee.*—"In ſpite of all the falſehoods with which I know thou haſt deceived me—in ſpite of all the crimes of which I know thee guilty—in ſpite of all thoſe reaſons for which I ought to hate thee—in ſpite of myſelf,—ſtill I find that I love,—yes, I DO love thee." We look upon it as a thing altogether impoſſible to transfuſe the energy of this expreſſion into any language whoſe verbs are regularly inflected.

In the ſame manner we might go through all the other tenſes, and ſhow that the ſame ſuperiority is to be found in each.—Thus, in the *perfect tenſe* of the Latins, inſtead of the ſimple AMAVI, we ſay, I HAVE LOVED; and by the liberty we have of putting the emphaſis upon any of the words which compoſe this phraſe, we can in the moſt accurate manner fix the preciſe idea which we mean to excite: for if we ſay, I *have loved*, with the emphaſis upon the word *I*, it at once points out the perſon as the principal object in that phraſe, and makes us naturally look for a contraſt in ſome other perſon, and the other parts of the phraſe becomes ſubordinate to it;—"HE *has loved* thee much, but I *have loved* thee infinitely more." The Latins too, as they were not prohibited from joining the pronoun with their verb, were alſo acquainted with this excellence, which Virgil has beautifully uſed in this verſe:

———Nos *patriam fugimus;*
TU, *Tityre, lentus in umbra,* &c.

But *we* are not only enabled thus to diſtinguiſh the perſon in as powerful a manner as the Latins, but can alſo with the ſame facility point out any of the other circumſtances as principals; for if we ſay, with the emphaſis upon the word *have*, "I HAVE *loved*," it as naturally points out the time as the principal object, and makes us look for a contraſt in that peculiarity, I HAVE: I *have* loved indeed;—my imagination *has* been lead aſtray—my reaſon *has* been perverted:—but, *now* that time has opened my eyes, I can ſmile at thoſe imaginary diſtreſſes which once perplexed me."—In the ſame manner we can put the emphaſis upon the other word of the phraſe *loved*,—"I *have* LOVED."—Here the paſſion is exhibited as the principal circumſtance; and as this can never be excited without ſome object, we naturally wiſh to know the object of that paſſion—"Who! what have you *loved?*" are the natural queſtions we would put in this caſe. "I have LOVED——Eliza."——In this manner we are, on all occaſions, enabled to expreſs, with the utmoſt preciſion, that particular idea which we would wiſh to excite, ſo as to give an energy and perſpicuity to the language, which can never be attained by thoſe languages whoſe verbs are conjugated by inflection: and if to this we add the inconvenience which all inflected languages are ſubject to, by having too ſmall a number of tenſes, ſo as to be compelled to make one word on many occaſions ſupply the place of two, three, or even four, the balance is turned ſtill more in our favour.—Thus, in Latin, the ſame word AMABO ſtands for *ſhall* or *will* love, ſo that the reader is left to gueſs from the context which of the two meanings it was moſt likely the writer had in view.—In the ſame manner *may* or *can* love are expreſſed by the ſame word AMEM; as are alſo *might*, *could*, *would*, or *ſhould* love, by the ſingle word AMAREM, as we have already obſerved; ſo that the reader is left to gueſs which of theſe four meanings the writer intended to expreſs: which occaſions a perplexity very different from that clear preciſion which our language allows of, by not only pointing out the different words, but alſo by allowing us to put the emphaſis upon any of them we pleaſe, which ſuperadds energy and force to the preciſion it would have had without that aſſiſtance.

19
The method of conjugating verbs by inflection inferior to that which is performed by auxiliaries.

Upon the whole, therefore, after the moſt candid examination, we muſt conclude, that the method of conjugating verbs by *inflection* is inferior to that which is performed by the help of *auxiliaries*;—becauſe it does not afford ſuch a diverſity of ſounds,—nor allow ſuch variety in the arrangement of expreſſion for the ſame thought,—nor give ſo great diſtinction and preciſion in the meaning.—It is, however, attended with one conſiderable advantage above the other method: for as the words of which it is formed are neceſſarily of greater length, and more ſonorous, than in the analogous languages, it admits of a more flowing harmony of expreſſion; for the number of monoſyllables in this laſt greatly checks that pompous dignity which naturally reſults from longer words. Whether this ſingle advantage is ſufficient to counterbalance all the other defects with which it is attended, is left to the judgment of the reader to determine:—but we may remark, before we quit the ſubject, that even this excellence is attended with ſome peculiar inconveniences, which ſhall be more particularly pointed out in the ſequel.

But perhaps it might ſtill be objected, that although the compariſon we have made above may be fair, and the concluſion juſt, with regard to the Latin and Engliſh languages; yet it does not appear clear, that on that account the method of conjugating verbs by *inflection* is *inferior* to that by *auxiliaries*; for although it be allowed that the Latin language is defective in point of tenſes; yet if a language were formed which had a ſufficient number of inflected tenſes to anſwer every purpoſe; if it had for inſtance, a word properly formed for every variation of each tenſe; one for *I love*, another for *I do love*; one for *I ſhall*, another for *I will love*; one for *I might*, another for *I could*, and *would*, and *ſhould love*; and ſo on through all the other tenſes; that this language would not be liable to the objections we have brought againſt the inflection of verbs; and that of courſe, the objections we have brought are only valid againſt thoſe languages which have followed that mode and executed it imperfectly.—We anſwer, that although this would in ſome meaſure remedy the evil, yet it would not remove it entirely. For, in the firſt place, unleſs every verb, or every ſmall number of verbs, were conjugated in one way, having the ſound of the words in each tenſe, and diviſion of tenſes, as we may ſay different from all the other conjugations,—it would always occaſion a ſameneſs of ſound, which would in ſome meaſure prevent that variety of ſounds ſo proper for a language. And even if this could be effected, it would not give ſuch a latitude to the expreſſion as auxiliaries allow: for although there ſhould be two words, one for *I might*, and another for *I could* love; yet as theſe are ſingle words, they cannot be varied; whereas, by auxiliaries, either of theſe can be varied 24 different ways, as has been ſhown above. In the laſt place, no ſingle word can ever expreſs all that variety of meaning which we can do by the help of our auxiliaries and the emphaſis. *I have loved*, if expreſſed by any one word, could only denote at all times one diſtinct meaning; ſo that to give it the power of ours, three diſtinct words at leaſt would be neceſſary. However, if all this were done; that is, if there were a diſtinct conjugation formed for every 40 or 50 verbs;—if each of the tenſes were properly formed, and all of them different from every other tenſe as well as every other verb; and theſe all carried through each of the different perſons, ſo as to be all different from one another;—and if likewiſe there were a diſtinct word to mark each of the ſeparate meanings which the ſame tenſe could be made to aſſume by means of the emphaſis; and if all this infinite variety of words could be formed in a diſtinct manner, different from each other, and harmonious; this language would have powers greater than any that could be formed by auxiliaries, if it were poſſible for the human powers to acquire ſuch a degree of knowledge as to be able to employ it with facility. But how could this be attained, ſince upwards of ten thouſand words would be neceſſary to form the variations of any one verb, and a hundred times that number would not include the knowledge of the verbs alone of ſuch a language (E)!—How much, therefore, ought we to admire the ſimple perſpicuity of our language, which enables us, by the proper application of ten or twelve ſeemingly trifling words, the meaning and uſe of which can be attained with the utmoſt eaſe, to expreſs all that could be expreſſed by this unwieldy apparatus? What can equal the ſimplicity or the power of the one method, but the well known powers of the 24 letters, the knowledge of which can be obtained with ſo much eaſe—and their powers know no limits?—or, what can be compared to the fancied perfection of the other, but the tranſcript of it which the Chineſe ſeem to have formed in their unintelligible language?

Having thus conſidered pretty fully the advantages and defects of each of theſe two methods of varying verbs, we cannot help feeling a ſecret wiſh ariſe in our mind, that there had been a people ſagacious enough to have united the powers of the one method with thoſe of the other; nor can we help being ſurpriſed, that among the changes which took place in the ſeveral languages of Europe after the downfal of the Roman monarchy, ſome of them did not accidentally ſtumble on the method of doing it. From many concurring circumſtances, it ſeems probable that the greateſt

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(E) This aſſertion may perhaps appear to many very much exaggerated: but if any ſhould think ſo, we only beg the favour that he will ſet himſelf to mark all the variations of tenſes, mode, perſon, and number, which an Engliſh verb can be made to aſſume, varying each of theſe in every way that it will admit, both as to the diverſity of expreſſion and the emphaſis; he will ſoon be convinced that we have here ſaid nothing more than enough.

eſt part, if not all the Gothic nations that over-ran Italy at that time, had their verbs varied by the help of auxiliaries; and many of the modern European languages which have ſprung from them, have ſo far borrowed from the Latin, as to have ſome of the tenſes of their verbs inflected: yet the Engliſh alone have in any inſtance combined the joint powers of the two: which could only be done by forming inflections for the different tenſes in the ſame manner as the Latins, and at the ſame time retaining the original method of varying them by auxiliaries; by which means either the one or the other method could have been employed as occaſion required. We have luckily two tenſes formed in that way; the *preſent* of the indicative, and the aoriſt of the *paſt*. In almoſt all our verbs theſe can be declined either with or without auxiliaries. Thus the preſent, without an auxiliary, is, *I love, I write, I ſpeak;* with an auxiliary; *I do love, I do write, I do ſpeak.* In the ſame manner, the paſt tenſe, by inflection, is, *I loved, I wrote, I ſpoke;* by auxiliaries. *I did love, I did ſpeak, I did write.* Every author, who knows any thing of the power of the Engliſh language, knows the uſe which may be made of this diſtinction. What a pity is it that we ſhould have ſtopt ſhort ſo ſoon! how blind was it in ſo many other nations to imitate the defects, without making a proper uſe of that beautiful language which is now numbered among the dead!

20 Analogous and tranſpoſitive languages compared with reſpect to the caſes of nouns.

21 The former ſuperior in diverſity of ſound.

After the verbs, the next moſt conſiderable variation we find between the *analogous* and *tranſpoſitive* languages is in the nouns; the latter varying the different caſes of theſe by *inflection;* whereas the former expreſs all the different variations of them by the help of other words prefixed, called *prepoſitions.* Now, if we conſider the advantages or diſadvantages of either of theſe methods under the ſame heads as we have done the verbs, we ſhall find, that with regard to the firſt particular, viz. variety of ſounds, almoſt the ſame remarks may be made as upon the verbs; for if we compare any particular noun by itſelf, the variety of ſound appears much greater between the different caſes in the *tranſpoſitive,* than between the tranſlation of theſe in the *analogous* language. Thus REX, REGIS, REGI, REGEM, &c. are more diſtinct from one another in point of ſound, than the tranſlation of theſe, *a king, of a king, to a king, a king* &c. But if we proceed one ſtep further, and conſider the variety which is produced in the language *in general* by the one or the other of theſe methods, the caſe is entirely reverſed. For as it would have been impoſſible to form diſtinct variations, different from one another, for each caſe of every noun, they have been obliged to reduce all their nouns into a few general claſſes, called *declenſions,* and to give to all thoſe included under each claſs the ſame termination in every caſe; which produces a like ſimilarity of ſound with what we already obſerved was occaſioned to the verbs from the ſame cauſe; whereas in the analogous languages, as there is no neceſſity for any conſtraint, there is almoſt as great a variety of ſounds as there is of nouns. The Latins have only five different declenſions; ſo that all the great number of words of this general order muſt be reduced to the very ſmall diverſity of ſounds which theſe few claſſes admit of; and even the ſounds of theſe few claſſes are not ſo much diverſified as they might have been, as many of the different *caſes* in the different *declenſions* have exactly the ſame ſounds, as we ſhall have occaſion to remark more fully hereafter. We might here produce examples to ſhow the great *ſimilarity* of ſounds between different nouns in the Latin language, and *variety* in the Engliſh, in the ſame way as we did of the verbs: but as every reader in the leaſt acquainted with theſe two languages can ſatiſfy himſelf in this particular, without any further trouble than by marking down any number of Latin nouns, with their tranſlations into Engliſh, we think it unneceſſary to dwell longer on this particular.

22 Inferior with regard to the arrangement of words in a ſentence; but

But if the inflection of nouns is a diſadvantage to a language in point of diverſity of ſounds, it is very much the reverſe with regard to the variety it allows in the arranging the words of the phraſe. Here, indeed, the tranſpoſitive language ſhines forth in all its glory, and the analogous muſt yield the palm without the ſmalleſt diſpute. For as the *nominative caſe* (or that noun which is the cauſe of the energy expreſſed by the verb) is different from the *accuſative* (or that noun upon which the energy expreſſed by the verb is exerted), theſe may be placed in any ſituation that the writer ſhall think proper, without occaſioning the ſmalleſt confuſion: whereas in the analogous languages, as theſe two different ſtates of the noun are expreſſed by the ſame word, they cannot be diſtinguiſhed but by their poſition alone: ſo that the noun which is the efficient cauſe muſt always precede the verb, and that which is the paſſive ſubject muſt follow; which greatly cramps the harmonious flow of compoſition.—Thus the Latins, without the ſmalleſt perplexity in the meaning, could ſay either *Brutum amavit Caſſius,* or *Caſſius amavit Brutum,* or *Brutum Caſſius amavit,* or *Caſſius Brutum amavit.* As the termination of the word *Caſſius* always points out that it is in the *nominative caſe,* and therefore that he is the perſon from whom the energy proceeds; and in the ſame manner, as the termination of the word *Brutum* points out that it is in the *accuſative caſe,* and conſequently that he is the object upon whom the energy is exerted; the meaning continues ſtill diſtinct and clear, notwithſtanding of all theſe ſeveral variations: whereas in the Engliſh language, we could only ſay *Caſſius loved Brutus,* or, by a more forced phraſeology, *Caſſius Brutus loved:* Were we to reverſe the caſe, as in the Latin, the meaning alſo would be reverſed; for if we ſay *Brutus loved Caſſius,* it is evident, that, inſtead of being the perſon beloved, as before, *Brutus* now becomes the perſon from whom the energy proceeds, and *Caſſius* becomes the object beloved.—In this reſpect, therefore, the analogous languages are greatly inferior to the tranſpoſitive; and indeed it is from this ſingle circumſtance alone that they derive their chief excellence.

But although it thus appears evident, that any language, which has a particular variation of its nouns to diſtinguiſh the *accuſative* from the *nominative caſe,* has an advantage over thoſe languages which have none; yet it does not appear that any other of their *caſes* adds to the variety, but rather the reverſe: for, in Latin, we can only ſay *Amor Dei;* in Engliſh the ſame phraſe may be rendered, either,—*the love of God*—*of God the love,*—or, by a more forced arrangement, *God the love of.* And as theſe oblique caſes, as the Latins called them, except the accuſative, are clearly diſtinguiſhed from one another, and from the nominative, by the prepoſition which accompanies them, we are not confined to any particular arrangement with regard to theſe as with the accuſative, but may place them in what order we pleaſe, as in Milton's elegant invocation at the beginning of Paradiſe Loſt:

> Of man's firſt diſobedience, and the fruit
> Of that forbidden tree, whoſe mortal taſte
> Brought death into the world, and all our wo,
> With loſs of Eden, till one greater man
> Reſtore us, and regain the bliſsful ſeat,
> Sing, heavenly Muſe.

In this ſentence the tranſpoſition is almoſt as great as the Latin language would admit of, and the meaning as diſtinct as if Milton had begun with the plain language of proſe, thus,—"Heavenly muſe, ſing of man's firſt diſobedience," &c.

Before we leave this head, we may remark, that the little attention which ſeems to have been paid to this peculiar advantage derived from the uſe of an accuſative caſe different from the nominative, is ſomewhat ſurpriſing. The Latins, who had more occaſion to attend to this with care than any other nation, and even the Greeks themſelves, have in many caſes overlooked it, as is evident from the various inſtances we meet with in their languages where this is not diſtinguiſhed. For all nouns of the neuter gender both in Greek and Latin have in every declenſion their nominative and accuſative ſingular alike. Nor in the plural of ſuch nouns is there any diſtinction between theſe two caſes; and in Latin all nouns whatever of the third, fourth, and fifth declenſions, of which the number is very conſiderable, have their nominative and accuſative plural alike. So that their language reaps no advantage in this reſpect from almoſt one half of their nouns. Nor have any of the modern languages in Europe, however much they may have borrowed from the ancient languages in other reſpects, attempted to copy from them in this particular; from which perhaps more advantage would have been gained, than from copying all the other ſuppoſed excellencies of their language.—But to return to our ſubject.

23
Greatly ſuperior as to preciſion of meaning.

It remains that we conſider, whether the inflection of nouns gives any advantage over the method of defining them by prepoſitions, in point of diſtinctneſs and preciſion of meaning? But in this reſpect, too, the analogous languages muſt come off victorious. Indeed this is the particular in which their greateſt excellence conſiſts, nor was it, we believe, ever diſputed, but that, in point of accuracy and preciſion, this method muſt excel all others, however it may be defective in other reſpects. We obſerved under this head, when ſpeaking of verbs, that it might perhaps be poſſible to form a language by inflection which ſhould be capable of as great accuracy as in the more ſimple order of auxiliaries: but this would have been ſuch an infinite labour, that it was not to be expected that ever human powers would have been able to accompliſh it. More eaſy would it have been to have formed the ſeveral inflections of the nouns ſo different from one another, as to have rendered it impoſſible ever to miſtake the meaning. Yet even this has not been attempted. And as we find that thoſe languages which have adopted the method of inflecting their verbs are more imperfect in point of preciſion than the other, ſo the ſame may be ſaid of inflecting the nouns: for, not to mention the energy which the analogous languages acquire by putting the accent upon the noun, or its prepoſition (when in an oblique caſe), according as the ſubject may require, to expreſs which variation of meaning no particular variety of words have been invented in any inflected language, they are not even complete in other reſpects. The Latin, in particular, is in many caſes defective, the ſame termination being employed in many inſtances for different caſes of the ſame noun. Thus the genitive and dative ſingular, and nominative and vocative plural, of the firſt declenſion, are all exactly alike, and can only be diſtinguiſhed from one another by the formation of the ſentences;—as are alſo the nominative, vocative, and ablative ſingular, and the dative and ablative plural. In the ſecond, the genitive ſingular, and nominative and vocative plural, are the ſame; as are alſo the dative and ablative ſingular, and dative and ablative plural; except thoſe in UM, whoſe nominative, accuſative, and vocative ſingular, and nominative, accuſative, and vocative plural, are alike. The other three declenſions agree in as many of their caſes as theſe do; which evidently tends to perplex the meaning, unleſs the hearer is particularly attentive to, and well acquainted with, the particular conſtruction of the other parts of the ſentence; all of which is totally removed, and the cleareſt certainty exhibited at once, by the help of prepoſitions in the analogous languages

It will hardly be neceſſary to enter into ſuch a minute examination of the advantages or diſadvantages attending the variation of *adjectives*; as it will appear evident, from what has been already ſaid, that the endowing them with terminations ſimilar to, and correſponding with, *ſubſtantives*, muſt tend ſtill more to increaſe the ſimilarity of ſounds in any language, than any of thoſe particulars we have already taken notice of; and were it not for the liberty which they have, in tranſpoſitive languages, of ſeparating the adjective from the ſubſtantive, this muſt have occaſioned ſuch a jingle of ſimilar ſounds as could not fail to have been moſt diſguſting to the ear: but as it would have been impoſſible in many caſes, in thoſe languages where the verbs and nouns are inflected, to have pronounced the words which ought to have followed each other, unleſs their adjectives could have been ſeparated from the ſubſtantives; therefore, to remedy this inconvenience, they were forced to deviſe this unnatural method of inflecting them alſo; by which means it is eaſy to recogniſe to what ſubſtantive any adjective has a reference, in whatever part of the ſentence it may be placed. In theſe languages, therefore, this inflection, both as to gender, number, and caſe, becomes abſolutely neceſſary; and, by the diverſity which it admitted in the arranging the words of the ſeveral phraſes, might counterbalance the jingle of ſimilar ſounds which it introduced into the language.

24
Theſe two different *idioms* of language compared as to their general effects.

Having thus examined the moſt ſtriking particulars in which the tranſpoſitive and analogous languages differ, and endeavoured to ſhow the general tendency of every one of the particulars ſeparately, it would not be fair to diſmiſs the ſubject without conſidering each of theſe as a whole, and pointing out their general tendency in that light: for we all know, that it often happens in human inventions, that every part which compoſes a whole, taken ſeparately, may appear extremely fine; and yet, when all theſe parts are put together, they may not agree, but produce a jarring and confuſion very different from what we might have expected. We therefore imagine a few remarks upon the genius of each of theſe two diſtinct IDIOMS of language conſidered as a whole will not be deemed uſeleſs.

25
The tranſpoſitive idiom fitteſt for ſolemn compoſition.

26
The analogous for private converſation and written dialogue,

Although all languages agree in this reſpect, that they are the means of conveying the ideas of one man to another; yet as there is an infinite variety of ways in which we might wiſh to convey theſe ideas, ſometimes by the eaſy and familiar mode of converſation, and at other times by more ſolemn addreſſes to the underſtanding, by pompous declamation, &c. it may ſo happen, that the genius of one language may be more properly adapted to the one of theſe than the other, while another language may excel in the oppoſite particular. This is exactly the caſe in the two general IDIOMS of which we now treat. Every particular in a *tranſpoſitive* language, is peculiarly calculated for that ſolemn dignity which is neceſſary for pompous orations. Long ſounding words, formed by the inflection of the different parts of ſpeech,—flowing periods, in which the attention is kept awake by the harmony of the ſounds, and in expectation of that word which is to unravel the whole,—if compoſed by a ſkilful artiſt, are admirably ſuited to that ſolemn dignity and awful grace which conſtitute the eſſence of a public harangue. On the contrary, in private converſation, where the mind wiſhes to unbend itſelf with eaſe, theſe become ſo many clogs which encumber and perplex. At theſe moments we wiſh to transfuſe our thoughts with eaſe and facility—we are tired with every unneceſſary ſyllable—and wiſh to be freed from the trouble of attention as much as may be. Like our ſtate-robes, we would wiſh to lay aſide our pompous language, and enjoy ourſelves at home with freedom and eaſe. Here the ſolemnity and windings of the *tranſpoſitive* language are burdenſome; while the facility with which a ſentiment can be expreſſed in the *analogous* language is the thing that we wiſh to acquire. Accordingly in Terence and Plautus, where the beauties of dialogue are moſt charmingly diſplayed, tranſpoſition is ſparingly uſed. In this humble, though moſt engaging ſphere, the analogous language moves unrivalled;—in this it wiſhes to indulge, and never tires. But it in vain attempts to rival the *tranſpoſitive* in dignity and pomp: The number of monoſyllables interrupt the flow of harmony; and although they may give a greater variety of ſounds, yet they do not naturally poſſeſs that dignified gravity which ſuits the other language. This, then, muſt be conſidered as the ſtriking particular in the genius of theſe two different IDIOMS, which marks their characters.

If we conſider the effects which theſe two different characters of language muſt naturally produce upon the people who employ them, we will ſoon perceive, that the genius of the *analogous* language is much more favourable for the moſt engaging purpoſes of life, the civilizing the human mind by mutual intercourſe of thought, *than the tranſpoſitive*. For as it is chiefly by the uſe of ſpeech that man is raiſed above the brute creation;—as it is by this means he improves every faculty of his mind, and, to the obſervations which he may himſelf have made, has the additional advantage of the experience of thoſe with whom he may converſe, as well as the knowledge which the human race have acquired by the accumulated experience of all preceding ages:—as it is by the enlivening glow of converſation that kindred ſouls catch fire from one another, that thought produces thought, and each improves upon the other, till they ſoar beyond the bounds which human reaſon, if left alone, could ever have aſpired to;—we muſt ſurely conſider that language as the moſt beneficial to ſociety, which moſt effectually removes theſe bars that obſtruct its progreſs. Now, the genius of the *analogous* languages is ſo eaſy, ſo ſimple and plain, as to be within the reach of every one who is born in the country where it is uſed to ſpeak it with facility; even the rudeſt among the vulgar can hardly fall into any conſiderable grammatical errors: whereas, in the *tranſpoſitive* languages, ſo many rules are neceſſary to be attended to, and ſo much variation is produced in the meaning, by the ſlighteſt variations in the ſound, that it requires a ſtudy far above the reach of the illiterate mechanic ever to attain. So that, how perfect ſoever the language may be when ſpoken with purity, the bulk of the nation muſt ever labour under the inconvenience of rudeneſs and inaccuracy of ſpeech, and all the evils which this naturally produces.—Accordingly, we find, that in Rome, a man, even in the higheſt rank, received as much honour, and was as much diſtinguiſhed among his equals, for being able to converſe with eaſe, as a modern author would be for writing in an eaſy and elegant ſtyle; and Cæſar among his contemporaries was as much eſteemed for his ſuperiority in ſpeaking the language in ordinary converſation with eaſe and elegance, as for his powers of oratory, his ſkill in arms, or his excellence in literary compoſition. It is needleſs to point out the many inconveniences which this muſt unavoidably produce in a ſtate. It is ſufficient to obſerve, that it naturally tends to introduce a vaſt diſtinction between the different orders of men; to ſet an impenetrable barrier between thoſe born in a high and thoſe born in a low ſtation; to keep the latter in ignorance and barbarity, while it elevates the former to ſuch a height as muſt ſubject the other to be eaſily led by every popular demagogue.—How far the hiſtory of the nations who have followed this IDIOM of language confirms this obſervation, every one is left to judge for himſelf.

Having thus conſidered LANGUAGE in general, and pointed out the genius and tendency of the two moſt diſtinguiſhed IDIOMS which have prevailed; we ſhall cloſe theſe remarks with a few obſervations upon the particular nature and genius of thoſe languages which are now chiefly ſpoken or ſtudied in Europe.

27
Obſervations on thoſe languages which are now chiefly ſpoken or ſtudied in Europe.

Of all the nations whoſe memory hiſtory has tranſmitted to us, none have been ſo eminently diſtinguiſhed for their literary accompliſhments, as well as acquaintance with the polite arts, as the Greeks; nor are we as yet acquainted with a language poſſeſſed of ſo many advantages, with ſo few defects, as that which they uſed, and which continues ſtill to be known by their name.—The neceſſary connection between the progreſs of knowledge and the improvement of language has been already explained; ſo that it will not be ſurpriſing to find their progreſs in the one keep pace with that of the other: but it will be of utility to point out ſome advantages which that diſtinguiſhed people poſſeſſed, which other nations, perhaps not leſs diſtinguiſhed for talents or taſte, have not enjoyed, which have contributed to render their language the moſt univerſally admired in ancient as well as in modern times.

28
The great ſuperiority of the Greek language, owing to what cauſes.

It has been already obſerved, that the original inhabitants of Greece, who were groſs ſavages, and whoſe language of courſe would be very rude and narrow, were firſt tamed by the Pelaſgi, an eaſtern or an Egyptian tribe. From the eaſt it is well known that arts and ſciences were ſpread over the reſt of the world, and that Egypt was one of the countries firſt civilized. The language therefore imported into Greece by the Pelaſgi would be pure from the fountain head, and much more perfect in this ſtructure than if it had been tranſmitted through many nations. But this was not the only circumſtance highly fortunate for the Greek language. Before it had time to be fully eſtabliſhed among the people, its aſperities, which it had in common with the other dialects of the eaſt, were poliſhed away by ſuch a ſucceſſion of poets, muſicians, philoſophers, and legiſlators, from different countries, as never appeared in any other nation at a period ſo early as to give their genius and taſte its full influence. In this reſpect, no people were ever ſo eminently diſtinguiſhed as the ancient Greeks, who had their Orpheus, their Linus, their Cecrops, and their Cadmus, who introduced their different improvements at a time when the nation had no ſtandard of taſte formed by itſelf Hence the original ſounds of the Greek language are the moſt harmonious, and the moſt agreeable to the ear, of any that have hitherto been invented. They are indeed agreeable to every perſon who hears them, even when the meaning of the words is not underſtood; whereas almoſt all other languages, till they are underſtood, appear, to an ear which has not been accuſtomed to them, jarring and diſcordant. This is the fundamental excellence of that juſtly admired language; nor have the people failed to improve this to the utmoſt of their power, by many aids of their own invention. The Greek language is of the *tranſpoſitive* kind: but a people ſo lively, ſo acute, and ſo loquacious, could ill bear the ceremonious reſtraint to which this mode of language naturally ſubjected them; and have therefore, by various methods, freed it in a great meaſure from the ſtiffneſs which that produced. In inflecting their nouns and verbs, they ſometimes prefix a ſyllable, and ſometimes add one; which, beſides the variety that it gives to the ſounds of the language, adds greatly to the diſtinctneſs, and admits of a more natural arrangement of the words than in the Latin, and of conſequence renders it much fitter for the eaſineſs of private converſation: and indeed the genius of the people ſo far prevailed over the *idiom* of the language, as to render it, in the age of its greateſt perfection, capable of almoſt as much eaſe, and requiring almoſt as little tranſpoſition of words, as thoſe languages which have been called *analogous*. But as thoſe nations who ſpoke this language were all governed by popular aſſemblies, and as no authority could be obtained among them but by a ſkill in rhetoric and the powers of perſuaſion; it became neceſſary for every one, who wiſhed to acquire power of conſideration in the ſtate, to improve himſelf in the knowledge of that language, in the uſe of which alone he could expect honours or reputation. Hence it happened, that while the vivacity of the people rendered it eaſy, the great men ſtudiouſly improved every excellence that it could reap from its powers as a *tranſpoſitive* language; ſo that, when brought to its utmoſt perfection by the amazing genius of the great Demoſthenes, it attained a power altogether unknown to any other language.—Thus happily circumſtanced, the Greek language arrived at that envied pre-eminence which it ſtill juſtly retains. From the progreſs of arts and ſciences; from the gaiety and inventive genius of the people; from the number of free ſtates into which Greece was divided, each of which invented words of its own, all of which contributed to the general ſtock; and from the natural communication which took place between theſe ſtates, which excited in the ſtrongeſt degree the talents of the people; it acquired a copiouſneſs unknown to any ancient language, and excelled by few of the moderns.—In point of harmony of numbers, it is altogether unrivalled; and on account of the eaſe as well as dignity which, from the cauſes abovementioned, it acquired, it admits of perfection in a greater number of particular kinds of compoſition than any other language known.—The irreſiſtible force and overwhelming impetuoſity of Demoſthenes ſeems not more natural to the genius of the language, than the more flowery charms of Plato's calm and harmonious cadences, or the unadorned ſimplicity of Xenophon; nor does the majeſtic pomp of Homer ſeem to be more agreeable to the genius of the language in which he wrote, than the more humble ſtrains of Theocritus, or the laughing feſtivity of Anacreon: Equally adapted to all purpoſes, when we peruſe any of theſe authors, we would imagine the language was moſt happily adapted for his particular ſtyle alone. The ſame powers it likewiſe, in a great meaſure, poſſeſſed for converſation; and the dialogue ſeems not more natural for the dignity of Sophocles or Euripides, than for the more eaſy tenderneſs of Menander, or buffoonery of Ariſtophanes.—With all theſe advantages, however, it muſt be acknowledged, that it did not poſſeſs that unexceptionable clearneſs of meaning which ſome analogous languages enjoy, or that characteriſtic force which the emphaſis properly varied has power to give, were not theſe defects counterbalanced by other cauſes which we ſhall afterwards point out.

29
The Latin language inferior to the Greek; and why

The Romans, a people of fierce and warlike diſpoſitions, for many ages during the infancy of their republic, more intent on purſuing conqueſts and military glory than in making improvements in literature or the fine arts, beſtowed little attention to their language. Of a diſpoſition leſs ſocial or more phlegmatic than the Greeks, they gave themſelves no trouble about rendering their language fit for converſation; and it remained ſtrong and nervous, but, like their ideas, was limited and confined. More diſpoſed to command reſpect by the power of their arms than by the force of perſuaſion, they deſpiſed the more effeminate powers of ſpeech: ſo that, before the Punic wars, their language was perhaps more reſerved and uncourtly than any other at that time known.—But after their rival Carthage was deſtroyed, and they had no longer that powerful curb upon their ambition; when riches flowed in upon them by the multiplicity of their conqueſts; —luxury began to prevail, the ſtern auſterity of their manners to relax, and ſelfiſh ambition to take place of that diſintereſted love of their country ſo eminently conſpicuous among all orders of men before that period.—Popularity began then to be courted: ambitious men, finding themſelves not poſſeſſed of that merit which inſured them ſucceſs with the virtuous ſenate, amuſed the mob with artful and ſeditious harangues; and by making them believe that they were poſſeſſed of all power, and had their ſacred rights encroached upon by the ſenate, led them about at their pleaſure, and got themſelves exalted to honours and riches by theſe inſidious arts. It was then the Romans firſt began to perceive the uſe to which a command of language could be put. Ambitious men then ſtudied it with care, to be able to accompliſh their ends; while the more virtuous were obliged to acquire a ſkill in this, that they might be able to repel the attacks of their adverſaries.—Thus it happened, that in a ſhort time that people, from having entirely neglected, began to ſtudy their language with the greateſt aſſiduity; and as Greece happened to be ſubjected to the Roman yoke about that time, and a friendly intercourſe was eſtabliſhed between theſe two countries, this greatly conſpired to nouriſh in the minds of the Romans a taſte for that art of which they had lately become ſo much enamoured. Greece had long before this period been corrupted by luxury; their taſte for the fine arts had degenerated into unneceſſary refinement; and all their patriotiſm conſiſted in popular harangues and unmeaning declamation. Oratory was then ſtudied as a refined art; and all the ſubtleties of it were taught by rule, with as great care as the gladiators were afterwards trained up in Rome. But while they were thus idly trying who ſhould be the lord of their own people, the nerves of government were relaxed, and they became an eaſy prey to every invading power. In this ſituation they became the *ſubjects*, under the title of the *allies*, of Rome, and introduced among them the ſame taſte for haranguing which prevailed among themſelves. Well acquainted as they were with the powers of their own language, they ſet themſelves with unwearied aſſiduity to poliſh and improve that of their new maſters: but with all their aſſiduity and pains, they never were able to make it arrive at that perfection which their own language had acquired; and in the Auguſtan age, when it had arrived at the ſummit of its glory, Cicero bitterly complains of its want of copiouſneſs in many particulars.

30
It could not be carried to the ſame degree of perfection.

But as it was the deſire of all who ſtudied this language with care, to make it capable of that ſtately dignity and pomp neceſſary for public harangues, they followed the genius of the language in this particular, and in a great meaſure neglected thoſe leſſer delicacies which form the pleaſure of domeſtic enjoyment; ſo that, while it acquired more copiouſneſs, more harmony, and preciſion, it remained ſtiff and inflexible for converſation: nor could the minute diſtinction of nice grammatical rules be ever brought down to the apprehenſion of the vulgar; whence the language ſpoken among the lower claſs of people remained rude and unpoliſhed even to the end of the monarchy. The Huns who over-run Italy, incapable of acquiring any knowledge of ſuch a difficult and abſtruſe language, never adopted it; and the native inhabitants being made acquainted with a language more natural and eaſily acquired, quickly adopted that idiom of ſpeech introduced by their conquerors, although they ſtill retained many of thoſe words which the confined nature of the barbarian language made neceſſary to allow them to expreſs their ideas. And thus it was that the language of Rome, that proud miſtreſs of the world, from an original defect in its formation, although it had been carried to a perfection in other reſpects far ſuperior to any northern language at that time, eaſily gave way to them, and in a few ages the knowledge of it was loſt among mankind, while, on the contrary, the more eaſy nature of the Greek language has ſtill been able to keep ſome ſlight footing in the world, although the nations in which it has been ſpoken have been ſubjected to the yoke of foreign dominion for upwards of two thouſand years, and their country has been twice ravaged by barbarous nations, and more cruelly depreſſed than ever the Romans were.

From the view which we have already given of the Latin language, it appears evident, that its idiom was more ſtrictly tranſpoſitive than that of any other language yet known, and was attended with all the defects to which that idiom is naturally ſubjected: nor could it boaſt of ſuch favourable alleviating circumſtances as the Greek, the prevailing ſounds of the Latin being far leſs harmonious to the ear; and although the formation of the words are ſuch as to admit of full and diſtinct ſounds, and ſo modulated as to lay no reſtraint upon the voice of the ſpeaker; yet, to a perſon unacquainted with the language, they do not convey that enchanting harmony ſo remarkable in the Greek language. The Latin is ſtately and ſolemn; it does not excite diſguſt; but at the ſame time it does not charm the ear, ſo as to make it liſten with delightful attention. To one acquainted with the language indeed, the nervous boldneſs of the thoughts, the harmonious rounding of the periods, the full ſolemn ſwelling of the ſounds, ſo diſtinguiſhable in the moſt eminent writers in that language which have been preſerved to us, all conſpire to make it pleaſing and agreeable.—In theſe admired works we meet with all its beauties, without perceiving any of its defects; and we naturally admire, as perfect, a language which is capable of producing ſuch excellent works.—Yet with all theſe ſeeming excellencies, this language is leſs copious, and more limited in its ſtyle of compoſition, than many modern languages; far leſs capable of preciſion and accuracy than almoſt any of theſe; and infinitely behind them all in point of eaſineſs in converſation. But theſe points have been ſo fully proved already, as to require no further illuſtration.—Of the compoſitions in that language which have been preſerved to us, the

Orations of Cicero are beſt adapted to the genius of the language, and we there ſee it in its utmoſt perfection. In the *Philoſophical Works* of that great author we perceive ſome of its defects; and it requires all the powers of that great man to render his *Epiſtles* agreeable, as theſe have the genius of the language to ſtruggle with.—Next to oratory, hiſtory agrees with the genius of this language: and Cæſar, in his Commentaries, has exhibited the language in its pureſt elegance, without the aid of pomp or foreign ornament.——Among the poets, Virgil has beſt adapted his works to his language. The flowing harmony and pomp of it is well adapted for the epic ſtrain, and the correct delicacy of his taſte rendered him perfectly equal to the taſk. But Horace is the only poet whoſe force of genius was able to overcome the bars which the language threw in his way, and ſucceed in lyric poetry. Were it not for the brilliancy of the thoughts, and acuteneſs of the remarks, which ſo eminently diſtinguiſh this author's compoſitions, his odes would long ere now have ſunk into utter oblivion. But ſo conſcious have all the Roman poets been of the unfitneſs of their language for eaſy dialogue, that almoſt none of them, after Plautus and Terence, have attempted any dramatic compoſitions in that language. Nor have we any reaſon to regret that they neglected this branch of poetry, as it is probable, if they had ever become fond of theſe, they would have been obliged to have adopted ſo many unnatural contrivances to render them agreeable, as would have prevented us (who of courſe would have conſidered ourſelves as bound to follow them) from making that progreſs in the drama which ſo particularly diſtinguiſhes the productions of modern times.

31
The Italian language of Gothic idiom and

The modern *Italian* language, from an inattention too common in literary ſubjects, has been uſually called a *child of the Latin language*, and is commonly believed to be the ancient Latin a little debaſed by the mixture of the barbarous language of thoſe people who conquered Italy. The truth is, the caſe is directly the reverſe: for this language, in its general idiom and fundamental principles, is evidently of the analogous kind, firſt introduced by thoſe fierce invaders, although it has borrowed many of its words, and ſome of its modes of phraſeology, from the Latin, with which they were ſo intimately blended that this could ſcarcely be avoided; and it has been from remarking this ſlight connection ſo obvious at firſt ſight, that ſuperficial obſervers have been led to draw this general concluſion, ſo contrary to fact.

32
Of Latin ſound.

33
Has the defects of both its parent tongues.

When Italy was over-run with the Lombards, and the empire deſtroyed by theſe northern invaders, they, as conquerors, continued to ſpeak their own native language. Fierce and illiterate, they would not ſtoop to the ſervility of ſtudying a language ſo clogged with rules, and difficult of attainment, as the Latin would naturally be to a people altogether unacquainted with nice grammatical diſtinctions: while the Romans of neceſſity were obliged to ſtudy the language of their conquerors, as well to obtain ſome relief of their grievances by prayers and ſupplications, as to deſtroy that odious diſtinction which ſubſiſted between the conquerors and conquered while they continued as diſtinct people. As the language of their new maſters, although rude and confined, was natural in its order, and eaſy to be acquired, the Latins would ſoon attain a competent ſkill in it: and as they bore ſuch a proportion to the whole number of people, the whole language would partake ſomewhat of the general ſound of the former: for, in ſpite of all their efforts to the contrary, the organs of ſpeech could not at once be made to acquire a perfect power of uttering any unaccuſtomed ſounds; and as it behoved the language of the barbarians to be much leſs copious than the Latin, whenever they found themſelves at a loſs for a word, they would naturally adopt thoſe which moſt readily preſented themſelves from their new ſubjects. Thus a language in time was formed, ſomewhat reſembling the Latin both in the general tenor of the ſounds and in the meaning of many words: and as the barbarians gave themſelves little trouble about language, and in ſome caſes perhaps hardly knew the general analogy of their own language, it is not ſurpriſing if their new ſubjects ſhould find themſelves ſometimes at a loſs on that account; or if, in theſe ſituations, they followed, on ſome occaſions, the analogy ſuggeſted to them by their own: which accounts for the ſtrange degree of mixture of heterogeneous grammatical analogy we meet with in the Italian as well as Spaniſh and French languages. The idiom of all the Gothic language is purely analogous; and in all probability, before their mixture with the Latins and other people in their provinces, the ſeveral grammatical parts of ſpeech followed the plain ſimple idea which that ſuppoſes; the verbs and nouns were all probably varied by auxiliaries, and their adjectives retained their ſimple unalterable ſtate:—but by their mixture with the Latins, this ſimple form has been in many caſes altered; their verbs became in ſome caſes inflected; but their nouns in all theſe languages ſtill retained their original form; although they have varied their adjectives, and fooliſhly clogged their nouns with gender, according to the Latin idioms. From this heterogeneous and fortuitous (as we may ſay, becauſe injudicious) mixture of parts, reſults a language poſſeſſing almoſt all the defects of each of the languages of which it is compoſed, with few of the excellencies of either: for it has neither the eaſe and preciſion of the *analogous*, nor the pomp and boldneſs of the *tranſpoſitive*, languages; at the ſame time that it is clogged with almoſt as many rules, and liable to as great abuſes.

Theſe obſervations are equally applicable to the French and Spaniſh as to the Italian language. With regard to this laſt in particular, we may obſerve, that as the natural inhabitants of Italy, before the laſt invaſion of the barbarians, were ſunk and enervated by luxury, and that by depreſſion of mind and genius which anarchy always produces, they had become fond of feaſting and entertainments, and the enjoyment of ſenſual pleaſures conſtituted their higheſt delight; and their language partook of the ſame debility as their body.—The barbarians too, unaccuſtomed to the ſeductions of pleaſure, ſoon fell from their original boldneſs and intrepidity, and, like Hannibal's troops of old, were enervated by the ſenſual gratifications in which a nation of conquerors unaccuſtomed to the reſtraint of government freely indulged. The ſoftneſs of the air, the fertility of the climate, the unaccuſtomed

34
And though flowing and harmonious, is too ſenſible for the higheſt ſpecies of compoſition.

flow of riches which they at once acquired, together with the voluptuous manner of their conquered ſubjects; all conſpired to enervate their minds, and render them ſoft and effeminate. No wonder then, if a language new-moulded at this juncture ſhould partake of the genius of the people who formed it; and inſtead of participating of the martial boldneſs and ferocity of either of their anceſtors, ſhould be ſoftened and enfeebled by every device which an effeminate people could invent.—The ſtrong conſonants which terminated the words, and gave them life and boldneſs, being thought too harſh for the delicate ears of theſe ſons of ſloth, were baniſhed their language; while ſonorous vowels, which could be protracted to any length in muſic, were ſubſtituted in their ſtead.—Thus the Italian language is formed flowing and harmonious, but deſtitute of thoſe nerves which conſtitute the ſtrength and vigour of a language: at the ſame time, the ſounds are neither enough diverſified, nor in themſelves of ſuch an agreeable tone, as to afford great pleaſure without the aid of muſical notes; and the ſmall pleaſure which this affords is ſtill leſſened by the little variety of meaſures which the great ſimilarity of the terminations of the words occaſions. Hence it happens, that this language is fitted for excelling in fewer branches of literature than almoſt any other: and although we have excellent hiſtorians, and more than ordinary poets, in Italian, yet they labour under great inconveniences, from the language wanting nerves and ſtatelineſs for the former, and ſufficient variety of modulation for the latter. It is, more particularly on this account, altogether unfit for an epic poem: and though attempts have been made in this way by two men whoſe genius, if not fettered by the language, might have been crowned with ſucceſs; yet theſe, notwithſtanding the fame that with ſome they may have acquired, muſt, in point of poetic harmony, be deemed defective by every impartial perſon. Nor is it poſſible that a language which hardly admits of poetry without rhime, can ever be capable of producing a perfect poem of great length; and the ſtanza to which their poets have ever confined themſelves, muſt always produce the moſt diſagreeable effect in a poem where unreſtrained pomp or pathos are neceſſary qualifications. The only ſpecies of poetry in which the Italian language can claim a ſuperior excellence, is the tender tone of elegy: and here it remains unrivalled and alone; the plaintive melody of the ſounds, and ſmooth flow of the language, being perfectly adapted to expreſs that ſoothing melancholy which this ſpecies of poetry requires. On this account the plaintive ſcenes of the *Paſtor Fido* of *Guarini* have juſtly gained to that poem an univerſal applauſe; although, unleſs on this account alone, it is perhaps inferior to almoſt every other poem of the kind which ever appeared.—We muſt obſerve with ſurpriſe, that the Italians, who have fettered every other ſpecies of poetry with the ſevereſt ſhackles of rhime, have in this ſpecies ſhowed an example of the moſt unreſtrained freedom; the happy effects of which ought to have taught all Europe the powerful charms attending it: yet with amazement we perceive, that ſcarce an attempt to imitate them has been made by any poet in Europe except by Milton in his Lycidas; no dramatic poet, even in Britain, having ever adopted the unreſtrained harmony of numbers to be met with in this and many other of their beſt dramatic compoſitions.

35
The excellency of the Spaniſh tongue.

Of all the languages which ſprung up from the mixture of the Latins with the northern people on the deſtruction of the Roman empire, none of them approach ſo near to the genius of the Latin as the Spaniſh does. For as the Spaniards have been always remarkable for their military proweſs and dignity of mind, their language is naturally adapted to expreſs ideas of that kind. Sonorous and ſolemn, it admits nearly of as much dignity as the Latin. For converſation, it is the moſt elegant and courteous language in Europe.

The humane and generous order of chivalry was firſt invented, and kept its footing longeſt, in this nation; and although it run at laſt into ſuch a ridiculous exceſs as deſervedly made it fall into univerſal diſrepute, yet it left ſuch a ſtrong tincture of romantic heroiſm upon the minds of all ranks of people, as made them jealous of their glory, and ſtrongly emulous of cultivating that heroic politeneſs, which they conſidered as the higheſt perfection they could attain. Every man diſdained to flatter, or to yield up any point of honour which he poſſeſſed; at the ſame time, he rigorouſly exacted from others all that was his due. Theſe circumſtances have given riſe to a great many terms of reſpect, and courteous condeſcenſion, without meanneſs or flattery, which give their dialogue a reſpectful politeneſs and elegance unknown to any other European language. This is the reaſon why the characters ſo finely drawn by Cervantes in Don Quixotte are ſtill unknown to all but thoſe who underſtand the language in which he wrote. Nothing can be more unlike the gentle meekneſs and humane heroiſm of the knight, or the native ſimplicity, warmth of affection, and reſpectful loquacity of the ſquire, than the inconſiſtent follies of the one, or the impertinent forwardneſs and diſreſpectful petulance of the other, as they are exhibited in every Engliſh tranſlation. Nor is it, as we imagine, poſſible to repreſent ſo much familiarity, united with ſuch becoming condeſcenſion in the one, and unfeigned deference in the other, in any other European language, as is neceſſary to paint theſe two admirable characters.

Although this language, from the ſolemn dignity and majeſtic elegance of its ſtructure, is perhaps better qualified than any other modern one for the ſublime ſtrains of epic poetry; yet as the poets of this nation have all along imitated the Italians by a moſt ſervile ſubjection to rhime, they never have produced one poem of this ſort, which in point of poeſy of ſtyle deſerves to be tranſmitted to poſterity. And in any other ſpecies of poetry but this, or the higher tragedy, it is not naturally fitted to excel. But although the drama and other polite branches of literature were early cultivated in this country, and made conſiderable progreſs in it, before the thirſt of gain debaſed their ſouls, or the deſire of univerſal dominion made them forfeit that liberty which they once ſo much prized; ſince they became enervated by an overbearing pride, and their minds enſlaved by ſuperſtition, all the polite arts have been neglected: ſo that, while other European nations have been advancing in knowledge, and improving their language, they have remained in a ſtate of torpid inactivity; and their language has not arrived at that perfection which its nature would admit, or the acute genius of the people might have made us naturally expect.

36 The French language deficient in dignity and energy; but

It will perhaps by ſome be thought an unpardonable inſult, if we do not allow the French the preference of all modern languages in many reſpects. But ſo far muſt we pay a deference to truth, as to be obliged to rank it among the pooreſt languages in Europe. Every other language has ſome ſounds which can be uttered clearly by the voice: even the Italian, although it wants energy, ſtill poſſeſſes diſtinctneſs of articulation. But the French is almoſt incapable of either of theſe beauties; for in that language the vowels are ſo much curtailed in the pronunciation, and the words run into one another in ſuch a manner, as neceſſarily to produce an indiſtinctneſs which renders it incapable of meaſure or harmony. From this cauſe, it is in a great meaſure incapable of poetic modulation, and rhime has been obliged to be ſubſtituted in its ſtead; ſo that this pooreſt of all contrivances which has ever yet been invented to diſtinguiſh poetry from proſe, admitted into all the modern languages when ignorance prevailed over Europe, has ſtill kept ſome footing in the greateſt part of theſe, rather through a deference for eſtabliſhed cuſtoms than from any neceſſity. Yet as the French language admits of ſo little poetic modulation, rhime is in ſome meaſure *neceſſary* to it; and therefore this poor deviation from proſe has been adopted by it, and dignified with the name of *Poetry*. But by their blind atttachment to this artifice, the French have neglected to improve ſo much as they might have done the ſmall powers for harmony of which their language is poſſeſſed; and by being long accuſtomed to this falſe taſte, they have become fond of it to ſuch a ridiculous exceſs, as to have all their tragedies, nay even their comedies, in rhime. While the poet is obliged to enervate his language, and check the flow of compoſition, for the ſake of linking his lines together, the judicious actor finds more difficulty in deſtroying the appearance of that meaſure, and preventing the clinking of the rhimes, than in all the reſt of his taſk.—After this, we will not be ſurpriſed to find Voltaire attempt an epic poem in this ſpecies of poetry: although the more judicious Fenelon in his *Telemaque* had ſhown to his countrymen the only ſpecies of poeſy that their language could admit of for any poem which aſpired to the dignity of the epic ſtrain.—Madam Deſhouliers, in her *Idyllie*, has ſhown the utmoſt extent of harmony to which their language can attain in ſmaller poems: indeed in the tenderneſs of an elegy, or the gaiety of a ſong, it may ſucceed; but it is ſo deſtitute of force and energy, that it can never be able to reach the pindaric, or even perhaps the lyric ſtrain,—as the ineffectual efforts even of the harmonious Rouſſeau, in his tranſlation of the Pſalms of David of this ſtamp, may fully convince us.

With regard to its powers in other ſpecies of compoſition, the ſententious rapidity of Voltaire, and the more nervous dignity of Rouſſeau, afford us no ſmall preſumption, that, in a ſkilful hand, it might acquire ſo much force, as to tranſmit to futurity hiſtorical facts in a ſtyle not altogether unworthy of the ſubject. In attemps at pathetic declamation, the ſuperior abilities of the compoſer may perhaps on ſome occaſions excite a great idea; but this is ever cramped by the genius of the language: and although no nation in Europe can boaſt of ſo many orations where this grandeur is attempted; yet perhaps there are few who cannot produce more perfect, although not more laboured, compoſitions of this kind.

37 Admirably fitted for light converſation.

But notwithſtanding the French language labours under all theſe inconveniences; although it can neither equal the dignity or genuine politeneſs of the Spaniſh, the nervous boldneſs of the Engliſh, nor the melting ſoftneſs of the Italian; although it is deſtitute of poetic harmony, and ſo much cramped in ſound as to be abſolutely unfit for almoſt every ſpecies of muſical compoſition (F); yet the ſprightly genius of that volatile people has been able to ſurmount all theſe difficulties, and render it the language moſt generally eſteemed, and moſt univerſally ſpoken, of any in Europe; for this people, naturally gay and loquacious, and fond to exceſs of thoſe ſuperficial accompliſhments which engage the attention of the fair ſex, have invented ſuch an infinity of words capable of expreſſing vague and unmeaning compliment, now dignified by the name of *politeneſs*, that, in this ſtrain, one who uſes the French can never be at a loſs; and as it is eaſy to converſe *more*, and really ſay *leſs*, in this than in any other language, a man of very moderate talents may diſ-

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(F) An author of great diſcernment, and well acquainted with the French language, has lately made the ſame remark; and as the loftineſs of his genius often prevents him from bringing down his illuſtrations to the level of ordinary comprehenſion, he has on this and many other occaſions been unjuſtly accuſed of being fond of paradoxes.—But as muſic never produces its full effect but when the tones it aſſumes are in uniſon with the idea that the words naturally excite, it of neceſſity follows, that if the words of any language do not admit of that fullneſs of ſound, or that ſpecies of tones, which the paſſion or affection that may be deſcribed by the words would naturally require to excite the ſame idea in the mind of one who was unacquainted with the language, it will be impoſſible for the muſic to produce its full effect, as it will be cramped and confined by the ſound of the words;—and as the French language does not admit of thoſe full and open ſounds which are neceſſary for pathetic expreſſion in muſic, it muſt of courſe be unfit for muſical compoſition.—It is true indeed, that in modern times, in which ſo little attention is beſtowed on the ſimple and ſublime charms of pathetic expreſſion, and a fantaſtical tingling of unmeaning ſounds is called *muſic*—where the ſenſe of the words are loſt in fugues, quavers, and unneceſſary repetition of particular ſyllables,—all languages are nearly fitted for it; and among theſe the French: nor is it leſs to be doubted, that, in the eaſy gaiety of a ſong, this language can properly enough admit of all the muſical expreſſion which that ſpecies of compoſition may require.

diſtinguiſh himſelf much more by uſing this than any other that has ever yet been invented. On this account, it is peculiarly well adapted to that ſpecies of converſation which muſt ever take place in thoſe general and promiſcuous companies, where many perſons of both ſexes are met together for the purpoſes of relaxation or amuſement; and muſt of courſe be naturally admitted into the courts of princes, and aſſemblies of great perſonages; who, having fewer equals with whom they can aſſociate, are more under a neceſſity of converſing with ſtrangers, in whoſe company the tender ſtimulus of friendſhip does not ſo naturally expand the heart to mutual truſt or unreſtrained confidence. In theſe circumſtances, as the heart remaineth diſengaged, converſation muſt neceſſarily flag; and mankind in this ſituation will gladly adopt that language in which they can converſe moſt eaſily without being deeply intereſted. On theſe accounts the French now is, and probably will continue to be, reckoned the moſt polite language in Europe, and therefore the moſt generally ſtudied and known: nor ſhould we envy them this diſtinction, if our countrymen would not weaken and enervate their own manly language, by adopting too many of their unmeaning phraſes.

38
The excellencies and defects of the Engliſh tongue.

The Engliſh is perhaps poſſeſſed of a greater degree of excellence, blended with a greater number of defects, than any of the languages we have hitherto mentioned. As the people of Great Britain are a bold, daring, and impetuous race of men, ſubject to ſtrong paſſions, and, from the abſolute freedom and independence which reigns amongſt all ranks of people throughout that iſle, little ſolicitous about controlling theſe paſſions;—our language takes its ſtrongeſt characteriſtical diſtinction from the genius of the people; and, being bold, daring, and abrupt, is admirably well adapted to expreſs thoſe great emotions which ſpring up in an intrepid mind at the proſpect of intereſting events. Peculiarly happy too in the full and open ſound of the vowels, which forms the characteriſtic *tone* of the language, and in the ſtrong uſe of the aſpirate H in almoſt all thoſe words which are uſed as exclamations, or marks of ſtrong emotions upon intereſting occaſions, that particular claſs of words called *interjections* have, in our language, more of that fulneſs and unreſtrained freedom of tones, in which their chief power conſiſts, and are puſhed forth from the inmoſt receſſes of the ſoul in a more forcible and unreſtrained manner, than any other language whatever. Hence it is more peculiarly adapted for the great and intereſting ſcenes of the *drama* than any language that has yet appeared on the globe. Nor has any other nation ever arrived at that perfection which the Engliſh may juſtly claim in that reſpect; for however faulty our dramatic compoſitions may be in ſome of the critical niceties which relate to this art,—in nervous force of diction, and in the natural expreſſion of thoſe great emotions which conſtitute its ſoul and energy, we claim, without diſpute, an unrivalled ſuperiority. Our language too, from the great intercourſe that we have had with almoſt all the nations of the globe by means of an extenſive commerce, and from the eminent degree of perfection which we have attained in all the arts and ſciences, has acquired a copiouſneſs beyond what any other modern language can lay claim to: and even the moſt partial favourers of the Greek language are forced to acknowledge, that in this reſpect it muſt give place to the Engliſh. Nor is it leſs happy in that facility of conſtruction which renders it more peculiarly adapted to the genius of a free people, than any other form of language. Of an *idiom* purely analogous, it has deviated leſs from the genius of that *idiom*, and poſſeſſes more of the characteriſtic advantages attending it than any other language that now exiſts: for, while *others*, perhaps by their more intimate connection with the Romans, have adopted ſome of their tranſpoſitions, and clogged their language with unneceſſary fetters, *we* have preſerved ourſelves free from the contagion, and ſtill retain the primitive ſimplicity of our language. Our *verbs* are all varied by auxiliaries (except in the inſtance we have already given, which is ſo much in our favour): our *nouns* remain free from the perplexing embarraſſment of *genders*, and our pronouns mark this diſtinction where neceſſary with the moſt perfect accuracy; our *articles* alſo are of courſe freed from this unnatural encumbrance, and our *adjectives* preſerve their natural freedom and independence. From theſe cauſes, our language follows an order of conſtruction ſo natural and eaſy, and the rules of *ſyntax* are ſo few and obvious, as to be within the reach of the moſt ordinary capacity. So that from this, and the great clearneſs and diſtinctneſs of meaning with which this mode of conſtruction is neceſſarily accompanied, it is much better adapted for the familiar intercourſe of private ſociety, and liable to fewer errors in uſing it, than any other language yet known; and on this account we may boaſt, that in no nation of Europe do the lower claſs of people ſpeak their language with ſo much accuracy, or have their minds ſo much enlightened by knowledge, as in Great Britain and America.——What then ſhall we ſay of the diſcernment of thoſe grammarians, who are every day echoing back to one another complaints of the poverty of our language on account of the few and ſimple rules which it requires in ſyntax? As juſtly might we complain of an invention in mechanics, which, by means of one or two ſimple movements, obvious to an ordinary capacity, little liable to accidents, and eaſily put in order by the rudeſt hand, ſhould poſſeſs the whole powers of a complex machine, which had required an infinite apparatus of wheels and contrary movements, the knowledge of which could only be acquired, or the various accidents to which it was expoſed by uſing it be repaired, by the powers of an ingenious artiſt, as complain of this characteriſtic excellence of our language as a defect.

But if we thus enjoy in an eminent degree the advantages attending an *analogous* language, we likewiſe feel in a conſiderable meaſure the defects to which it is expoſed; as the number of monoſyllables with which it always muſt be embarraſſed, notwithſtanding the great improvements which have been made in our language ſince the revival of letters in Europe, prevents in ſome degree that ſwelling fulneſs of ſound which ſo powerfully contributes to harmonious dignity and graceful cadences in literary compoſitions. And as the genius of the people of Britain has always been more diſpoſed to the rougher arts of command than to the ſofter inſinuations of perſuaſion, no pains have been taken to correct theſe natural defects of our language; but, on the contrary, by an inattention of which we have hardly a parallel in the hiſtory of any civilized nation, we meet with many inſtances, even within this laſt century, of the harmony of ſound being ſacrificed to that brevity ſo deſirable in converſation, as many elegant words have been curtailed, and harmonious ſyllables ſuppreſſed, to ſubſtitute in their ſtead others, ſhorter indeed, but more barbarous and uncouth. Nay, ſo little attention have our forefathers beſtowed upon the harmony of ſounds in our language, that one would be tempted to think, on looking back to its primitive ſtate, that they had on ſome occaſions ſtudiouſly debaſed it. Our language, at its firſt formation, ſeems to have laboured under a capital defect in point of ſound, as ſuch a number of S's enter into the formation of our words, and ſuch a number of letters and combinations of other letters aſſume a ſimilar ſound, as to give a general hiſs through the whole tenor of our language, which muſt be exceedingly diſagreeable to every unprejudiced ear. We would therefore have naturally expected, that at the revival of letters, when our forefathers became acquainted with the harmonious languages of Greece and Rome, they would have acquired a more correct taſte, and endeavoured, if poſſible, to diminiſh the prevalence of this diſguſting ſound. But ſo far have they been from thinking of this, that they have multiplied this letter exceedingly. The plurals of almoſt all our nouns were originally formed by adding the harmonious ſyllable *en* to the ſingular, which has given place to the letter *s*; and inſtead of *houſen* formerly, we now ſay *houſes*. In like manner, many of the variations of our verbs were formed by the ſyllable *eth*, which we have likewiſe changed into the ſame diſagreeable letter; ſo that, inſtead of *loveth*, *moveth*, *writeth*, *walketh*, &c. we have changed them into the more modiſh form of *loves*, *moves*, *writes*, *walks*, &c. Our very auxiliary verbs have ſuffered the ſame change; and inſtead of *hath* and *doth*, we now make uſe of *has* and *does*. From theſe cauſes, notwithſtanding the great improvements which have been made in language, within theſe few centuries, in other reſpects; yet, with regard to the pleaſingneſs of ſound alone, it was perhaps much more perfect in the days of Chaucer than at preſent: and although cuſtom may have rendered theſe ſounds ſo familiar to our ear, as not to affect us much; yet to an unprejudiced perſon, unacquainted with our language, we have not the ſmalleſt doubt but the language of *Bacon* or *Sidney* would appear more harmonious than that of *Robertſon* or *Hume*. This is indeed the fundamental defect of our language, and loudly calls for reformation.

But notwithſtanding this great and radical defect with regard to pleaſingneſs of ſounds, which muſt be ſo ſtrongly perceived by every one who is unacquainted with the meaning of our words; yet to thoſe who underſtand the language, the exceeding copiouſneſs which it allows in the choice of words proper for the occaſion, and the nervous force which the perſpicuity and graceful elegance the emphaſis beſtows upon it, makes this defect be totally overlooked; and we could produce ſuch numerous works of proſe, which excel in almoſt every different ſtyle of compoſition, as would be tireſome to enumerate: every reader of taſte and diſcernment will be able to recollect a ſufficient number of writings which excel in point of ſtyle, between the graceful and becoming gravity ſo conſpicuous in all the works of the author of the *Whole Duty of Man*, and the animated and nervous diction of Robertſon in his Hiſtory of Charles the Fifth,—the more flowery ſtyle of Shafteſbury, or the Attic ſimplicity and elegance of Addiſon. But although we can equal if not ſurpaſs, every modern language in works of proſe, it is in its poetical powers that our language ſhines forth with the greateſt luſtre. The brevity to which we muſt here neceſſarily confine ourſelves, prevents us from entering into a minute examination of the poetical powers of our own, compared with other languages; otherwiſe it would be eaſy to ſhow, that every other modern language labours under great reſtraints in this reſpect which ours is freed from;—that our language, admits of a greater variety of poetic movements, and diverſity of cadence, than any of the admired languages of antiquity; that it diſtinguiſhes with the greateſt accuracy between accent and quantity, and is poſſeſſed of every other poetic excellence which their languages were capable of: ſo that we are poſſeſſed of all the ſources of harmony which they could boaſt; and, beſides all theſe, have one ſuperadded, which is the cauſe of greater variety and more forcible expreſſion in numbers than all the reſt; that is, the unlimited power given by the emphaſis over quantity and cadence; by means whereof, a neceſſary union between ſound and ſenſe, numbers and meaning, a verſification, unknown to the ancients, has been brought about, which gives our language in this reſpect a ſuperiority over all thoſe juſtly admired languages. But as we cannot here farther purſue this ſubject, we ſhall only obſerve, that theſe great and diſtinguiſhing excellencies far more than counterbalance the inconveniences that we have already mentioned: and although, in mere pleaſantneſs of ſounds, or harmonious flow of ſyllables, our language may be inferior to the Greek, the Latin, Italian, and Spaniſh; yet in point of manly dignity, graceful variety, intuitive diſtinctneſs, nervous energy of expreſſion, unconſtrained freedom and harmony of poetic numbers, it will yield the palm to none. Our immortal Milton, ſlowly riſing, in graceful majeſty ſtands up as equal, if not ſuperior in theſe reſpects to any poet, in any other language, that ever yet exiſted;—while Thomſon, with more humble aim, in melody more ſmooth and flowing, ſoftens the ſoul to harmony and peace:—the plaintive moan of Hammond calls forth the tender tear and ſympathetic ſigh; while Gray's more ſoothing melancholy fixes the ſober mind to ſilent contemplation:—more tender ſtill than theſe, the amiable Shenſton comes; and from his Doric reed, ſtill free from courtly affectation, flows a ſtrain ſo pure, ſo ſimple, and of ſuch tender harmony, as even Arcadian ſhepherds would be proud to own. But far before the reſt, the daring Shakeſpeare ſteps forth conſpicuous, clothed in native dignity; and, preſſing forward with unremitting ardour, boldly lays claim to both dramatic crowns held out to him by Thalia and Melpomene:—his rivals, far behind, look up, and envy him:

him for theſe unfading glories; and the aſtoniſhed nations round, with diſtant awe, behold and tremble at his daring flight.——Thus the language, equally obedient to all, bends with eaſe under their hands, whatever form they would have it aſſume; and, like the yielding wax, readily receives, and faithfully tranſmits to poſterity, thoſe impreſſions which they have ſtamped upon it.

Such are the principal outlines of the Engliſh language, ſuch are its beauties, and ſuch its moſt capital defects; a language more peculiarly circumſtanced than any that has ever yet appeared.—It is the language of a great and powerful nation, whoſe fleets ſurround the globe, and whoſe merchants are in every port; a people admired or revered by all the world:—and yet it is leſs known in every foreign country than many of the other languages in Europe. In it are written more perfect treatiſes on every art and ſcience than are to be found in any other language;—yet it is leſs ſought after or eſteemed by the literati in any part of the globe than almoſt any of theſe. Its ſuperior powers for every purpoſe of language are ſufficiently obvious from the models of perfection in almoſt every particular which can be produced in it:—yet it is neglected, deſpiſed, and vilified by the people who uſe it; and many of thoſe authors who owe almoſt the whole of their fame to the excellence of the language, in which they wrote, look upon that very language with the higheſt contempt. Neglected and deſpiſed, it has been trodden under foot as a thing altogether unworthy of cultivation or attention. Yet in ſpite of all theſe inconveniences, in ſpite of the many wounds it has thus received, it ſtill holds up its head, and preſerves evident marks of that comelineſs and vigour which are its characteriſtical diſtinction. Like a healthy oak planted in a rich and fertile ſoil, it has ſprung up with vigour: and although neglected, and ſuffered to be over-run with weeds; although expoſed to every blaſt, and unprotected from every violence; it ſtill beareth up under all theſe inconveniences, and ſhoots up with a robuſt healthineſs and wild luxuriance of growth. Should this plant, ſo ſound and vigorous, be now cleared from thoſe weeds with which it has been ſo much encumbered;—ſhould every obſtacle which now buries it under thick ſhades, and hides it from the view of every paſſenger, be cleared away;—ſhould the ſoil be cultivated with care, and a ſtrong fence be placed around it, to prevent the idle or the wicked from breaking or diſtorting its branches;—who can tell with what additional vigour it would flouriſh, or what amazing magnitude and perfection it might at laſt attain!—How would the aſtoniſhed world behold, with reverential awe, the majeſtic gracefulneſs of that object which they ſo lately deſpiſed!

Beauty of LANGUAGE *conſidered in regard to Compoſition.* The beauties of language may be divided into three claſſes: 1. Thoſe which ariſe from ſound; 2. Thoſe which reſpect ſignificance; 3. Thoſe derived from a reſemblance between ſound and ſignification.

Elements of Crit.

I. *With reſpect to ſound.* In a curſory view, one would imagine, that the agreeableneſs or diſagreeableneſs of a word with reſpect to ſound, ſhould depend upon the agreeableneſs or diſagreeableneſs of its component ſyllables: which is true in part, but not entirely; for we muſt alſo take under conſideration the effect of ſyllables in ſucceſſion. In the firſt place, ſyllables in immediate ſucceſſion, pronounced each of them with the ſame, or nearly the ſame, aperture of the mouth, produce a ſucceſſion of weak and feeble ſounds; witneſs the French words *dit-il, pathetique*: on the other hand, a ſyllable of the greateſt aperture ſucceeding one of the ſmalleſt, or the contrary, makes a ſucceſſion which, becauſe of its remarkable diſagreeableneſs, is diſtinguiſhed by a proper name, viz. *hiatus*. The moſt agreeable ſucceſſion is, where the cavity is increaſed and diminiſhed alternately, within moderate limits: examples, *Alternative, longevity, puſillanimous*. Secondly, words conſiſting wholly of ſyllables pronounced ſlow, or of ſyllables pronounced quick, commonly called *long* and *ſhort ſyllables*, have little melody in them; witneſs the words *petitioner, fruiterer, dizzineſs*: on the other hand, the intermixture of long and ſhort ſyllables is remarkably agreeable; for example, *degree, repent, wonderful, altitude, rapidity, independent, impetuoſity*; the cauſe of which is explained in POETRY, Part II.

To proceed to the muſic of periods. As the arrangement of words in ſucceſſion, ſo as to afford the greateſt pleaſure to the ear, depends on principles remote from common view, it will be neceſſary to premiſe ſome general obſervations upon the appearance that objects make when placed in an increaſing or decreaſing ſeries; which appearance will vary according to the prevalence of reſemblance or of contraſt. Where the objects vary by ſmall differences ſo as to have a mutual reſemblance, we in aſcending conceive the ſecond object of no greater ſize that the firſt, the third of no greater ſize than the ſecond, and ſo of the reſt; which diminiſheth in appearance the ſize of every object except the firſt: but when beginning at the greateſt object, we proceed gradually to the leaſt, reſemblance makes us imagine the ſecond as great as the firſt, and the third as great as the ſecond; which in appearance magnifies every object except the firſt. On the other hand, in a ſeries varying by large differences, where contraſt prevails, the effects are directly oppoſite: a great object ſucceeding a ſmall one of the ſame kind, appears greater than uſual; and a little object ſucceeding one that is great, appears leſs than uſual ‡. Hence a remarkable pleaſure in viewing a ſeries aſcending by large differences; directly oppoſite to what we feel when the differences are ſmall. The leaſt object of a ſeries aſcending by large differences has the ſame effect upon the mind as if it ſtood ſingle without making a part of the ſeries: but the ſecond object, by means of contraſt, appears greater than when viewed ſingly and apart; and the effect is perceived in aſcending progreſſively, till we arrive at the laſt object. The oppoſite effect is produced in deſcending; for in this direction, every object, except the firſt, appears leſs than when viewed ſeparately and independent of the ſeries. We may then aſſume as a maxim, which will hold in the compoſition of language as well as of other ſubjects, That a ſtrong impulſe ſucceeding a weak, makes a double impreſſion on the mind; and that a weak impulſe ſucceeding a ſtrong, makes ſcarce any impreſſion.

‡ See *Reſemblance.*

After eſtabliſhing this maxim, we can be at no loſs.

about its application to the ſubject in hand. The following rule is laid down by Diomedes †. "In verbis obſervandum eſt, ne a majoribus ad minora deſcendat oratio; melius enim dicitur, *Vir eſt optimus*, quam, *Vir optimus eſt.*" This rule is alſo applicable to entire members of a period, which, according to our author's expreſſion, ought not, more than ſingle words, to proceed from the greater to the leſs, but from the leſs to the greater. In arranging the members of a period, no writer equals Cicero: The following examples are too beautiful to be ſlurred over by a reference.

Quicum quæſtor fueram,
Quicum me ſors conſuetudoque majorum,
Quicum me deorum hominumque judicium conjunxerat.

Again:

Habet honorem quem petimus,
Habet ſpem quam præpoſitam nobis habemus,
Habet exiſtimationem, multo ſudore, labore, vigiliiſque, collectam.

Again:

Eripite nos ex miſeriis,
Eripite nos ex faucibus eorum,
Quorum crudelitas noſtro ſanguine non poteſt expleri.
De oratore, l. 1. § 52.

This order of words or members gradually increaſing in length, may, ſo far as concerns the pleaſure of ſound, be denominated *a climax in ſound*.

With reſpect to the muſic of periods as united in a diſcourſe this depends chiefly on variety. Hence a rule for arranging the members of different periods with relation to each other, that to avoid a tedious uniformity of ſound and cadence, the arrangement, the cadence, and the length of the members, ought to be diverſified as much as poſſible: and if the members of different periods be ſufficiently diverſified, the periods themſelves will be equally ſo.

II. *With reſpect to ſignification.* The beauties of language with reſpect to ſignification, may not improperly be diſtinguiſhed into two kinds: firſt, the beauties that ariſe from a right choice of words or materials for conſtructing the period; and next, the beauties that ariſe from a due arrangement of theſe words or materials.

1. Communication of thought being the chief end of language, it is a rule, That perſpicuity ought not to be ſacrificed to any other beauty whatever. Nothing therefore in language ought more to be ſtudied, than to prevent all obſcurity in the expreſſion; for to have no meaning, is but one degree worſe than to have a meaning that is not underſtood. We ſhall here give a few examples where the obſcurity ariſes from a wrong choice of words.

Livy, ſpeaking of a rout after a battle, "Multique in ruina *majore* quam fuga oppreſſi obtruncatique." This author is frequently obſcure by expreſſing but part of his thought, leaving it to be completed by his reader. His deſcription of a ſea-fight, *l.* 28. *cap.* 30. is extremely perplexed.

Unde tibi reditum *certo ſubtemine* Parcæ
Rupere. *Hor.*

Qui perſæpe cava teſtudine flevit amorem,
Non elaboratum ad pedem. *Id.*

Me fabuloſæ Vulture in Appulo,
Altricis extra limen Apuliæ,
  Ludo, fatigatumque *ſomno*,
  Fronde nova puerum palumbes
Texere. *Id.*

Puræ rivus aquæ, ſilvaque jugerum
Paucorum, et ſegetis certa fides meæ,
Fulgentem imperio fertilis Africæ
  Fallit ſorte beatior. *Id.*

Cum fas atque nefas exiguo *fine* libidinum
Diſcernunt avidi. *Id.*

Ac ſpem fronte ſerenat. *Virg.*

The rule next in order is, that the language ought to correſpond to the ſubject: heroic actions or ſentiments require elevated language; tender ſentiments ought to be expreſſed in words ſoft and flowing; and plain language void of ornament, is adapted to ſubjects grave and didactic. Language may be conſidered as the dreſs of thought; and where the one is not ſuited to the other, we are ſenſible of incongruity, in the ſame manner as where a judge is dreſſed like a fop, or a peaſant like a man of quality. Where the impreſſion made by the words reſembles the impreſſion made by the thought, the ſimilar emotions mix ſweetly in the mind, and double the pleaſure; but where the impreſſions made by the thought and the words are diſſimilar, the unnatural union they are forced into is diſagreeable.

This concordance between the thought and the words has been obſerved by every critic, and is ſo well underſtood as not to require any illuſtration. But there is a concordance of a peculiar kind that has ſcarcely been touched in works of criticiſm, though it contributes to neatneſs of compoſition. It is what follows.

In a thought of any extent, we commonly find ſome parts intimately united, ſome ſlightly, ſome disjointed, and ſome directly oppoſed to each other. To find theſe conjunctions and disjunctions imitated in the expreſſion, is a beauty; becauſe ſuch imitation makes the words concordant with the ſenſe. This doctrine may be illuſtrated by a familiar example: When we have occaſion to mention the intimate connection that the ſoul hath with the body, the expreſſion ought to be, *the ſoul and body*; becauſe the article *the*, relative to both, makes a connection in the expreſſion, reſembling in ſome degree the connection in the thought: but when the ſoul is diſtinguiſhed from the body, it is better to ſay *the ſoul and the body*; becauſe the disjunction in the words reſembles the disjunction in the thought. We proceed to other examples, beginning with conjunctions.

"Conſtituit agmen; et expedire tela animoſque, equitibus juſſis," &c. *Livy, l.* 38. § 25. Here the words that expreſs the connected ideas are artificially connected by ſubjecting them both to the regimen of one verb; And the two following are of the ſame kind.

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† *De ſtruct. perfecta orat.* lib. ii.

“Quum ex paucis quotidie aliqui eorum caderent aut vulnerarentur, et qui ſuperarent, feſſi et corporibus et animis eſſent,” &c. *Ibid.* § 29.

Poſt acer Mneſtheus adducto conſtitit arcu,
Alta petens, pariterque oculos telumque tetendit.
Æneid, v. 507.

But to juſtify this artificial connection among the words, the ideas they expreſs ought to be intimately connected; for otherwiſe that concordance which is required between the ſenſe and the expreſſion will be impaired. In that view, the following paſſage from Tacitus is exceptionable; where words that ſignify ideas very little connected, are however forced into an artificial union. “Germania omnis a Gallis, Rhætiiſque, et Pannoniis, Rheno et Danubio fluminibus; a Sarmatis Daciſque, mutuo metu aut montibus ſeparatur.”

Upon the ſame account, the following paſſage ſeems equally exceptionable.

——————The fiend look'd up, and knew
His mounted ſcale aloft; nor more, but fled
Murm'ring, and with him fled the ſhades of night.
Paradiſe Loſt, B. iv. *at the end.*

There is no natural connection between a perſon's flying or retiring, and the ſucceſſion of day-light to darkneſs; and therefore to connect artificially the terms that ſignify theſe things cannot have a ſweet effect.

Two members of a thought connected by their relation to the ſame action, will naturally be expreſſed by two members of the period governed by the ſame verb; in which caſe theſe members, in order to improve their connection, ought to be conſtructed in the ſame manner. This beauty is ſo common among good writers as to have been little attended to; but the neglect of it is remarkably diſagreeable: for example, “He did not mention Leonora, nor that her father was dead.” Better thus: “He did not mention Leonora, nor her father's death.”

Where two ideas are ſo connected as to require but a copulative, it is pleaſant to find a connection in the words that expreſs theſe ideas, were it even ſo ſlight as where both begin with the ſame letter. Thus,

“The peacock, in all his pride, does not diſplay half the colour that appears in the garments of a Britiſh lady, when ſhe is either dreſſed for a ball or a birth-day.” *Spect.*

“Had not my dog of a ſteward run away as he did, without making up his accounts, I had ſtill been immerſed in ſin and ſea-coal.” *Ib.*

My life's companion, and my boſom-friend,
One faith, one fame, one fate ſhall both attend.
Dryden, *Tranſlation of Æneid.*

Next as to examples of disjunction and oppoſition in the parts of the thought, imitated in the expreſſion; an imitation that is diſtinguiſhed by the name of *antitheſis.*

Speaking of Coriolanus ſoliciting the people to be made conſul:

With a proud heart he wore his humble weeds.
Coriolanus

“Had you rather Cæſar were living, and die all ſlaves, than that Cæſar were dead, to live all freemen.”
Julius Cæſar.

He hath cool'd my friends and heated mine enemies.
Shakeſpeare.

An artificial connection among the words, is undoubtedly a beauty when it repreſents any peculiar connection among the conſtituent parts of the thought; but where there is no ſuch connection, it is a poſitive deformity, becauſe it makes a diſcordance between the thought and expreſſion. For the ſame reaſon, we ought alſo to avoid every artificial oppoſition of words where there is none in the thought. This laſt, termed *verbal antitheſis*, is ſtudied by low writers, becauſe of a certain degree of livelineſs in it. They do not conſider how incongruous it is, in a grave compoſition, to cheat the reader, and to make him expect a contraſt in the thought, which upon examination is not found there.

A fault directly oppoſite to the laſt mentioned, is to conjoin artificially words that expreſs ideas oppoſed to each other. This is a fault too groſs to be in common practice; and yet writers are guilty of it in ſome degree, when they conjoin by a copulative things tranſacted at different periods of time. Hence a want of neatneſs in the following expreſſion: “The nobility too, whom the king had no means of retaining by ſuitable offices and preferments, had been ſeized with the general diſcontent, and unwarily threw themſelves into the ſcale which began already too much to preponderate.” *Hume.* In periods of this kind, it appears more neat to expreſs the paſt time by the participle paſſive, thus: “The nobility having been ſeized with the general diſcontent, unwarily threw themſelves,” &c. or, “The nobility, who had been ſeized, &c. unwarily threw themſelves,” &c.

It is unpleaſant to find even a negative and affirmative propoſition connected by a copulative:

If it appear not plain, and prove untrue,
Deadly divorce ſtep between me and you.
Shakeſpeare.

In mirth and drollery it may have a good effect to connect verbally things that are oppoſite to each other in the thought. Example; Henry IV. of France introducing the Mareſchal Biron to ſome of his friends, “Here, gentlemen, (ſays he) is the Mareſchal Biron, whom I freely preſent both to my friends and enemies.”

This rule of ſtudying uniformity between the thought and expreſſion may be extended to the conſtruction of ſentences or periods. A ſentence or period ought to expreſs one entire thought or mental propoſition; and different thoughts ought to be ſeparated in the expreſſion by placing them in different ſentences or periods. It is therefore offending againſt neatneſs, to crowd into one period entire thoughts requiring more than one; which is joining in language things that are ſeparated in reality. Of errors againſt this rule take the following examples.

“Behold, thou art fair, my beloved, yea pleaſant: alſo our bed is green.”

Burnet, in the hiſtory of his own times, giving Lord Sunderland's character, ſays, “His own notions were always good; but he was a man of great expence.”

“I have ſeen a woman's face break out in heats, as ſhe has been talking againſt a great lord, whom ſhe had never ſeen in her life; and indeed never knew a party woman that kept her beauty for a twelvemonth." *Spect.*

Lord Bolingbroke, ſpeaking of Strada: "I ſingle him out among the moderns, becauſe he had the fooliſh preſumption to cenſure Tacitus, and to write hiſtory himſelf; and your lordſhip will forgive this ſhort excurſion in honour of a favourite writer."

To crowd into a ſingle member of a period different ſubjects, is ſtill worſe than to crowd them into one period:

————Trojam genitore Adamaſto
Paupere (manſiſſetque utinam fortuna) profectus.
Æneid iii. 614.

From conjunctions and disjunctions in general, we proceed to compariſons, which make one ſpecies of them, beginning with ſimilies. And here alſo, the intimate connection that words have with their meaning requires, that in deſcribing two reſembling objects, a reſemblance in the two members of the period ought to be ſtudied. To begin with examples of reſemblance expreſſed in words that have no reſemblance.

"I have obſerved of late, the ſtyle of ſome great miniſters very much to exceed that of any other productions." *Swift.* This, inſtead of ſtudying the reſemblance of words in a period that expreſſes a compariſon, is going out of one's road to avoid it. Inſtead of *productions*, which reſemble not miniſters great nor ſmall, the proper word is *writers* or *authors*.

"I cannot but fancy, however, that this imitation, which paſſes ſo currently with *other judgments*, muſt at ſome time or other have ſtuck a little with your *lordſhip*." *Shafteſb.* Better thus: "I cannot but fancy, however, that this imitation, which paſſes ſo currently with *others*, muſt at ſome time or other have ſtuck a little with your *lordſhip*."

"A glutton or mere ſenſualiſt is as ridiculous as the other two characters." *Id.*

"They wiſely prefer *the generous efforts of goodwill and affection*, to the reluctant compliances *of ſuch as* obey by force." *Bolingb.*

It is a ſtill greater deviation from congruity, to affect not only variety in the words, but alſo in the conſtruction.

Hume ſpeaking of Shakeſpeare: "There may remain a ſuſpicion that we over-rate the greatneſs of his genius, in the ſame manner as bodies appear more gigantic on account of their being diſproportioned and miſhapen." This is ſtudying variety in a period where the beauty lies in uniformity. Better thus: "There may remain a ſuſpicion that we over-rate the greatneſs of his genius, in the ſame manner as we over-rate the greatneſs of bodies that are diſproportioned and miſhapen."

Next of compariſon where things are oppoſed to each other. And here it muſt be obvious, that if reſemblance ought to be ſtudied in the words which expreſs two reſembling objects, there is equal reaſon for ſtudying oppoſition in the words which expreſs contraſted objects. This rule will be beſt illuſtrated by examples of deviations from it.

"A friend exaggerates a man's virtues; an enemy inflames his crimes." *Spect.* Here the oppoſition in the thought is neglected in the words; which at firſt view ſeem to import, that the friend and enemy are employed in different matters, without any relation to each other, whether of reſemblance or of oppoſition. And therefore the contraſt or oppoſition will be better marked by expreſſing the thought as follows: "A friend exaggerates a man's virtues, an enemy his crimes."

"The wiſe man is happy when he gains his own approbation; the fool when he recommends himſelf to the applauſe of thoſe about him." *Ib.* Better: The wiſe man is happy when he gains his own approbation, the fool when he gains that of others."

We proceed to a rule of a different kind. During the courſe of a period, the ſcene ought to be continued without variation: the changing from perſon to perſon, from ſubject to ſubject, or from perſon to ſubject, within the bounds of a ſingle period, diſtracts the mind, and affords no time for a ſolid impreſſion.

Hook, in his Roman hiſtory, ſpeaking of Eumenes, who had been beat to the ground with a ſtone, ſays, "After a ſhort time *he* came to himſelf; and the next day *they* put him on board his ſhip, *which* conveyed him firſt to Corinth, and thence to the iſland of Ægina."

The following period is unpleaſant, even by a very ſlight deviation from the rule: "That ſort of inſtruction which is acquired by inculcating an important moral truth." &c. This expreſſion includes two perſons, one acquiring, and one inculcating; and the ſcene is changed without neceſſity. To avoid this blemiſh, the thought may be expreſſed thus: "That ſort of inſtruction which is afforded by inculcating," &c.

The bad effect of ſuch a change of perſon is remarkable in the following paſſage: "the *Britons*, daily haraſſed by cruel inroads from the Picts, were forced to call in the Saxons for their defence, *who* conſequently reduced the greateſt part of the iſland to their own power, drove the Britons into the moſt remote and mountainous parts, and *the reſt of the country*, in cuſtoms, religion, and language, became wholly Saxon." *Swift.*

The following paſſage has a change from ſubject to perſon: "*The proſtitution of praiſe* is not only a deceit upon the groſs of mankind, who take their notion of characters from the learned; but alſo *the better ſort* muſt by this means loſe ſome part at leaſt of that deſire of fame which is the incentive to generous actions, when they find it promiſcuouſly beſtowed on the meritorious and undeſerving." *Guardian*, N° 4.

The preſent head, which relates to the choice of materials, ſhall be cloſed with a rule concerning the uſe of copulatives. Longinus obſerves, that it animates a period to drop the copulatives; and he gives the following example from Xenophon: "Cloſing their ſhields together, they were puſh'd, they fought, they ſlew, they were ſlain." The reaſon may be what follows. A continued ſound, if not loud, tends to lay us aſleep: an interrupted ſound rouſes and animates by its repeated impulſes: thus feet compoſed of ſyllables, being pronounced with a ſenſible interval between each, make more lively impreſſions than can be made by a continued ſound. A period of which the members are connected by copulatives, produceth an effect upon the mind approaching to that of a continued ſound; and therefore the ſuppreſſing copulatives muſt animate a deſcription. It produces a different effect akin to that mentioned: the members of a period connected by proper copulatives, glide ſmoothly and gently along; and are a proof of ſedateneſs and leiſure in the ſpeaker: on the other hand, one in the hurry of paſſion, neglecting copulatives and other particles, expreſſes the principal image only; and for that reaſon, hurry or quick action is beſt expreſſed without copulatives:

Veni, vidi, vici.

——————Ite:
Ferte citi flammas, date vela, impellite remos.
Æneid. iv. 593.
Quis globus, O cives, caligine volvitur atra?
Ferte citi ferrum, date tela, ſcandite muros.
Hoſtis adeſt, eja. *Æneid.* ix. 37.

In this view Longinus juſtly compares copulatives in a period to ſtrait tying, which in a race obſtructs the freedom of motion.

It follows, that a plurality of copulatives in the ſame period ought to be avoided; for if the laying aſide copulatives give force and livelineſs, a redundancy of them muſt render the period languid. The following inſtance may be appealed to, though there are but two copulatives: "Upon looking over the letters of my female correſpondents, I find ſeveral from women complaining of jealous huſbands; and at the ſame time proteſting their own innocence, and deſiring my advice upon this occaſion." *Spect.*

Where the words are intended to expreſs the coldneſs of the ſpeaker, there indeed the redundancy of copulatives is a beauty:

'Dining one day at an alderman's in the city, Peter obſerved him expatiating after the manner of his brethren in the praiſes of his ſurloin of beef. "Beef (ſaid the ſage magiſtrate) is the king of meat: beef comprehends in it the quinteſſence of partridge, and quail, and veniſon, and pheaſant, and plum-pudding, and cuſtard." *Tale of a Tub*, § 4. And the author ſhows great delicacy of taſte by varying the expreſſion in the mouth of Peter, who is repreſented more animated: "Bread (ſays he), dear brothers, is the ſtaff of life; in which bread is contained, *incluſive*, the quinteſſence of beef, mutton, veal, veniſon, partridge, plum-pudding, and cuſtard."

Another caſe muſt alſo be excepted. Copulatives have a good effect where the intention is to give an impreſſion of a great multitude conſiſting of many diviſions; for example: 'The army was compoſed of Grecians, and Carians, and Lycians, and Pamphylians, and Phrygians.' The reaſon is, that a leiſurely ſurvey, which is expreſſed by the copulatives, makes the parts appear more numerous than they would do by a haſty ſurvey: in the latter caſe, the army appears in one group; in the former, we take as it were an accurate ſurvey of each nation, and of each diviſion.

2. To pave the way for the rules of arrangement, it will be here neceſſary to explain the difference between a natural ſtyle and that where tranſpoſition or inverſion prevails. In a natural ſtyle, relative words are by juxtapoſition connected with thoſe to which they relate, going before or after, according to the peculiar genius of the language. Again, a circumſtance connected by a prepoſition, follows naturally the word with which it is connected. But this arrangement may be varied, when a different order is more beautiful: a circumſtance may be placed before the word with which it is connected by a prepoſition; and may be interjected even between a relative word and that to which it relates. When ſuch liberties are frequently taken, the ſtyle becomes inverted or tranſpoſed.

But as the liberty of inverſion is a capital point in the preſent ſubject, it will be neceſſary to examine it more narrowly, and in particular to trace the ſeveral degrees in which an inverted ſtyle recedes more and more from that which is natural. And firſt, as to the placing a circumſtance before the word with which it is connected, this is the eaſieſt of all inverſion, even ſo eaſy as to be conſiſtent with a ſtyle that is properly termed *natural:* witneſs the following examples.

"In the ſincerity of my heart, I profeſs," &c.

"By our own ill management, we are brought to ſo low an ebb of wealth and credit, that," &c.

"On Thurſday morning there was little or nothing tranſacted in Change-alley."

"At St Bride's church in Fleetſtreet, Mr Woolſton, (who wrote againſt the miracles of our Saviour), in the utmoſt terrors of conſcience, made a public recantation."

The interjecting a circumſtance between a relative word and that to which it relates, is more properly termed *inverſion;* becauſe, by a disjunction of words intimately connected, it recedes farther from a natural ſtyle. But this licence has degrees; for the disjunction is more violent in ſome caſes than in others.

In nature, though a ſubject cannot exiſt without its qualities, nor a quality without a ſubject; yet in our conception of theſe, a natural difference may be remarked. We cannot conceive a quality but as belonging to ſome ſubject: it makes indeed a part of the idea which is formed of the ſubject. But the oppoſite holds not; for though we cannot form a conception of a ſubject void of all qualities, a partial conception may be formed of it, abſtracting from any particular quality: we can, for example, form the idea of a fine Arabian horſe without regard to his colour, or of a white horſe without regard to his ſize. Such partial conception of a ſubject is ſtill more eaſy with reſpect to action or motion, which is an occaſional attribute only, and has not the ſame permanency with colour or figure: we cannot form an idea of motion independent of a body; but there is nothing more eaſy than to form an idea of a body at reſt. Hence it appears, that the degree of inverſion depends greatly on the order in which the related words are placed: when a ſubſtance occupies the firſt place, the idea it ſuggeſts muſt ſubſiſt in the mind at leaſt for a moment, independent of the relative words afterwards introduced; and that moment may without difficulty be prolonged by interjecting a circumſtance between the ſubſtantive and its connections. This liberty therefore, however frequent, will ſcarce alone be ſufficient to denominate a ſtyle *inverted.* The caſe is very different, where the word that occupies the firſt place denotes a quality or an action;

for as theſe cannot be conceived without a ſubject, they cannot without greater violence be ſeparated from the ſubject that follows; and for that reaſon, every ſuch ſeparation by means of an interjected circumſtance belongs to an inverted ſtyle.

To illuſtrate this doctrine, examples are neceſſary. In the following, the word firſt introduced does not imply a relation:

————Nor Eve to iterate
Her former treſpaſs fear'd.

————Hunger and thirſt at once,
Powerful perſuaders, quicken'd at the ſcent
Of that alluring fruit, urg'd me ſo keen.

Moon that now meet'ſt the orient ſun, now fli'ſt
With the fix'd ſtars, fixed in their orb that flies,
And ye five other wand'ring fires that move
In myſtic dance not without ſong, reſound
His praiſe.

Where the word firſt introduced imports a relation, the disjunction will be found more violent:

Of man's firſt diſobedience, and the fruit
Of that forbidden tree, whoſe mortal taſte
Brought death into the world, and all our wo,
With loſs of Eden, till one greater man
Reſtore us, and regain the bliſsful ſeat,
Sing heav'nly muſe.

————Upon the firm opacous globe
Of this round world, whoſe firſt convex divides
The luminous inferior orbs, incloſ'd
From chaos and th' inroad of darkneſs old,
Satan alighted walks.

————On a ſudden open fly,
With impetuous recoil and jarring ſound,
Th' infernal doors.

————Wherein remain'd,
For what could elſe? to our almighty foe
Clear victory, to our part loſs and rout.

Language would have no great power, were it confined to the natural order of ideas: By inverſion a thouſand beauties may be compaſſed, which muſt be relinquiſhed in a natural arrangement.

Rules. 1. In the arrangement of a period, as well as in a right choice of words, the firſt and great object being perſpicuity, the rule above laid down, that perſpicuity ought not to be ſacrificed to any other beauty, holds equally in both. Ambiguities occaſioned by a wrong arrangement are of two ſorts; one where the arrangement leads to a wrong ſenſe, and one where the ſenſe is leſs doubtful. The firſt, being the more culpable, ſhall take the lead, beginning with examples of words put in a wrong place.

"How much the imagination of ſuch a preſence muſt exalt a genius, we may obſerve *merely* from the influence which an ordinary preſence has over men." *Shafteſb.* This arrangement leads to a wrong ſenſe: the adverb *merely* ſeems by its poſition to affect the preceding word; whereas it is intended to affect the following words *an ordinary preſence;* and therefore the arrangement ought to be thus: "How much the imagination of ſuch a preſence muſt exalt a genius, we may obſerve from the influence which an ordinary preſence merely has over men." [Or better],—"which even an ordinary preſence has over men."

"Sixtus the Fourth was, if I miſtake not, a great collector of books at leaſt." *Boling.* The expreſſion here leads evidently to a wrong ſenſe; the adverb *at leaſt,* ought not to be connected with the ſubſtantive *books,* but with *collector,* thus: "Sixtus the Fourth was a great collector, at leaſt of books."

Speaking of Louis XIV. "If he was not the greateſt king, he was the beſt actor of majeſty at leaſt that ever filled a throne." *Id.* Better thus: "If he was not the greateſt king, he was at leaſt the beſt actor of majeſty," &c. This arrangement removes the wrong ſenſe occaſioned by the juxtapoſition of *majeſty* and *at leaſt.*

The following examples are of a wrong arrangement of members.

"I have confined myſelf to thoſe methods for the advancement of piety, which are in the power of a prince limited like ours by a ſtrict execution of the laws." *Swift.* The ſtructure of this period leads to a meaning which is not the author's, viz. power limited by a ſtrict execution of the laws. That wrong ſenſe is removed by the following arrangement: "I have confined myſelf to thoſe methods for the advancement of piety, which, by a ſtrict execution of the laws, are in the power of a prince limited like ours."

"This morning, when one of Lady Lizard's daughters was looking over ſome hoods and ribbands brought by her tirewoman, with great care and diligence, I employed no leſs in examining the box which contained them." *Guardian.* The wrong ſenſe occaſioned by this arrangement, may be eaſily prevented by varying it thus: "This morning, when, with great care and diligence, one of Lady Lizard's daughters was looking over ſome hoods and ribbands, &c.

"A great ſtone that I happened to find after a long ſearch by the ſea-ſhore, ſerved me for an anchor." *Swift.* One would think that the ſearch was confined to the ſea-ſhore; but as the meaning is, that the great ſtone was found by the ſea-ſhore, the period ought to be arranged thus: "A great ſtone that, after a long ſearch, I happened to find by the ſea-ſhore, ſerved me for an anchor.

Next of a wrong arrangement where the ſenſe is left doubtful; beginning, as in the former ſort, with examples of a wrong arrangement of words in a member.

"Theſe forms of converſation *by degrees* multiplied and grew troubleſome." *Spect.* Here it is left doubtful whether the modification *by degrees* relates to the preceding member or to what follows: it ſhould be "Theſe forms of converſation multiplied by degrees."

"Nor does this falſe modeſty expoſe us *only* to ſuch actions as are indiſcreet, but very often to ſuch as are highly criminal." *Spect.* The ambiguity is removed by the following arrangement: "Nor does this falſe modeſty expoſe us to ſuch actions only as are indiſcreet, &c.

"The empire of Blefuſcu is an iſland ſituated to the north-eaſt ſide of Lilliput, from whence it is parted *only* by a channel of 800 yards wide." *Swift.* The ambiguity may be removed thus:————

"from whence it is parted by a channel of 800 yards wide only."

In the following examples the ſenſe is left doubtful by wrong arrangement of members.

"The miniſter who grows leſs by his elevation, *like a little ſtatue placed on a mighty pedeſtal*, will always have his jealouſy ſtrong about him." *Boling.* Here, ſo far as can be gathered from the arrangement, it is doubtful, whether the object introduced by way of ſimile relates to what goes before or to what follows. The ambiguity is removed by the following arrangement: "The miniſter who, like a little ſtatue placed on a mighty pedeſtal, grows leſs by his elevation, will always, &c.

Speaking of the ſuperſtitious practice of locking up the room where a perſon of diſtinction dies: "The knight, ſeeing his habitation reduced to ſo ſmall a compaſs, and himſelf in a manner ſhut out of his own houſe, *upon the death of his mother*, ordered all the apartments to be flung open, and exorciſed by his chaplain." *Spect.* Better thus: "The knight, ſeeing his habitation reduced to ſo ſmall a compaſs, and himſelf in a manner ſhut out of his own houſe, ordered, upon the death of his mother, all the apartments to be flung open."

Speaking of ſome indecencies in converſation: "As it is impoſſible for ſuch an irrational way of converſation to laſt long among a people that make any profeſſion of religion, or ſhow of modeſty, *if the country gentlemen get into it*, they will certainly be left in the lurch." *Ib.* The ambiguity vaniſhes in the following arrangement: ——— "the country-gentleman, if they get into it, will certainly be left in the lurch."

"And ſince it is neceſſary that there ſhould be a perpetual intercourſe of buying and ſelling, and dealing upon credit, *where fraud is permitted or connived at, or hath no law to puniſh it*, the honeſt dealer is always undone, and the knave gets the advantage." *Swift.* Better thus: "And ſince it is neceſſary that there ſhould be a perpetual intercourſe of buying and ſelling, and dealing upon credit, the honeſt dealer, where fraud is permitted or connived at, or hath no law to puniſh it, is always undone, and the knave gets the advantage."

From theſe examples, the following obſervation will occur: That a circumſtance ought never to be placed between two capital members of a period; for by ſuch ſituation it muſt always be doubtful, ſo far as we gather from the arrangement, to which of the two members it belongs: where it is interjected, as it ought to be, between parts of the member to which it belongs, the ambiguity is removed, and the capital members are kept diſtinct, which is a great beauty in compoſition. In general, to preſerve members diſtinct that ſignify things diſtinguiſhed in the thought, the beſt method is, to place firſt in the conſequent member, ſome word that cannot connect with what precedes it.

If it ſhall be thought, that the objections here are too ſcrupulous, and that the defect of perſpicuity is eaſily ſupplied by accurate punctuation; the anſwer is, That punctuation may remove an ambiguity, but will never produce that peculiar beauty which is perceived when the ſenſe comes out clearly and diſtinctly by means of a happy arrangement. Such influence has this beauty, that, by a natural tranſition of perception, it is communicated to the very ſound of the words, ſo as in appearance to improve the muſic of the period. But as this curious ſubject comes in more properly elſewhere, it is ſufficient at preſent to appeal to experience, that a period, ſo arranged as to bring out the ſenſe clear, ſeems always more muſical than where the ſenſe is left in any degree doubtful.

The next rule is, That words expreſſing things connected in the thought, ought to be placed as near together as poſſible. This rule is derived immediately from human nature, prone in every inſtance to place together things in any manner connected: where things are arranged according to their connections, we have a ſenſe of order; otherwiſe we have a ſenſe of diſorder, as of things placed by chance: and we naturally place words in the ſame order in which we would place the things they ſignify. The bad effect of a violent ſeparation of words or members thus intimately connected, will appear from the following examples

"For the Engliſh are naturally fanciful, and very often diſpoſed, by that gloomineſs and melancholy of temper which is ſo frequent in our nation, to many wild notions and viſions, to which others are not ſo liable." *Spect.* Here the verb or aſſertion is, by a pretty long circumſtance, violently ſeparated from the ſubject to which it refers: this makes a harſh arrangement; the leſs excuſable that the fault is eaſily prevented by placing the circumſtance before the verb, after the following manner: "For the Engliſh are naturally fanciful, and by that gloomineſs and melancholy of temper which is ſo frequent in our nation, are often diſpoſed to many wild notions," &c.

"From whence we may date likewiſe the rivalſhip of the houſe of France, for we may reckon that of Valois and that of Bourbon as one upon this occaſion, and the houſe of Auſtria, that continues at this day, and has oft coſt ſo much blood and ſo much treaſure in the courſe of it." *Bolingbr.*

"It cannot be impertinent or ridiculous therefore in ſuch a country, whatever it might be in the abbot of St Real's, which was Savoy, I think, or in Peru, under the Incas, where Garcilaſſo de la Vega ſays it was lawful for none but the nobility to ſtudy—for men of all degrees to inſtruct themſelves in thoſe affairs wherein they may be actors, or judges of thoſe that act, or controllers of thoſe that judge." *Ibid.*

"If Scipio, who was naturally given to women, for which anecdote we have, if I miſtake not, the authority of Polybius, as well as ſome verſes of Nevius preſerved by Aulus Gellius, had been educated by Olympias at the court of Philip, it is improbable that he would have reſtored the beautiful Spaniard." *Ibid.*

If any one have a curioſity for more ſpecimens of this kind, they will be found without number in the works of the ſame author.

A pronoun, which ſaves the naming a perſon or thing a ſecond time, ought to be placed as near as poſſible to the name of that perſon or thing. This is a branch of the foregoing rule; and with the reaſon there given, another occurs, viz. That if other ideas intervene, it is difficult to recall the perſon or thing by reference.

"If I had leave to print the Latin letters tranſmitted to me from foreign parts, they would fill a volume, and be a full defence againſt all that Mr Patridge, or his accomplices of the Portugal inquiſition, will be ever able to object; *who*, by the way, are the only enemies my predictions have ever met with at home or abroad." Better thus:———" and be a full defence againſt all that can be objected by Mr Patridge, or his accomplices of the Portugal inquiſition; who, by the way are," &c.

"There being a round million of creatures in human figure, throughout this kingdom, *whoſe* whole ſubſiſtence," &c. *Swift.* Better: "There being, throughout this kingdom, a round million of creatures in human figure, whoſe whole ſubſiſtence," &c.

The following rule depends on the communication of emotions to related objects; a principle in human nature that hath no extenſive operation: and we find this operation, even where the objects are not otherwiſe related than by juxtapoſition of the words that expreſs them. Hence, to elevate or depreſs an object, one method is, to join it in the expreſſion with another that is naturally high or low: witneſs the following ſpeech of Eumenes to the Roman ſenate.

"Cauſam veniendi ſibi Romam fuiſſe, præter cupiditatem viſendi *deos homineſque*, quorum beneficio in ea fortuna eſſet, ſupra quam ne optare quidem auderet, etiam ut coram moneret ſenatum ut Perſei conatus obviam iret." *Livy.* To join the Romans with the gods in the ſame enunciation, is an artful ſtroke of flattery, becauſe it tacitly puts them on a level.

On the other hand, the degrading or vilifying an object, is done ſucceſsfully by ranking it with one that is really low: "I hope to have this entertainment in readineſs for the next winter; and doubt not but it will pleaſe more than the opera or puppet-ſhow." *Spect.*

"Manifold have been the judgments which Heaven from time to time, for the chaſtiſement of a ſinful people, has inflicted upon whole nations. For when the degeneracy becomes common, it is but juſt the puniſhment ſhould be general. Of this kind, in our own unfortunate country, was that deſtructive peſtilence, whoſe mortality was ſo fatal as to ſweep away, if Sir William Petty may be believed, five millions of Chriſtian ſouls, beſides women and Jews." *Arbuthnot.*

"Such alſo was that dreadful conflagration enſuing in this famous metropolis of London, which conſumed, according to the computation of Sir Samuel Moreland, 100,000 houſes, not to mention churches and ſtables." *Ibid.*

"But on condition it might paſs into a law, I would gladly exempt both lawyers of all ages, ſubaltern and field officers, young heirs, dancing-maſters, pick-pockets, and players." *Swift.*

Sooner let earth, air, ſea, to chaos fall,
Men, monkeys, lapdogs, parrots, periſh all.
Rape of the Lock.

Circumſtances in a period reſemble ſmall ſtones in a building, employed to fill up vacuities among thoſe of a larger ſize. In the arrangement of a period, ſuch under-parts crowded together make a poor figure; and never are graceful but when interſperſed among the capital parts.

"It is likewiſe urged, that there are, by computation, in this kingdom, above 10,000 parſons, whoſe revenues, added to thoſe of my lords the biſhops, would ſuffice to maintain, &c." *Swift.* Here two circumſtances, viz. *by computation*, and *in this kingdom*, are crowded together unneceſſarily. They make a better appearance ſeparated in the following manner: "It is likewiſe urged, that in this kingdom there are by computation, above 10,000 parſons," &c.

If there be room for a choice, the ſooner a circumſtance is introduced, the better; becauſe circumſtances are proper for that coolneſs of mind, with which we begin a period as well as a volume: in the progreſs, the mind warms, and has a greater reliſh for matters of importance. When a circumſtance is placed at the beginning of the period, or near the beginning, the tranſition from it to the principal object is agreeable: it is like aſcending, or going upward. On the other hand, to place it late in the period has a bad effect; for after being engaged in the principal ſubject, one is with reluctance brought down to give attention to a circumſtance. Hence evidently the preference of the following arrangement, "Whether in any country a choice altogether unexceptionable has been made, ſeems doubtful; before this other, "Whether a choice altogether unexceptionable has in any country been made," &c.

For this reaſon the following period is exceptionable in point of arrangement. "I have conſidered formerly, with a good deal of attention, the ſubject upon which you command me to communicate my thoughts to you." *Boling.* Which, with a ſlight alteration, may be improved thus: "I have formerly, with a good deal of attention, conſidered the ſubject," &c.

Swift, ſpeaking of a virtuous and learned education: "And although they may be, and too often are, drawn by the temptations of youth, and the opportunities of a large fortune, into ſome irregularities, *when they come forward into the great world*; it is ever with reluctance and compunction of mind, becauſe their bias to virtue ſtill continues." Better; "And although, *when they come forward into the great world*, they may be, and too often," &c.

In arranging a period, it is of importance to determine in what part of it a word makes the greateſt figure, whether at the beginning, during the courſe, or at the cloſe. The breaking ſilence rouſes the attention, and prepares for a deep impreſſion at the beginning: the beginning, however, muſt yield to the cloſe; which being ſucceeded by a pauſe, affords time for a word to make its deepeſt impreſſion. Hence the following rule, That to give the utmoſt force to a period, it ought, if poſſible, to be cloſed with that word which makes the greateſt figure. The opportunity of a pauſe ſhould not be thrown away upon acceſſories. but reſerved for the principal object, in order that it may make a full impreſſion: which is an additional reaſon againſt cloſing a period without a circumſtance. There are, however, periods that admit not ſuch a ſtructure; and in that caſe the capital word ought, if poſſible, to be placed in the front, which next to the cloſe is the moſt advantageous for making an impreſſion. Hence, in directing our diſcourſe to a man of figure, we ought to begin with his name; and one will be ſenſible of a degradation when this rule is neglected, as it frequently is for the ſake of verſe. We give the following examples.

Integer vitæ, ſceleriſque purus,
Non eget Mauri jaculis, neque arcu,
Nec venenatis gravida ſagittis,
Fuſce, pharetra. *Horat. Carm. l.* 1. *ode* 22.

Je crains Dieu, cher Abner, et n'ai point d'autre crainte.

In theſe examples, the name of the perſon addreſſed to, makes a mean figure, being like a circumſtance ſlipt into a corner. That this criticiſm is well founded, we need no other proof than Addiſon's tranſlation of the laſt example:

O Abner! I fear my God, and I fear none but him. *Guardian*, n° 117.

O father, what intends thy hand, ſhe cry'd,
Againſt thy only ſon? What fury, O ſon,
Poſſeſſes thee to bend that mortal dart
Againſt thy father's head?
Paradiſe loſt, book ii. *l.* 727.

Every one muſt be ſenſible of a dignity in the invocation at the beginning, which is not attained by that in the middle. It is not meant, however, to cenſure this paſſage: on the contrary, it appears beautiful, by diſtinguiſhing the reſpect that is due to a father from that which is due to a ſon.

The ſubſtance of what is ſaid in this and the foregoing ſection, upon the method of arranging words in a period, ſo as to make the deepeſt impreſſion with reſpect to ſound as well as ſignification, is comprehended in the following obſervation: That order of words in a period will always be the moſt agreeable, where, without obſcuring the ſenſe, the moſt important images, the moſt ſonorous words, and the longeſt members, bring up the rear.

Hitherto of arranging ſingle words, ſingle members, and ſingle circumſtances. But the enumeration of many particulars in the ſame period is often neceſſary: and the queſtion is, In what order they ſhould be placed? And, firſt, with reſpect to the enumerating particulars of equal rank: As there is no cauſe for preferring any one before the reſt, it is indifferent to the mind in what order they be viewed; therefore it is indifferent in what order they be named. 2dly, If a number of objects of the ſame kind, differing only in ſize, are to be ranged along a ſtraight line, the moſt agreeable order to the eye is that of an increaſing ſeries: in ſurveying a number of ſuch objects, beginning at the leaſt, and proceeding to greater and greater, the mind ſwells gradually with the ſucceſſive objects, and in its progreſs has a very ſenſible pleaſure. Preciſely for the ſame reaſon, words expreſſive of ſuch objects ought to be placed in the ſame order. The beauty of this figure, which may be termed *a climax in ſenſe*, has eſcaped Lord Bolingbroke in the firſt member of the following period: "Let but one, great, brave, diſintereſted, active man ariſe, and he will be received, followed, and almoſt adored." The following arrangement has ſenſibly a better effect: "Let but one brave, great, active, diſintereſted man ariſe," &c. Whether the ſame rule ought to be followed in enumerating men of different ranks, ſeems doubtful: on the one hand, a number of perſons preſented to the eye in form of an increaſing ſeries, is undoubtedly the moſt agreeable order; on the other hand, in every liſt of names, we ſet the perſon of the greateſt dignity at the top, and deſcend gradually through his inferiors. Where the purpoſe is to honour the perſons named according to their rank, the latter ought to be followed; but every one who regards himſelf only, or his reader, will chooſe the former order. 3dly, As the ſenſe of order directs the eye to deſcend from the principal to its greateſt acceſſory, and from the whole to its greateſt part, and in the ſame order through all the parts and acceſſories, till we arrive at the minuteſt; the ſame order ought to be followed in the enumeration of ſuch particulars.

When force and livelineſs of expreſſion are demanded, the rule is, to ſuſpend the thought as long as poſſible, and to bring it out full and entire at the cloſe: which cannot be done but by inverting the natural arrangement. By introducing a word or member before its time, curioſity is raiſed about what is to follow; and it is agreeable to have our curioſity gratified at the cloſe of the period: the pleaſure we feel reſembles that of ſeeing a ſtroke exerted upon a body by the whole collected force of the agent. On the other hand, where a period is ſo conſtructed as to admit more than one complete cloſe in the ſenſe, the curioſity of the reader is exhauſted at the firſt cloſe, and what follows appears languid or ſuperfluous: his diſappointment contributes alſo to that appearance, when he finds, contrary to expectation, that the period is not yet finiſhed. Cicero, and after him Quintilian, recommend the verb to the laſt place. This method evidently tends to ſuſpend the ſenſe till the cloſe of the period; for without the verb the ſenſe cannot be complete: and when the verb happens to be the capital word, which it frequently is, it ought at any rate to be the laſt, according to another rule above laid down. The following period is placed in its natural order: "Were inſtruction an eſſential circumſtance in epic poetry, I doubt whether a ſingle inſtance could be given of this ſpecies of compoſition in any language." The period thus arranged admits a full cloſe upon the word *compoſition;* after which it goes on languidly, and cloſes without force. This blemiſh will be avoided by the following arrangement: "Were inſtruction an eſſential circumſtance in epic poetry, I doubt whether, in any language, a ſingle inſtance could be given of this ſpecies of compoſition."

"Some of our moſt eminent divines have made uſe of this Platonic notion, as far as it regards the ſubſiſtence of our paſſions after death, with great beauty and ſtrength of reaſon." *Spect.* Better thus: "Some of our moſt eminent divines have, with great beauty and ſtrength of reaſon, made uſe of this Platonic notion," &c.

"Men of the beſt ſenſe have been touched, more or leſs, with theſe groundleſs horrors and preſages of futurity, upon ſurveying the moſt indifferent works of nature."

ture." *Ib.* Better, "Upon ſurveying the moſt indifferent works of nature, men of the beſt ſenſe," &c.

"She ſoon informed him of the place he was in; which, notwithſtanding all its horrors, appeared to him more ſweet than the bower of Mahomet, in the company of his Balſora." *Guardian.* Better, "She ſoon, &c. which appeared to him, in the company of his Balſora, more ſweet than the bower of Mahomet."

None of the rules for the compoſition of periods are more liable to be abuſed than thoſe laſt mentioned; witneſs many Latin writers, among the moderns eſpecially, whoſe ſtyle, by inverſions too violent, is rendered harſh and obſcure. Suſpenſion of the thought till the cloſe of the period, ought never to be preferred before perſpicuity. Neither ought ſuch ſuſpenſion to be attempted in a long period; becauſe in that caſe the mind is bewildered amidſt a profuſion of words: a traveller, while he is puzzled about the road, reliſhes not the fineſt proſpect: "All the rich preſents which Aſtyages had given him at parting, keeping only ſome Median horſes, in order to propagate the breed of them in Perſia, he diſtributed among his friends whom he left at the court of Ecbatana." *Trav. of Cyrus.*

III. *Beauties from a reſemblance between Sound and Signification.* There being frequently a ſtrong reſemblance of one ſound to another, it will not be ſurpriſing to find an articulate ſound reſembling one that is not articulate: thus the ſound of a bow-ſtring is imitated by the words that expreſs it:

——————The ſtring let fly,
Twang'd ſhort and ſharp, like the ſhrill ſwallow's cry.
Odyſſey, xxi. 449.

The ſound of felling trees in a wood:

Loud ſounds the ax, redoubling ſtrokes on ſtrokes,
On all ſides round the foreſt hurls her oaks
Headlong. Deep echoing groan the thickets brown,
Then *ruſtling*, *crackling*, *craſhing*, thunder down.
Iliad, xxiii. 144.

But when loud ſurges laſh the ſounding ſhore,
The hoarſe rough verſe ſhould like the torrent roar.
Popes Eſſay on Criticiſm, 369.

Dire Scylla there a ſcene of horror forms,
And here Charybdis fills the deep with ſtorms:
When the tide ruſhes from her rumbling caves,
The rough rock roars; tumultuous boil the waves.
Pope.

No perſon can be at a loſs about the cauſe of this beauty; it is obviouſly that of imitation.

That there is any other natural reſemblance of ſound to ſignification, muſt not be taken for granted. There is no reſemblance of ſound to motion, nor of ſound to ſentiment. We are, however, apt to be deceived by artful pronunciation: the ſame paſſage may be pronounced in many different tones, elevated or humble, ſweet or harſh, briſk or melancholy, ſo as to accord with the thought or ſentiment: ſuch concord muſt be diſtinguiſhed from that concord between ſound and ſenſe which is perceived in ſome expreſſions independent of artful pronunciation; the latter is the poet's work, the former muſt be attributed to the reader. Another thing contributes ſtill more to the deceit: in language, ſound and ſenſe being intimately connected, the properties of the one are readily communicated to the other; for example, the quality of grandeur, of ſweetneſs, or of melancholy, though belonging to the thought ſolely, is transferred to the words, which by that means reſemble in appearance the thought that is expreſſed by them. That there may be a reſemblance of articulate ſounds to ſome that are not articulate, is ſelf-evident; and that in fact there exiſt ſuch reſemblances ſucceſsfully employed by writers of genius, is clear from the foregoing examples, and from many others that might be given. But we may ſafely pronounce, that this natural reſemblance can be carried no farther; the objects of the different ſenſes differ ſo widely from each other, as to exclude any reſemblance; ſound in particular, whether articulate or inarticulate, reſembles not in any degree taſte, ſmell, nor motion; and as little can it reſemble any internal ſentiment, feeling, or emotion. But muſt we then admit, that nothing but ſound can be imitated by ſound? Taking imitation in its proper ſenſe, as importing a reſemblance between two objects, the propoſition muſt be admitted: and yet in many paſſages that are not deſcriptive of ſound, every one muſt be ſenſible of a peculiar concord between the ſound of the words and their meaning. As there can be no doubt of the fact, what remains is to inquire into its cauſe.

Reſembling cauſes may produce effects that have no reſemblance; and cauſes that have no reſemblance may produce reſembling effects. A magnificent building, for example, reſembles not in any degree an heroic action; and yet the emotions they produce are concordant, and bear a reſemblance to each other. We are ſtill more ſenſible of this reſemblance in a ſong, when the muſic is properly adapted to the ſentiment: there is no reſemblance between the thought and ſound; but there is the ſtrongeſt reſemblance between the emotion raiſed by muſic tender and pathetic, and that raiſed by the complaint of an unſucceſsful lover. Applying this obſervation to the preſent ſubject, it appears, that, in ſome inſtances, the ſound even of a ſingle word makes an impreſſion reſembling that which is made by the thing it ſignifies: witneſs the word *running*, compoſed of two ſhort ſyllables; and more remarkably the words *rapidity*, *impetuoſity*, *precipitation.* Brutal manners produce in the ſpectator an emotion not unlike what is produced by a harſh and rough ſound; and hence the beauty of the figurative expreſſion, *rugged* manners. Again, the word *little*, being pronounced with a very ſmall aperture of the mouth has a weak and faint ſound, which makes an impreſſion reſembling that made by a diminutive object. This reſemblance of effects is ſtill more remarkable where a number of words are connected in a period: words pronounced in ſucceſſion make often a ſtrong impreſſion; and when this impreſſion happens to accord with that made by the ſenſe, we are ſenſible of a complex emotion, peculiarly pleaſant; one proceeding from the ſentiment, and one from the melody or ſound of the words. But the chief pleaſure proceeds from having theſe two concordant emotions combined in perfect harmony, and carried on in the mind to a full cloſe.

Except in the ſingle caſe where ſound is deſcribed, all the examples given by critics of ſenſe being imitated in ſound, reſolve it into a reſemblance of effects: emotions raiſed by ſound and ſignification may have a reſemblance; but ſound itſelf cannot have a reſemblance to any thing but ſound.

Proceeding now to particulars, and beginning with thoſe caſes where the emotions have the ſtrongeſt reſemblance, we obſerve, firſt, That by a number of ſyllables in ſucceſſion, an emotion is ſometimes raiſed, extremely ſimilar to that raiſed by ſucceſſive motion; which may be evident even to thoſe who are defective in taſte, from the following fact, that the term *movement* in all languages is equally applied to both. In this manner, ſucceſſive motion, ſuch as walking, running, galloping, can be imitated by a ſucceſſion of long or ſhort ſyllables, or by a due mixture of both: for example, ſlow motion may be juſtly imitated in a verſe where long ſyllables prevail; eſpecially when aided by a ſlow pronunciation:

Illi inter ſeſe magna vi brachia tollunt.
Georg. iv. 174.

On the other hand, ſwift motion is imitated by a ſucceſſion of ſhort ſyllables;

Quadrupedante putrem ſonitu quatit ungula campum.

Again:

Radit iter liquidum, celeres neque commovet alas.

Thirdly, A line compoſed of monoſyllables makes an impreſſion by the frequency of its pauſes, ſimilar to what is made by laborious interrupted motion:

With many a weary ſtep, and many a groan,
Up the high hill he heaves a huge round ſtone.
Odyſſey, xi. 736.

Firſt march the heavy mules ſecurely ſlow;
O'er hills, o'er dales, o'er craggs, o'er rocks they go.
Iliad, xxiii. 138.

Fourthly, The impreſſion made by rough ſounds in ſucceſſion, reſembles that made by rough or tumultuous motion: on the other hand, the impreſſion of ſmooth ſounds reſembles that of gentle motion. The following is an example of both.

Two craggy rocks projecting to the main,
The roaring winds tempeſtuous rage reſtrain;
Within, the waves in ſofter murmurs glide,
And ſhips ſecure without their haulſers ride.
Odyſſey, iii. 118.

Another example of the latter:

Soft is the ſtrain when Zephyr gently blows,
And the ſmooth ſtream in ſmoother numbers flows.
Eſſay on Criticiſm, 366.

Fifthly, Prolonged motion is expreſſed in an Alexandrine line. The firſt example ſhall be of a ſlow motion prolonged:

A needleſs Alexandrine ends the ſong;
That, like a wounded ſnake, drags its ſlow length along.
Ib. 356.

The next example is of forcible motion prolonged:

The waves behind impel the waves before,
Wide-rolling, foaming high, and tumbling to the ſhore.
Iliad, xiii. 1004.

The laſt ſhall be of rapid motion prolonged:

Not ſo when ſwift Camilla ſcours the plain,
Flies o'er the unbending corn, and ſkims along the main.
Eſſay on Criticiſm, 373.

Again, ſpeaking of a rock torn from the brow of a mountain:

Still gathering force, it ſmokes, and, urg'd amain,
Whirls, leaps, and thunders down impetuous to the plain.
Iliad, xiii. 197.

Sixthly, A period conſiſting moſtly of long ſyllables, that is, of ſyllables pronounced ſlow, produceth an emotion reſembling faintly that which is produced by gravity and ſolemnity. Hence the beauty of the following verſe:

Olli ſedato reſpondet corde Latinus.

It reſembles equally an object that is inſipid and uninteresting.

Tædet quotidianarum harum formarum.
Terence.

Seventhly, A ſlow ſucceſſion of ideas is a circumſtance that belongs equally to ſettled melancholy, and to a period compoſed of polyſyllables pronounced ſlow; and hence, by ſimilarity of emotions, the latter is imitative of the former:

In thoſe deep ſolitudes, and awful cells,

Where heav'nly-penſive Contemplation dwells,
And ever muſing Melancholy reigns.
Pope, Eloiſa to Abelard.

Eighthly, A long ſyllable made ſhort, or a ſhort ſyllable made long, raiſes, by the difficulty of pronouncing contrary to cuſtom, a feeling ſimilar to that of hard labour:

When Ajax ſtrives ſome rock's *vaſt* weight to throw,
The line too labours, and the words move ſlow.
Eſſay on Criticiſm, 370.

Ninthly, Harſh or rough words pronounced with difficulty, excite a feeling ſimilar to that which proceeds from the labour of thought to a dull writer:

Juſt writes to make his barrenneſs appear,
And ſtrains from hard-bound brains eight lines a year.
Pope's Epiſtle to Dr Arbuthnot, l. 181.

We ſhall cloſe with one example more, which of all makes the fineſt figure. In the firſt ſection mention is made of a climax in ſound; and in the ſecond of a climax in ſenſe. It belongs to the preſent ſubject to obſerve, that when theſe coincide in the ſame paſſage, the concordance of ſound and ſenſe is delightful: the reader is conſcious of pleaſure not only from the two climaxes ſeparately, but of an additional pleaſure from their concordance, and from finding the ſenſe ſo juſtly imitated by the ſound. In this reſpect, no periods are more perfect than thoſe borrowed from Cicero in the firſt ſection.

The concord between ſenſe and ſound is not leſs agreeable in what may be termed an *anticlimax*, where the progreſs is from great to little; for this has the effect to make diminutive objects appear ſtill more diminutive. Horace affords a ſtriking example:

> Parturiunt montes, naſcitur ridiculus mus.

The arrangement here is ſingularly artful: the firſt place is occupied by the verb, which is the capital word by its ſenſe as well as ſound: the cloſe is reſerved for the word that is the meaneſt in ſenſe as well as in ſound: and it muſt not be overlooked, that the reſembling ſounds of the two laſt ſyllables give a ludicrous air to the whole.

In this article we have mentioned none of the beauties of language but what ariſe from words taken in their proper ſenſe. Beauties that depend on the metaphorical and figurative power of words, are treated under the ſeparate articles of FIGURES, PERSONIFICATION, APOSTROPHE, HYPERBOLE, METAPHOR, &c. See alſo ORATORY.

Purity of LANGUAGE. Both the Greeks and Romans were particularly careful of preſerving the purity of their language. It ſeems amongſt the Romans to have been a point which they thought worthy the attention of the ſtate itſelf; for we find the Cumeans not daring to make uſe of the Latin language in their public acts without firſt having obtained leave in form. Tiberius himſelf would not hazard the word *monopolium* in the ſenate without making an excuſe for employing a foreign term. Seneca gives it as a certain maxim, that wherever a general falſe taſte in ſtyle and expreſſion prevails, it is an infallible ſign of a corruption of manners in that people: A liberty of introducing obſolete words, or forming new ones, is a mark, he thinks, of an equal licentiouſneſs of the moral kind. Accordingly it is obſerved, there are ſcarce more than eight or ten inſtances of new words to be produced from the moſt approved Roman writers, in the courſe of two or three centuries. If this mode of reaſoning concerning the morals of the ſtate was introduced and applied in our own country, no nation on the face of the earth could appear more abandoned; for no nation is more fond of adopting new words, though our language is ſufficiently copious. This delicacy of Seneca appears to be carried a little too far, and his manner of eſtimating the morals of the people muſt be a little fallacious. The Greeks were very remarkable for their diſcernment of provincialiſms, eſpecially the Athenians, whoſe dialect was inconceivably ſweet and elegant.

LANGUED, in heraldry, expreſſes ſuch animals whoſe tongue, appearing out of the mouth, is borne of a different colour from the reſt of the body.

LANGUEDOC, a large and maritime province of France: bounded on the north by Quercy, Rouerque, Auvergne, and Lionnois; on the eaſt by Dauphiny and Provence; on the weſt by Gaſcony; and on the ſouth by the Mediterranean Sea and Rouſillon. It is 225 miles in length, and 100 in breadth where broadeſt. The clergy are more rich and numerous here than in the reſt of France, there being three archbiſhops and 20 biſhops. Languedoc is divided into the Upper and Lower; and in general it is a very pleaſant country, fertile in corn, fruits, and excellent wines; and the inhabitants carry on a conſiderable trade. There are many curious medicinal plants, with iron mines, quarries of marble, and turquoiſe ſtones. There is alſo a great deal of kelp, and on the heaths are conſiderable numbers of the kermes oak. The principal rivers are the Rhone, the Garonne, the Aude, the Tarne, the Allier, and the Loire. There are alſo a great number of mineral ſprings. Thoulouſe is the capital town. This province is famous for the royal canal, which divides it in two, joining the Mediterranean with the Atlantic Ocean. This canal was undertaken in 1666, and finiſhed in 1680; the mathematician who undertook it made a baſon 400 yards long, 300 broad, and 7 feet deep, which is always kept full of water, and may be let out by means of a ſluice on the ſide of the Mediterranean, as well as by another on the ſide of the Atlantic.

LANGUET (Hubert), born at Viteaux in Burgundy in 1518, gained great reputation by his learning and virtue in the 16th century. Having read one of Melancthon's books at Bologna, he conceived ſo high an eſteem for the author, that he went to Wirtemberg purpoſely to viſit him; he arrived there in 1549, when he contracted a ſtrict friendſhip with Melancthon, and embraced the Proteſtant religion. In 1565, he was one of the firſt counſellors of Auguſtus elector of Saxony, who employed him in ſeveral important affairs and negociations. He was afterwards admitted to the confidence of William prince of Orange; and died at Antwerp, on the 30th of September 1581. We have many of his letters written in Latin to Sir Philip Sydney, to Camerarius the father and ſon, and to Auguſtus elector of Saxony, which have been ſeveral times reprinted, in three volumes; and there is alſo attributed to him a famous treatiſe, intitled *Vindiciæ contra Tyrannos*, and other works. His life is written by Philibert de la Mare.

LANGUET (John Baptiſt Joſeph), the celebrated vicar of St Sulpice at Paris, and a doctor of the Sorbonne, was born at Dijon in 1675. He was received into the Sorbonne in 1698; and attached himſelf to the community of St Sulpice, to which pariſh he was of great ſervice. M. de la Chetardie the vicar, conſcious of his talents, choſe him for his curate, in which capacity he officiated near 10 years; and in 1714, ſucceeded to the vicarage. His pariſh-church being ſmall and out of repair, he conceived the deſign of building a church ſuitable to the ſize of his pariſh, which he began with the ſum of 100 crowns, but ſoon obtained conſiderable donations; and the duke of Orleans, regent of the kingdom, granted him a lottery, and laid the firſt ſtone of the porch in 1718. It was conſecrated in 1745, after M. Languet had ſpared neither labour nor expence to render it one of the fineſt churches in the world both for architecture and ornament. Another work which did him no leſs honour was the *Maiſon de l'enfant Jeſus*. This eſtabliſhment conſiſts of two parts; the firſt compoſed of about 35 poor ladies of good families, and the ſecond of more than 400 poor women and children of town and country. The order and economy in this houſe, for the education and employment of ſo many perſons, gave cardinal Fleury ſo high an idea of the vicar of St Sulpice, that he propoſed to make him ſuperintendant-general of all the hoſpitals in the kingdom; which, however, was declined. Never man took more pains than he did to procure charitable donations and legacies, which he diſtributed with admirable diſcretion: he is ſaid from good authority to have diſburſed near a million of livres to the poor annually. When there was a general dearth in 1725, he ſold, in order to relieve the poor, his houſehold goods, pictures, and ſome curious pieces of furniture that he had procured with difficulty; and when the plague raged at Marſeilles, he ſent large ſums into Provence for the relief of the diſtreſſed. M. Languet was not only ſingular in this warm, diſintereſted, benevolent conduct, but alſo in another circumſtance equally rare; and this was in the refuſal of ſeveral biſhoprics that were offered him: he reſigned even his vicarage in 1748; but continued to preach every Sunday at his own pariſh-church, and to ſupport the *Maiſon de l'enfant Jeſus*, to his death, which happened in 1750. It is obſerved, that his piety and charity did not proceed from poverty of talents; for he was ſenſible and lively in converſation, and his genius often diſcovered itſelf in his agreeable repartees.

LANGUOR, among phyſicians, ſignifies great weakneſs and loſs of ſtrength, attended with a dejection of mind; ſo that the patients can ſcarce walk or even ſtand upright, but are apt to faint away.

LANHAM. See LAVENHAM.

LANIARD (from *Lanier*, Fr.), a ſhort piece of cord or line faſtened to ſeveral machines in a ſhip, and ſerving to ſecure them in a particular place, or to manage them more conveniently. Such are the laniards of the gun-ports, the laniard of the buoy, the laniard of the cat-hook, &c.—The principal laniards uſed in a ſhip, however, are thoſe employed to extend the ſhrouds and ſtays of the maſts by their communication with the dead-eyes, ſo as to form a ſort of mechanical power reſembling that of a tackle.—Theſe laniards are fixed in the dead-eyes as follows: one end of the laniard is thruſt through one of the holes of the upper dead-eye, and then knotted, to prevent it from drawing out; the other is then paſſed through one of the holes in the lower dead-eye, whence, returning upward, it is inſerted through the ſecond hole in the upper dead-eye, and next through the ſecond in the lower dead-eye, and finally through the third holes in both dead-eyes. The end of the laniard being then directed upwards from the loweſt dead-eye, is ſtretched as ſtiff as poſſible by the application of tackles; and that the ſeveral parts of it may ſlide with more facility through the holes in the dead eyes, it is well ſmeared with hog's lard or tallow, ſo that the ſtrain is immediately communicated to all the turns at once.

LANIGEROUS, an appellation given to whatever bears wool.

LANISTA, in antiquity, is ſometimes uſed to ſignify an executioner; but more frequently for a maſter-gladiator, who taught the uſe of arms, and had always people under them ready to exhibit ſhows of that kind. For this purpoſe, they either purchaſed gladiators, or educated children, that had been expoſen, in that art.

Plates CCLXII. and CCLXIII.

LANIUS, the SHRIKE, or *Butcher-bird*, in ornithology: a genus belonging to the order of accipitres, the characters of which are theſe: The beak is ſomewhat ſtrait, with a tooth on each ſide towards the apex, and naked at the baſe; and the tongue is lacerated.

1. The excubitor, great cinereous ſhrike, or greater butcher-bird, is in length 10 inches. The plumage on the upper parts is of a pale aſh-colour; the under, white: through the eyes there is a black ſtripe: the ſcapulars are white: the baſe of the greater quills is white, the reſt black: the tail is ſomewhat cuneiform; the two middle feathers are black; the outmoſt on each ſide, white; thoſe between are black, with the ends more or leſs white: the legs are black. Its bill is black, one inch long, and hooked at the end; the upper mandible furniſhed with a ſharp proceſs: the noſtrils are oval, covered with black briſtles pointing downwards: the muſcles that move the bill are very thick and ſtrong; which makes the head very large. This apparatus is quite requiſite in a ſpecies whoſe method of killing its prey is ſo ſingular, and whoſe manner of devouring it is not leſs extraordinary: ſmall birds it will ſeize by the throat, and ſtrangle; which probably is the reaſon the Germans alſo call this bird *wurchangl*, or "the ſuffocating angel." It feeds on ſmall birds, young neſtlings, beetles, and caterpillars. When it has killed the prey, it fixes them on ſome thorn, and when thus ſpitted pulls them to pieces with its bill: on this account the Germans call it it *thorntraer* and *thornſreker*. When confined in a cage, they will often treat their food in much the ſame manner, ſticking it againſt the wires before they devour it.—This bird inhabits many parts of Europe and North America. The female makes its neſt with heath and moſs, lining it with wool and goſſamer; and lays ſix eggs, about as big as thoſe of a thruſh, of a dull olive-green, ſpotted at the thickeſt end with black. In ſpring and ſummer it imitates the voices of other birds, by way of decoying them within reach, that it may deſtroy them; but beyond this, the natural note is the ſame throughout all ſeaſons. If a trap-fall be baited with a living ſmall bird, it proves a decoy, by which it may be taken in winter. It is obſerved to be mute when kept in a cage, though ſeemingly content.—In countries where they are plenty, the huſbandmen value them, on ſuppoſition of their deſtroying rats, mice, and other vermin. They are ſuppoſed to live five or ſix years; and are often trained up for catching ſmall birds in Ruſſia. In Carniola they are migratory, coming in May and departing in September; which is the caſe alſo in reſpect to the few which are met with in England.

2. The collurio, or leſſer butcher-bird, is ſeven inches and a half in length. The irides are hazel; the bill reſembles that of the preceding ſpecies; the head and lower part of the back are of a fine light grey: acroſs the eyes from the bill runs a broad black ſtroke: the upper part of the back, and coverts of the wings, are of a bright ferruginous colour; the breaſt, belly, and ſides, are of an elegant bloſſom colour: the two middle feathers of the tail are longeſt, and entirely black; the lower part of the others white, and the exterior webs of the outmoſt feather on each ſide wholly ſo. In the female, the ſtroke acroſs the eyes is of a reddiſh-brown; the head of a dull ruſt colour mixed with grey; the breaſt, belly, and ſides, are of a dirty

white, marked with ſemicircular duſky lines: the tail is of a deep brown; the outward feather on each ſide excepted, whoſe exterior webs are white. It is rather larger than the male. This bird is much more common than the former ſpecies. Mr Latham ſuſpects its being a bird of paſſage, never having ſeen it in winter. It lays ſix white eggs marked with a rufous brown circle towards the large end. The neſt is generally in a hedge or low-buſh; near which, it is ſaid, no ſmall bird chooſes to build; for it not only feeds on inſects, but alſo on the young of other birds in the neſt, taking hold of them by the neck, and ſtrangling them, beginning to eat them firſt at the brain and eyes. It is fonder of graſshoppers and beetles than of other inſects, which it eats by morſels, and, when ſatisfied, ſticks the remainder on a thorn; when kept in a cage, it does the ſame againſt the wires of it, like the former ſpecies. It is called in the German language by a name ſignifying "great head," or "bull head," from the ſize of that part. It will alſo feed on ſheep's kidneys, if in a cage, eating a whole one every day. Like the cinereous ſhrike, it only mocks the notes of other birds, having none of its own; and this merely, like that, to decoy. It is ſaid to be in this imitative art an adept; if money is counted over at midnight in the place where one of theſe is kept, ſo as to make a jingling noiſe, it begins to imitate the ſame ſound. When ſitting on the neſt, the female is ſoon diſcovered; for on the approach of any one, ſhe ſets up an horrible outcry.

3. The cœruleſcens, or fork-tailed Indian butcher-bird of Edwards, is in length about ſeven inches and a half: the bill is blackiſh brown, and bent; the upper mandible beſet with black hairs turning forwards: the plumage on the upper parts of the body is a fine black, with a gloſs of blue and in ſome light green; the under parts are white; the greater quills and tail are of a ferruginous black; the tail is pretty much forked, and the outer feather ſpotted with dirty white. It inhabits Bengal, where it is called *ſingah*. It is called alſo by the Indians the *king of the crows*, from its purſuing theſe birds from place to place with a great noiſe, and pecking them on the back till they eſcape.

4. The Antiguan ſhrike (or *Pie-grieſche d'Antigue* of Sonnerat) is about the ſize of a lark. Its bill is large and black; the upper mandible very long, and the curvature ſo exceſſive that one would rather take it for a monſtroſity than common to any other ſpecies: the irides are duſky: the head is black; the back, of a yellowiſh rufous colour: the throat and breaſt are white; the quills, and baſtard wing-coverts, black; and the wings reach only to the beginning of the tail, which is very long and wedge-ſhaped; the two middle feathers are wholly black; the legs are duſky black. It inhabits Panay, one of the Philippine iſlands, but principally about Antigue, one of the provinces thereof.

5. The jocoſus, or jokoſe ſhrike, is in length ſeven inches and a half. The bill is blackiſh, rather ſtraighter than in moſt of the genus, and furniſhed only with a very fine notch near the tip: the crown of the head is black, except ſome long brown feathers, which form a kind of creſt: the ſides of the head, throat, and fore part of the neck, are white; from each corner of the mouth there is a black line, continued backwards; and under each eye is a ſmall ſpot of lively red: the upper parts of the body are brown; the under parts, dirty white; the vent, roſe-colour: on the lower part of the neck and breaſt there is a kind of a brown band: the quills are brown: the tail is greatly wedge-ſhaped, and in colour brown, except the four outer feathers on each ſide, which have white tips: the legs and claws are black. This is a Chineſe bird, and called in thoſe parts by the name of *kowkai-kon*. It feeds upon rice and inſects, particularly cockroaches.

6. The infauſtus, or rock-ſhrike, is in length ſeven inches and three quarters. The bill is about an inch long, and blackiſh: the head and neck are of a dark aſh-colour, marked with ſmall rufous ſpots: the upper part of the back is a dark brown; the lower much paler, inclining to aſh, eſpecially towards the tail: the quills and wing-coverts are duſky, with pale margins: the breaſt, and under parts of the body, are orange, marked with ſmall ſpots, ſome white and others brown: the tail is three inches in length; the two middle feathers are brown, the others rufous: the legs are blackiſh: the wings and tail are even. This is the deſcription of the female. The male is ſaid to differ very little, except in being of a brighter colour. —This ſpecies is met with in many parts of Europe, from Italy on the one hand, to Ruſſia on the other; and is found in ſome parts of Germany, the Alpine mountains, thoſe of Tyrol, and ſuch-like places. The manners of this bird ſeem diſputed. Buffon ſays that it perches on a high ſtone, and as ſoon as a markſman appears with his gun, removes to a greater diſtance, and ſo on as often as he approaches; which renders this ſpecies difficult to come at. Brunnich and Linnæus, on the contrary, ſay that it is a bold bird, attending the traveller while at his meal, on purpoſe to feed on his ſcraps. It has an agreeable note of its own, approaching to that of the hedge-ſparrow, and will alſo learn to imitate that of others. It makes the neſt among the holes of the rocks, &c. hiding it with great art; and lays three or four eggs, feeding the young with worms and inſects, on which it alſo feeds itſelf. It may be taken young from the neſt, and brought up as the nightingale.

7. The fauſtus, or white-wreathed ſhrike, is about the ſize of a common thruſh. Its bill is pale: the upper parts of the body are grey; the under ferruginous: from the eyes to the hind head there paſſes a whitiſh line, compoſed of numerous white feathers, rendering it truly characteriſtic: the wings are rounded; the quills browniſh, with grey edges, which are croſſed with numerous ſlender brown lines: the tail is rounded, brown, and croſſed with numerous bars of darker brown: the legs are pale. This elegant ſpecies inhabits China, where it is known by the name of *whom-maj*. It may be obſerved, among others, in Chineſe paper-hangings, where the white line ſeems to encompaſs the back part of the head like a wreath.

8. The Dominican ſhrike (or *Pie-grieſche Dominiquaine* of Sonnerat), is bigger than a ſparrow, and rather longer. The bill is greyiſh, conical, and ſtrong; the baſe beſet with briſtles, pointing forwards: the head, neck, breaſt, back, wings, and tail, are black; the belly and rump white: the wings reach near an inch beyond the middle of the tail: the thighs are

black. It inhabits the Philippine iſlands, and is a bold courageous bird: it flies very quick, and with great rapidity; frequently hovering in the air like a ſwallow. It is a great enemy to the raven; to whom, though much bigger, he bids defiance, and even provokes him to combat: the battle often laſts half an hour, and ends with the retreat of the raven; rather, perhaps, from being teized out than much injured by the little enemy.

9. The nengeta (*Guirarou*, Buff.) is in length nine or ten inches. Its bill is duſky, and beſet with briſtles at the baſe: the irides are ſapphire-coloured: and from the angles of the mouth, through the eyes, there runs a black ſtreak; the upper parts of the body are of a dark browniſh aſh-colour; the under parts cinereous white: in the middle of the wing are a few white feathers: the quills and tail are nearly black; and all the feathers of the laſt, except the two middle ones, are obliquely tipped with white: the legs are of a dark aſh-colour; the claws black.—Theſe birds are found at Surinam and Braſil. They are common likewiſe at Guiana, where they frequent watery places, and are found in great numbers together. They are obſerved, at frequent intervals, to ſet up a great cry all together; which affords a happy and certain preſage to the thirſty traveller, in the immenſe foreſts of Guiana, of water being at hand.

10. The tyrannus, or tyrant ſhrike, is about the ſize of a thruſh. Its bill is a blackiſh brown, beſet with briſtles at the baſe: the irides are brown: the upper parts of the plumage grey brown; the under, white: the breaſt inclines to aſh-colour: the head is blackiſh on the upper part; the baſe of the feathers on that part in the male is orange, but ſeldom viſible except it erects the feathers, when there appears a ſtreak of orange down the middle of the crown: the tail is brown, marginated with rufous: the legs and claws are black brown. The female ſcarcely differs, except in the head; the baſe of the crown feathers being yellow inſtead of orange; the colours are not quite ſo deep, and it is a trifle leſs in ſize. It inhabits Virginia.—There is a variety which inhabits St Domingo and Jamaica. Theſe birds are called *titiri*, *pipiri*, or *quiquiri*, from their cry, which reſembles thoſe words. The firſt is called the *black-headed* or *great-billed pipiri*; the ſecond, the *yellow-headed pipiri* or *pipiri of paſſage*. The firſt though in plenty are ſeldom ſeen but in pairs; the ſecond in great troops, about the month of Auguſt, when they are very fat, and killed in great numbers for the table, as their fleſh is accounted good eating.—All authors agree in the manners of theſe birds, which are ferocious to a great degree while the hen is ſitting: no bird whatever dare approach their neſt: they will attack the firſt which comes near, without reſerve, and uſually come off conquerors. From hence by ſome they are called *king-birds*.

The *Carolina tyrant* of Cateſby is little, if at all, different from the preceding, in regard to ſpecific character. But he ſays that it makes its neſt rather expoſed, on trees and buſhes, frequently on the ſaſſafras; whereas the pipiris make uſe of the hollow of a tree, for the ſake of concealing it. In Carolina it is a bird of paſſage, coming in ſpring, and making one neſt in a year, which is commonly in June, and after bringing up its young, retires in autumn. Theſe birds frequent alſo the red cedars; are ſeldom found in woods, but often in hedge rows and fences of fields, and for the moſt part within 200 yards of each other. They do not moleſt their own ſpecies; but the moment either crow, or even eagle, appears, all within reach join forces, and begin the attack in all parts of his body at once, never deſiſting till they have driven him to a great diſtance.

11. The Albus, or white Panayan ſhrike, is about double the ſize of a lark. Its bill is black: the head, neck, back, belly, and ſhoulders, are white: the reſt of the wings and tail black; and acroſs the greater quills there is a white band: the legs are black. It inhabits the iſle of Panay.

There are above 40 other ſpecies of this genus, beſides many varieties.

LANNER, or Lannar. See Falco.

LANSDOWNE (Lord). See Granville.

LANSQUINET, the name of a game of cards, of French origin.

It may be played at by any indiſcriminate number of people, though a ſingle pack of cards is uſed during the deal. The dealer, who poſſeſſes an advantage, ſhuffles the cards, and after they have been cut by another of the party, deals out two cards on his left hand, turning them up, then one for himſelf, and a fourth that he places on the table for the company, who is called the *rejouiſſance*. On this card any, or all the company, the dealer excepted, may put their money, which the dealer is compelled to anſwer. The dealer continues turning the cards upwards, one by one, till two of a ſort come up, that is to ſay, two aces, two duces, &c. which, to prevent miſtakes, or their being conſidered as ſingle cards, he places on each ſide of his own card; and as often as two, three, or the fourth ſort of a card comes up, he invariably places, as before mentioned, on each ſide of his own card. The company has a right to take and put money upon any ſingle card, unleſs the dealer's card ſhould happen to be double, which is often the caſe, by his card being the ſame as one of the two hand-cards, which he firſt dealt out on his left hand: thus he continues dealing till he brings either their cards or his own. Whilſt the dealer's own card remains undrawn, he wins; and which ever card is turned up firſt, loſes. If he deals out the two cards on his left hand, which are ſtyled the *hand-cards*, before his own, he is intitled to deal again. This advantage amounts to no more than his being exempted from loſing, when he turns up a ſimilar card to his own, immediately after he has turned up one for himſelf.

Lanſquinet is often played without the *rejouiſſance*, the dealer giving every one of the party a card to put their money upon. It is alſo often played by dealing only two cards, one for the company and the other for the dealer.

It ſhould likewiſe be obſerved, that a limitation is generally fixed for the ſum to be placed upon any card or number of cards, either in gold or ſilver, beyond which the dealer is not obliged to anſwer.

LANTANA, or Indian sage, in botany: A genus of the angioſpermia order, belonging to the didynamia claſs of plants; and in the natural method ranking under the 40th order, *Perſonatæ*. The calyx is indiſtinctly quadridentated; the ſtigma as it were broken and turned back like a hoof; the fruit is a plum with a bilocular kernel. There are ſeveral ſpecies, conſiſting of ſhrubby exotics from Africa and America for the green-houſe or ſtove; growing to the height of a yard or two, and adorned with oblong, oval, and roundiſh ſimple leaves, with monopetalous, tubular, four-parted flowers of different colours. They may be propagated either by ſeeds or cuttings.—The camara, or wild ſage, is remarkable for the beauty of its flowers; which are yellow, tinged with red. The involucrata, or ſea-ſide ſage, has ſmall aſh-coloured leaves and a moſt agreeable ſmell. They are both natives of the Weſt Indies, the former growing wild among the buſhes, and the latter found near the ſea. Their leaves, particularly thoſe of the ſea-ſide ſage, are uſed by the black people in teas for colds, rheums, and weakneſs of the ſtomach.—There are ſeven other ſpecies.

LANTERN, or LANTHORN, a device to carry a candle in; being a kind of cover uſually made of white iron, with ſaſhes of ſome tranſparent matter, as glaſs, horn, &c. to tranſmit the light.

Dark LANTERN, one with only one opening, which may alſo be cloſed up when the light is to be entirely hid, or opened when there is occaſion for the aſſiſtance of the light to diſcover ſome object.

Magic LANTERN, an optical machine, whereby little painted images are repreſented ſo much magnified, as to be accounted the effect of magic by the ignorant. See DIOPTRICS, Art. x. p. 37.

LANTERN, in architecture, a little dome raiſed over the roof of a building to give light, and ſerve as a crowning to the fabric.

The term *lantern* is alſo uſed for a ſquare cage of carpentry, placed over the ridge of a corridor or gallery, between two rows of ſhops, to illuminate them, like that of the royal exchange London.

LANTERN, on ſhip-board, a well-known machine, of which there are many in a ſhip, particularly for the purpoſe of directing the courſe of other ſhips in a fleet or convoy; ſuch are the poop and top lanterns, &c.

Feaſt of LANTERNS, in China, is a celebrated feaſt held on the 15th day of the firſt month; ſo called from the infinite number of lanterns hung out of the houſes and ſtreets; which, it is ſaid, is no leſs than two hundred millions. On this day are expoſed lanterns of all prices, whereof ſome are ſaid to coſt 2000 crowns. Some of their grandees retrench ſomewhat every day out of their table, out of their dreſs, equipage, &c. to appear the more magnificent in lanterns. They are adorned with gilding, ſculpture, painting, japanning, &c. And as to their ſize, it is extravagant; ſome being from 25 to 30 feet diameter: they repreſent halls and chambers, and two or three ſuch machines together would make handſome houſes; ſo that in China they are able to eat, lodge, receive viſits, have balls, and act plays in a lantern. To illumine them, they ſhould have bonfires; but as that would be inconvenient, they content themſelves with lighting up in them an infinite number of torches or lamps, which at a diſtance have a beautiful effect. In theſe they exhibit various kinds of ſhows, to divert the people. Beſides theſe enormous lanterns, there is a multitude of others ſmaller, which uſually conſiſt of ſix faces or lights, each about four feet high, and one and a half broad, framed in wood finely gilt and adorned; over theſe they ſtretch a fine tranſparent ſilk, curiouſly painted with flowers, trees, and ſometimes human figures: the painting is very extraordinary, and the colours extremely bright; and when the torches are lighted, they appear highly beautiful and ſurpriſing.

Lantern-Fly, in natural hiſtory. See FULGORA.

LANUGO, the ſoft down of plants, like that growing on the fruit of the peach-tree. See HAIR.

LAOCOON (fab. hiſt.), a ſon of Priam and Hecuba, or according to others of Antenor or of Capys. As being prieſt of Apollo, he was commiſſioned by the Trojans to offer a bullock to Neptune to render him propitious. During the ſacrifice two enormous ſerpents iſſued from the ſea, and attacked Laocoon's two ſons who ſtood next to the altar. The father immediately attempted to defend his ſons; but the ſerpents falling upon him ſqueezed him in their complicated wreathes, and he died in the greateſt agonies. This puniſhment was ſaid to have been inflicted upon him for diſſuading the Trojans to bring into the city the fatal wooden horſe which the Greeks had conſecrated to Minerva, as alſo for his impiety in hurling a javelin againſt the ſides of the horſe as it entered within the walls. According to Hyginus, he ſuffered the above puniſhment for his marriage againſt the conſent of Apollo, or, according to others, for his polluting the temple, by his commerce with his wife Antiope, before the ſtatue of the god.

LAOCOON, in the hiſtory of the arts, is a celebrated monument of Greek ſculpture executed in marble by Polydorus, Athenodorus, and Ageſander, the three famous artiſts of Rhodes. This remain of antiquity was found at Rome in the ruins of the palace of Titus, in the beginning of the ſixteenth century, under the pontificate of Julius II. and ſince depoſited in the Farneſe palace. Laocoon, the prieſt of Apollo and Neptune, is here repreſented with his two ſons, with two hideous ſerpents clinging round his body, gnawing it, and injecting their poiſon: Virgil has given us the following deſcription of the fact:

Serpens amplexus uterque
Implicat, & miſeros morſu depaſcitur artus:
Corripiunt, ſpiriſque ligant ingentibus, & jam
Bis medium amplexi, bis collo ſquamea circum
Terga dati, ſuperant capite & cervicibus altis.

This ſtatue exhibits the moſt aſtoniſhing dignity and tranquillity of mind in the midſt of the moſt excruciating torments: Pliny [*] ſays of it, that is, *opus omnibus, picturæ & ſtatuariæ artis, præferendum*.

The Laocoon, Dr Gillies [†] obſerves, may be regarded as the triumph of Grecian ſculpture; ſince bodily pain, the groſſeſt and moſt ungovernable of all our paſſions, and that pain united with anguiſh and torture of mind, are yet expreſſed with ſuch propriety and dignity, as afford leſſons of fortitude ſuperior to any taught in the ſchools of philoſophy. The horrible ſhriek which Virgil's Laocoon emits is a proper circumſtance for poetry, which ſpeaks to the fancy by images and ideas borrowed from all the ſenſes, and has a thouſand ways of ennobling its object; but the expreſſion

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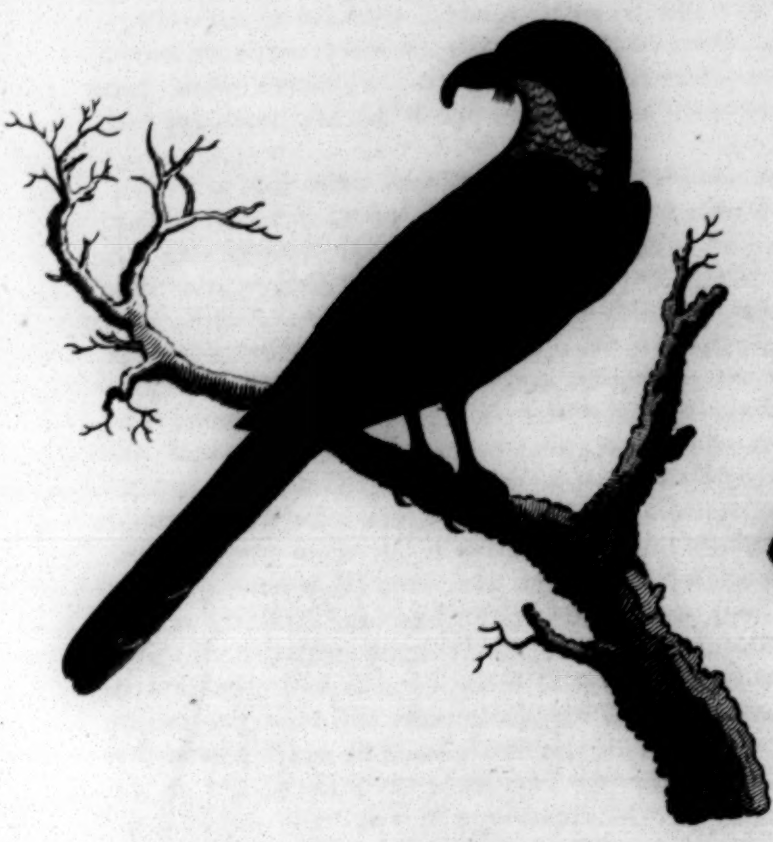
[*] Lib. xxxvi. c. 5.

[†] *Hiſt. of Greece*, ii. 177.

LANIUS. **Plate CCLXII.**

Antiguan Shrik.



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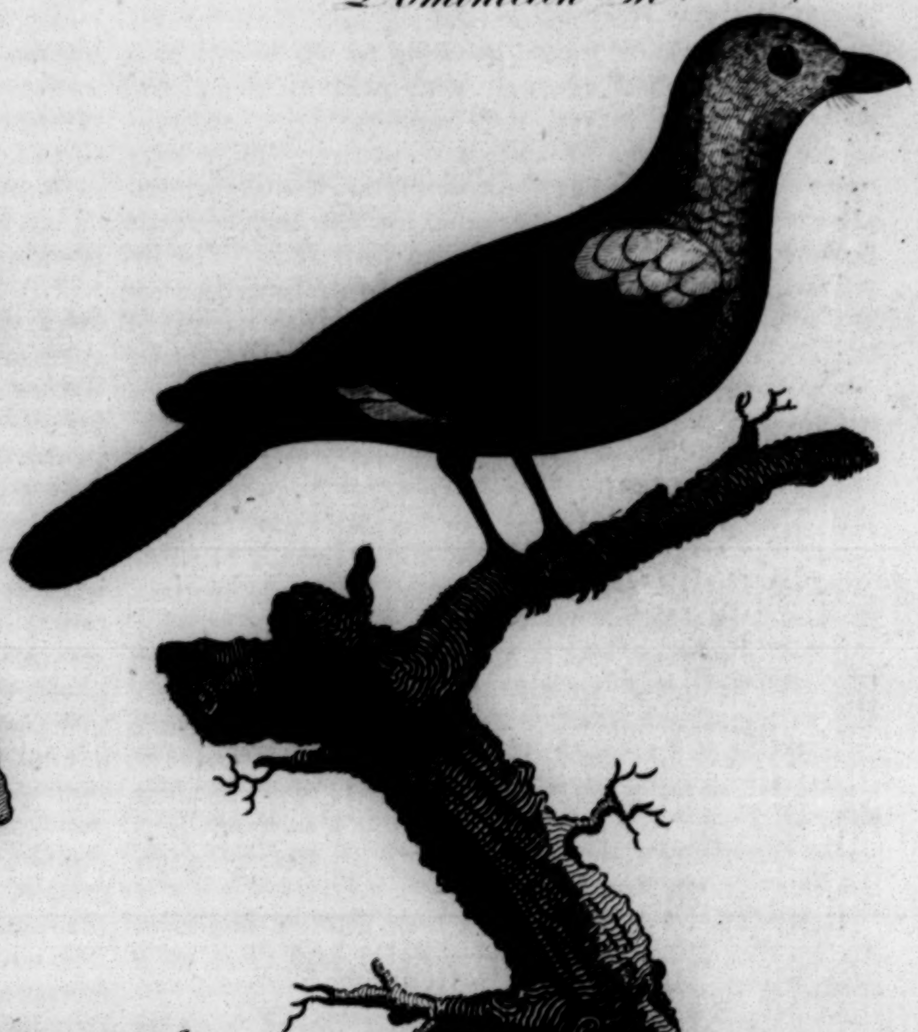

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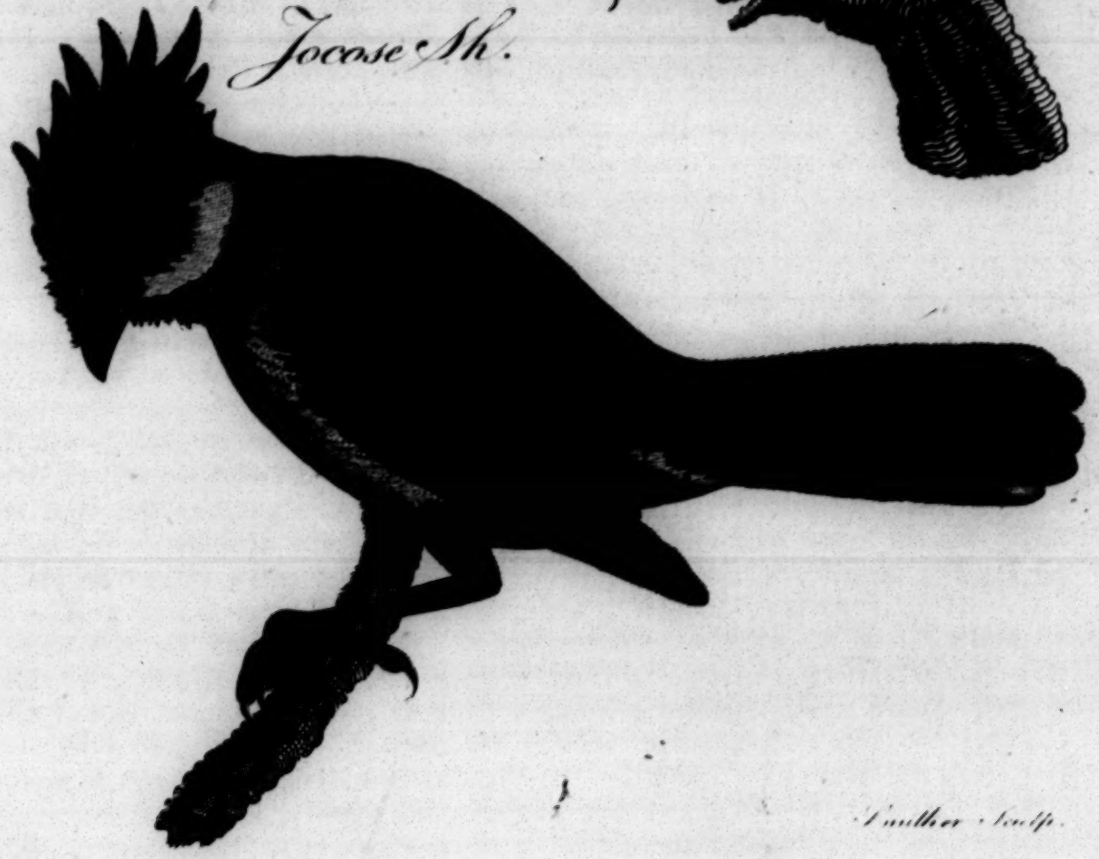

Pauther sculp.

BRITISH MUSEUM

preſſion of this ſhriek would have totally degraded the ſtatue. It is ſoftened, therefore, into a patient ſigh, with eyes turned to heaven in ſearch of relief. The intolerable agony of ſuffering nature is repreſented in the lower part, and particularly in the extremities of the body; but the manly breaſt ſtruggles againſt calamity. The contention is ſtill more plainly perceived in his furrowed forehead; and his languiſhing paternal eye demands aſſiſtance, leſs for himſelf than for his miſerable children, who look up to him for help.

LAODICÆA on the Lycus (anc. geog.), a town of Phrygia, at firſt called *Dioſpolis*, then *Rhoas*. It was built by Antiochus ſon of Stratonice, and called after his conſort *Laodice*. It was long an inconſiderable place; but increaſed towards the age of Auguſtus Cæſar, after having ſuffered in a ſiege from Mithridates. The fertility of the ſoil, and the good fortune of ſome of its citizens, raiſed it to greatneſs. Hiero, who adorned it with many offerings, left the people his heir to more than 2000 talents. After that benefactor followed Zeno, the rhetorician; and his ſon Polemo, as renowned a ſophiſt as ever lived. This perſon flouriſhed at Smyrna; but was buried here by the Syrian gate, near which were the ſepulchres or coffins of his anceſtors. Laodicea, though inland, grew more potent than the cities on the coaſt, and became one of the largeſt towns in Phrygia. It was often damaged by earthquakes, and reſtored by its own opulence or by the munificence of the Roman emperors. Theſe reſources failed, and the city, it is probable, became early a ſcene of ruin. About the year 1097 it was poſſeſſed by the Turks, and ſubmitted to Ducas general of the Emperor Alexis. In 1120 the Turks ſacked ſome of the cities of Phrygia by the Mæander, but were defeated by the Emperor John Comnenus, who took Laodicæa, and built anew or repaired the walls. About 1161 it was again unfortified. Many of the inhabitants were then killed with their biſhop, or carried with their cattle into captivity by the Turks. In 1190 the German emperor, Frederick Babaroſſa, going by Laodicea with his army toward Syria on a croiſade was received ſo kindly, that he prayed on his knees for the proſperity of the people. About 1196 this region with Caria was dreadfully ravaged by the Turks. The Sultan, on the invaſion of the Tartars in 1255, gave Laodicea to the Romans; but they were unable to defend it, and it ſoon returned to the Turks. It is now totally ruined and deſerted. Several remains of its ancient grandeur are, however, ſtill to be ſeen; particularly the ruins of two theatres and an amphitheatre.—The memory of this place is conſecrated in ſcripture, being one of the ſeven churches to which St John in the Apocalypſe addreſſes himſelf, commended by St Paul.

Chandler's Aſia.

LAODICÆA on the ſea (anc. geog.), according to Strabo, was a town of Seleucis in Syria, extremely well built, with a commodious harbour. The country about it yielded great quantities of wine. The city took its name from *Laodice*, mother of Seleucus the founder of it.

LAOMEDON, king of Troy, whoſe hiſtory is involved in fables. He was ſon of Ilus king of Troy; and married Strymo, called by ſome *Placia*, or *Leucippe*, by whom he had Podarces afterwards known by the name of *Priam*, and Heſione. He built the walls of Troy, and was aſſiſted by Apollo and Neptune, whom Jupiter had baniſhed from heaven, and condemned to be ſubſervient to the will of Laomedon for one year. When the walls were finiſhed, Laomedon refuſed to reward the labours of the gods; and ſoon after his territories were laid waſte by the ſea or Neptune, and his ſubjects were viſited by a peſtilence ſent by Apollo. Sacrifices were offered to the offended divinities; but the calamities of the Trojans increaſed, and nothing could appeaſe the gods, according to the words of the oracle, but annually to expoſe to a ſea monſter a Trojan virgin. Whenever the monſter appeared, the marriageable maidens were aſſembled, and the lot decided which of them was doomed to death for the good of her country. When this calamity had continued for five or ſix years, the lot fell upon Heſione Laomedon's daughter. The king was unwilling to part with a daughter whom he loved with uncommon tenderneſs, but his refuſal would irritate more ſtrongly the wrath of the gods. In the midſt of his fear and heſitation, Hercules came and offered to deliver the Trojans from this public calamity, if Laomedon would promiſe to reward him with a number of fine horſes. The king conſented; but when the monſter was deſtroyed, he refuſed to fulfil his engagements, and Hercules was obliged to beſiege Troy and take it by force of arms. Laomedon was put to death after a reign of 29 years; his daughter Heſione was given in marriage to Telamon, one of the conqueror's attendants; and Podarces was ranſomed by the Trojans, and placed upon his father's throne. According to Hyginus, the wrath of Neptune and Apollo was kindled againſt Laomedon, becauſe he refuſed to offer on their altars as a ſacrifice all the firſt born of his cattle, according to a vow he had made.

LAON, a conſiderable town of the iſle of France, and capital of the Laonois, with a caſtle and biſhop's ſee. Its principal trade conſiſts in corn and wine; and it is very advantageouſly ſeated on a mountain in E. Long. 3. 42. N. Lat. 49. 34.

LAOS, a kingdom of Aſia beyond the Ganges; bounded on the north, by China; on the eaſt, by Tonquin and Cochin-China; on the ſouth, by Cambodia; and on the weſt, by the kingdom of Siam, and by the territories of the king of Ava. This country is full of foreſts, and abounds in rice, fruits, and fiſh. The inhabitants are well made, robuſt, of an olive complexion, and mild in their diſpoſition; but very ſuperſtitious, and much addicted to women. Their principal occupation is tilling the ground and fiſhing. The king ſhows himſelf but twice a-year, and has large revenues from the elephant's teeth found in his dominions. Their religion is a kind of idolatry, and much the ſame as in China. Langiona is the capital town.

LAPATHUS, LAPETHUS, or *Lepithus* (anc. geog.); a town of Cyprus, about the middle of its north ſide, with a port or ſtation for ſhips, and a cognominal river. It was built by a colony of Phœnicians, according to Scylax; by Belus king of Tyre, according

cording to Alexander Epheſius. According to Strabo, it was built by a colony of Spartans; and one of the nine kings reſided here, the laſt of whom was Piſiſtratus, who commanded the naval army of Alexander the Great. There was a temple here dedicated to Venus. The territory round it is called *Lapithia* by Diodorus and Ptolemy; *Lapithii*, the people, tainted with a degree of fatuity; hence *Lapathius* denotes *fatuus*, (Heſychius).—Now a village called *Lapitha*; but, according to the Abbe Mariti, the longeſt and moſt extenſive in the iſland. Beſides the advantage of a fine ſituation, it furniſhes the beſt productions in the country; and though Cyprus is in general not very abundant in fruits, Lapitha ſeems a favoured ſpot in this reſpect, and may be called the *garden of the iſland*.

LAPIDARY, an artificer, who cuts precious ſtones.

The art of cutting precious ſtones is of great antiquity. The French have carried this art to a very great perfection, but not in any degree ſuperior to the Britiſh.

There are various machines employed in the cutting of precious ſtones according to their quality. The diamond, which is extremely hard, is cut on a wheel of ſoft ſteel, turned by a mill, with diamond-duſt, tempered with olive-oil, which alſo ſerves to poliſh it.

The oriental ruby, ſapphire, and topaz, are cut on a copper-wheel with diamond duſt tempered with olive-oil, and are poliſhed on another copper-wheel with tripoli and water. The hyacinth, emerald, amethyſt, garnets, agates, and other ſtones not of an equal degree of hardneſs with the other, are cut on a leaden wheel with ſmalt and water, and poliſhed on a tin-wheel with tripoli. The turquois of the old and new rock, giraſol, and opal, are cut and poliſhed on a wooden wheel with tripoli alſo.

The lapidaries of Paris have been a corporation ſince the year 1290. It is governed by four jurats, who ſuperintend their rights and privileges, viſit the maſter-workmen, take care of the maſter-piece of workmanſhip, bind apprentices, and adminiſter the freedom.

Lapidary is alſo uſed for a virtuoſo ſkilled in the nature, kinds, &c. of precious ſtones; or a merchant who deals in them.

Lapidary Style, denotes the ſtyle proper for monumental or other inſcriptions.

This is a kind of medium between proſe and verſe; the jejune and the brilliant are here equally to be avoided. Cicero has preſcribed the rules of it: *Accedat oportet oratio varia, vehemens, plena ſpiritus. Omnium ſententiarum gravitate, omnium verborum ponderibus, eſt utendum.*

The lapidary ſtyle, which was loſt with the ancient monuments, has been retrieved at the beginning of this age by Count Emanuel Teſoro: it is now uſed various ways at the beginning of books; and even epiſtles dedicatory are compoſed in it, of which we have no example among the ancients.

LAPIDESCENT, any thing which has the faculty of petrifying, or turning bodies to a ſtony nature. Naturaliſts ſpeak of a lapideſcent principle, a lapideſcent ſpirit, a lapideſcent juice, &c.

LAPIS, in general, is uſed to denote a ſtone of any kind.

Lapis, in Roman antiquity, a geographical meaſure denoting a mile; becauſe miles were diſtinguiſhed by erecting a ſtone at the end of each; from the number marked on which, the length of way from Rome might be known. The device is by Plutarch aſcribed to Caius Gracchus. This was more accurately executed by Auguſtus, who erected a gilt pillar in the forum, at which all the public ways of Italy, diſtinguiſhed by ſtones, were terminated. The ſame thing was done in the Roman provinces. Hence the phraſes *tertius lapis*, *centeſimus lapis*, &c. for three, a hundred, &c. miles; and ſometimes the ordinal number without *lapis*, as *ad duodecimum*, &c. at twelve miles diſtance.

Lapis Aſſius, in the natural hiſtory of the ancients, the name of a ſtone called alſo *ſarcophagus*, from its power of conſuming fleſh. See Sarcophagus.

Lapis Bononienſis, the Bolognian ſtone. See Chemistry, nº 1081, 1082.

Lapis Lazuli. See Lazuli.

Lapis Lyncurius. See Lyncurius.

Lapis Mutabilis. See Hydrophanes.

Lapis Hepaticus. See *Liver-Stone.*

Lapis Lydius. See Touch-stone, Trapp, and *Lapis Lydius.*

Lapis Obſidianus. See Obsidianus and Gallinaceus.

Lapis Nephriticus. See *Jade-Stone.*

Lapis Specularis. See Specularis.

LAPITHÆ, (anc. geog.), a people of Theſſaly. See the next article.

LAPITHUS, (fab. hiſt.), a ſon of Apollo, by Stilbe. He was brother to Centaurus; and married Orſinome, daughter of Euronymus, by whom he had Phorbas and Periphas. The name of Lapithæ was given to the numerous children of Phorbas and Periphas, or rather to the inhabitants of the country of which they had obtained the ſovereignty. The chief of the Lapithæ aſſembled to celebrate the nuptials of Perithous, one of their number. Among them were Theſeus, Dryas, Hopleus, Mopſus, Phalerus, Exadius, Prolochus, Titareſius, &c. The Centaurs were alſo invited to partake of the common feſtivity; and the amuſements would have been harmleſs and innocent, had not one of the intoxicated Centaurs offered violence to Hippodamia the wife of Perithous. The Lapithæ reſented the injury, and the Centaurs ſupported their companions; upon which the quarrel became univerſal, and ended in blows and ſlaughter. Many of the Centaurs were ſlain, and they at laſt were obliged to retire. Theſeus among the Lapithæ ſhowed himſelf brave and intrepid in ſupporting the cauſe of his friends; and Neſtor alſo was not leſs active in the protection of chaſtity and innocence. Heſiod has deſcribed the battle of the Centaurs and Lapithæ; as has alſo Ovid, in a more copious manner. The invention of bits and bridles for horſes is attributed to the Lapithæ.

LAPLAND, the moſt northerly country of Europe, extending from the north cape in 71° 30′ N. Lat. to the White Sea under the arctic circle, is inhabited by the ſame people, though the country is ſubject to different powers. Norwegian Lapland, under the dominion of Denmark, lies between the northern ſea, the river Pais, and the lake Enarak. Swediſh Lapland comprehends all the country from the Baltic to the mountains that ſeparate Norway from Sweden. It is divided into ſix diſtricts, denominated *marck*, or territory; and theſe are diſtinguiſhed by the names of rivers, ſuch as Aungnermanland, Elma, Peta, Lula, Torna, and Kiemi. The eaſtern part, ſubject to the Czar of Muſcovy, ſituated between the lake Enarak and the White Sea, is divided into three diſtinct prefectures; namely, that of the ſea coaſt towards the north, called *Mourmankoi Leporie;* the Terſkoi Leporie, upon the coaſt of the White Sea; and the third, or inland, known by the name of *Bellamoreſkoi Leporie.* In Swediſh Lapland, which is the moſt conſiderable of the three, the provinces or marcks are ſubdivided into ſmaller diſtricts called *biars*, conſiſting each of a certain number of families; among which the land is parcelled out by government, or the prefect of the diſtrict apppointed by the king of Sweden.

Lapland may be termed a huge congeries of frightful rocks and ſtupendous mountains; interſperſed, however, with many pleaſant valleys, watered by an infinite number of rivulets that run into the rivers and lakes, which diſcharge themſelves into the gulf of Bothnia. The names of the principal lakes in Lapland are the Great Uma, the Great Windel, the Oreavan, the Stor-avan, the Great Lula; the lakes of Kartom, Kali, Torno, Enara, and Kimi. Some of theſe extend 60 leagues in length, and contain a great number of iſlands: Stor-avan is ſaid to contain 365; and Enara contains an archipelago of iſlands ſo large, that no Laplander has lived long enough to viſit each particular iſland. The natives believe this country to be the terreſtrial paradiſe; and indeed nothing could be more enchanting than ſuch vaſt proſpects of mountains, hills, foreſts, lakes, rivers, &c. if the country was in a moderate climate; though even here, in ſummer the roſes are ſeen blowing wild on the banks of the lakes and rivers, with all the beautiful glow of colour which appears in thoſe cultivated in our gardens. But all the intervals between the mountains are not ingroſſed by theſe agreeable proſpects; great part of the flat country is covered with brown duſky foreſts of fir and pine trees; and theſe are often ſkirted by wide extended moraſſes, the ſtagnating waters of which in ſummer produce myriads of miſchievous inſects, that are more intolerable than even the cold of winter.

The cold of Lapland is very intenſe during the winter, freezing even brandy and the watery part of ſpirit of wine, if the latter is not highly rectified: all the lakes and rivers are frozen to a prodigious thickneſs; and the whole face of the country is covered with ſnow to the depth of four or five feet. While this continues looſe, it is impoſſible to travel; for a man's eyes are not only blinded with it, but if a ſtrong wind ſhould riſe he will be buried in the drifts of ſnow: yet ſhould a partial thaw take place for a few hours, the ſurface of this ſnow is formed by the ſucceeding froſt into a hard impenetrable cruſt, over which the Laplander travels in his ſledge with great celerity. While the thaw prevails, the air is ſurcharged with vapours, and the climate is rainy; but while the north wind blows, the ſky is beautifully ſerene, and the air very clear.

The heat of ſummer is almoſt as intolerable in Lapland as the cold of winter. At the northern extremity of the country the ſun never ſets for three months in ſummer, and in winter there is an uninterrupted night of the ſame duration; but this is qualified in ſuch a manner by a conſtant revolution of dawn and twilight, by a ſerene ſky, moon-light, and aurora borealis, reflected from the white ſurface of the earth covered with ſnow, that the inhabitants are enabled to hunt, fiſh, and proceed with their ordinary occupations. The country abounds with excellent ſprings; and is remarkable for ſome ſurpriſing cataracts, in which the water rumbles over frightful precipices, and daſhes among rocks with amazing impetuoſity and noiſe.

The ſoil of Lapland is generally ſo chilled and barren, that it produces little or no grain or fruit-trees of any kind. This ſterility, however, is not ſo much owing to the ſoil, which is in many places of a rich mould, as to want of induſtry; for in ſome diſtricts the Swedes have tilled and manured pieces of ground that bear plentiful crops of rye. There is alſo great plenty of berries: ſuch as black currants; what is called the Norwegian mulberry, growing upon a creeping plant, and much eſteemed as an antiſcorbutic; raſp-berries, cran-berries, juniper berries, and bilberries. The tops of the mountains are ſo much expoſed to intenſe cold, and tempeſts of ſnow and hail, that no tree will grow near the ſummit; but in parts that are more ſheltered, we ſee fine woods of birch, pine, and fir, diſpoſed by nature as if they had been planted by art in rows at regular diſtances, without any undergrowth or incumbrance below. Beſides theſe trees, ſome parts of Lapland produce the ſervice tree, the willow, the poplar, the elder, and the cornel. Among the plants of this country the principal is the Angelica; which is greatly eſteemed by the natives, who uſe it in their food. Here is likewiſe the acetoſa or ſorrel, which grows in great plenty, and is of much ſervice on account of its antiſcorbutic properties. They have alſo other kinds of herbs peculiar to the country, different kinds of graſs, heath, fern, and moſs; which are all enumerated by Linnæus in his *Flora Laponica.* But the vegetable which is in greateſt plenty, and of the moſt extenſive uſe among them, is the *lichen rangiſerus.* The rein-deer is wholly ſuſtained in winter by this vegetable; and the Laplanders themſelves boil it in broth as a cordial and reſtorative. They likewiſe uſe one ſort of it as a ſoft, eaſy, and wholeſome bed for their new-born children.

Some ſilver and lead mines have been diſcovered in the provinces of Pitha and Lula; and two of copper, together with excellent veins of iron, in the diſtrict of Torno, but they are not at preſent worked with any conſiderable advantage. In ſome places there are veins of ſilver and gold mixed; but theſe mines are worked only for a few months in the ſummer, becauſe the froſt hinders the engines from playing. Here are found beautiful cryſtals, of a ſurpriſing magnitude, ſo hard and fine, that when poliſhed they reſemble real diamonds. In ſome places amethyſts and topazes are alſo found, but pale and cloudy; alſo a great quantity of very curious ſtones, which are too hard to be worked by the tool of the maſon. Some of theſe found on the banks of rivers and lakes, when they happen to bear the leaſt reſemblance to the figures of animals, the Laplanders remove to more conſpicuous places, and adore as deities. The province of Torno affords ſome curious ſtones of an octagonal ſhape, regular, ſhining, and poliſhed by the hand of nature. In ſome rivers they fiſh for pearls, which are generally pale; but ſome of them are as bright as the oriental pearls and much larger and rounder. Theſe pearls are found in muſcle-ſhells; and the fiſhery is not in the ſea, but in rivers.

Lapland, as well as Norway, is infeſted with a great number of grey wolves and bears, with whom the inhabitants wage perpetual war. The moſt honourable exploit among the Laplanders is that of killing a bear; and the heroes adorn their caps with a ſmall plate of lead or pewter for every bear they have ſlain. The country abounds alſo with elks, beavers, and otters, which live here unmoleſted, and find plenty of fiſh for their ſubſiſtence. The foreſts of this country furniſh haunts to a great number of beautiful martens and ſquirrels; which laſt change their colour every winter from brown to grey. Lapland is alſo the native country of the zibeling or ſable, whoſe ſkin is extremely valuable. Here are likewiſe ermines, weaſels, hares, large black cats which attend the Laplanders in hunting, and little prick-eared curs trained to the game. But the moſt remarkable animal of Lapland is the rein-deer, of which an account is given in the article Cervus, n° 4. Theſe animals, ſo uſeful in various reſpects to the natives, are kept at no expence. In ſummer they feed upon graſſes and alpine plants; in winter, as already mentioned, upon the *lichen rangiferus*, or rein-deer lichen, and its varieties, which are ſo abundant as in many parts almoſt totally to cover the ground for the ſpace of ſeveral miles, and which the ſagacious animal diſcovers under the ſnow by the peculiar acuteneſs of its ſmell. Moſt of thoſe uſed for draught are caſtrated when very young, and are larger and fatter than the bucks. The woods, mountains, and rivers, are well ſtocked with wild-fowl; ſuch as buſtard, partridge, growſe, heathcock, pheaſants, lapwings, ſwans, wild-geeſe, wild-duck, and all ſorts of aquatic birds that build and breed in northern climates. In the beginning of the ſpring the ſwans go thither in numerous flights from the German ocean; the lap-wings follow in ſuch ſwarms that they darken the ſky as they paſs along, and ſcream ſo loud that they may be heard at a great diſtance. The rocks and mountains are likewiſe frequented by eagles, hawks, falcons, kites, and other birds of prey.—The rivers abound with delicious ſalmon from the gulph of Bothnia, trout, bream, and perch of exquiſite flavour and amazing magnitude; and the inhabitants of Wardhus, or Daniſh Lapland, are well ſupplied with fiſh from the northern ocean.—With reſpect to inſects, the flies hatched in the moraſſes and woods in ſummer are ſo numerous, that they often obſcure the face of day; ſo venomous, troubleſome, and intolerable, that the rein-deer fly to the tops of the higheſt mountains for ſhelter, and the Laplanders betake themſelves to the ſea-ſide, which is the leaſt infeſted by theſe peſtilent vermin. M. de Maupertuis, in his account of the voyage he made to Lapland, in company with the other French mathematicians ſent thither by the king to meaſure a degree of the meridian, gives us to underſtand, that on the tops of the mountains in Torno the flies were ſo troubleſome, that even the Finland ſoldiers, who are counted the moſt hardy troops in the ſervice of Sweden, were obliged to cover their faces with the ſkirts of their coats from the attacks of theſe animals, which ſwarmed to ſuch a degree, that the moment a piece of fleſh appeared it was blackened all over. Some of theſe flies are very large, with green heads, and fetch blood from the ſkin wherever they ſtrike. The Laplanders ſhroud themſelves in the ſmoke of a large fire kindled for that purpoſe; yet even this diſagreeable expedient was not ſufficient to defend the French philoſophers: they were obliged, notwithſtanding the exceſſive heat, to wrap up their heads in garments made of the ſkins of rein-deer, called in that country *lapmudes*, and to cover themſelves with a thick rampart of fir-boughs; yet all theſe precautions proved ineffectual. M. de Maupertuis obſerved a lake quite covered with little yellowiſh grains, reſembling millet ſeed, which he ſuppoſed to be the chryſaliſes of ſome of theſe inſects.

The Laplanders are very low in ſtature, and are likewiſe remarkable for having large heads. They are alſo ill ſhaped, and their features harſh. They are, however, ſtrong, hardy, and robuſt, inſomuch that they will bear incredible fatigue; and it is remarked that the ſtouteſt Norwegian is not able to bend the bow of a Laplander. The women are much leſs homely than the men, and many of them are noted for a delicate and florid complexion.

Theſe people are ſimple, honeſt, hoſpitable, and timorous: their timidity, however, reſpects war alone; for to many other ſpecies of dangers they expoſe themſelves with ſurpriſing intrepidity, whether in aſcending and deſcending mountains and precipices with their ſnow-ſhoes and in ſledges, or in venturing amidſt whirlpools and cataracts in little ſlender boats made of thin fir-boards, faſtened together with thongs of leather, ſinews of wild-beaſts, or tough and flexible twigs of willow and oſier. Theſe boats are of different ſizes, from two to ſix yards in length, managed with oars, and caulked with moſs ſo tight as to keep out the water. The Laplanders are partly ſettled, and in part wild and roving: the latter live in tents made with coarſe cloth; the former are fixed in ſmall villages near the lakes, and chiefly follow fiſhing. They build their cottages ſomewhat in the ſhape of a cone, by placing a circle of large trees or poles aſlant in the earth, and cloſe to each other, ſo that their tops meet, and form a ſmall vent for the iſſue of the ſmoke: they cover the ground within with branches of trees. In ſpring their food conſiſts principally of the eggs of water-fowl, which are extremely plentiful in thoſe parts; in ſummer and autumn, of the birds themſelves, and of various others of the partridge-tribe; and in winter of the milk and fleſh of the rein-deer and dried fiſh. They had till lately no bread; but in lieu thereof uſed the inner rind of the pine-tree dried and ground, and dried fiſh reduced to powder. They make confections and decoctions of berries, angelica, and ſorrel, which they juſtly reckon to be preſervatives againſt the ſcurvy. The Laplander is ſecured in the poſſeſſion of uninterrupted health by temperance and exerciſe, which, together with the ſeverity of the climate, brace his nerves to a very unuſual pitch of ſtrength, and fortify his conſtitution in ſuch a manner, that he often lives to the age of 100, without feeling the leaſt pang of diſtemper, or even perceiving his vigour in the leaſt impaired; for it is not uncommon to ſee a Laplander in extreme old age hunting, fowling, ſkaiting, and performing all the ſevereſt exerciſes with undiminiſhed agility.

The ſummer garb of the men conſiſts of a long coat of coarſe cloth, reaching down the middle of the leg, and girded round the waiſt with a belt or girdle; from which hang a Norway knife, and a pouch containing flints, matches, tobacco, and other neceſſaries; the girdle itſelf being decorated with braſs rings and chains. Their caps are made of the ſkin of the northern diver, with the feathers on; and their ſhoes of the rein-deer ſkin, with the hair outwards. They wear no linen; but the garments of the better ſort are of a finer cloth, and they delight in a variety of colours, though red, as the moſt glaring, is the moſt agreeable. In winter they are totally caſed up in coats, caps, boots, and gloves, made of the rein-deer ſkins. In the *Flora Laponica*, Linnæus ſays, "Perhaps the curious reader will wonder how the people in Lapland, during the terrible cold that reigns there in winter, can preſerve their lives; ſince almoſt all birds, and even ſome wild beaſts, deſert it at that time. The Laplander, not only in the day, but through the whole winter nights, is obliged to wander about in the woods with his herds of rein-deer. For the rein-deer never come under cover, nor eat any kind of fodder, but a particular kind of liverwort. On this account the herdſmen are under a neceſſity of living continually in the woods, in order to take care of their cattle, leſt they ſhould be devoured by wild beaſts. The Laplander eaſily does without more light, as the ſnow reflects the rays that come from the ſtars, and as the *Aurora Borealis* illuminates the air every night with a great variety of figures. No part of our body is more eaſily deſtroyed by cold than the extremities of the limbs, which are moſt remote from the ſun of this microcoſm, the heart. The kibes that happen to the hands and feet, ſo common in the northern parts of Sweden, prove this. In Lapland you will never ſee ſuch a thing; although were we to judge by the ſituation of the country, we ſhould imagine juſt the contrary, eſpecially as the people wear no ſtockings, as we do, not only ſingle, but double and triple. The Laplander guards himſelf againſt the cold in the following manner. He wears breeches made of rein-deer ſkins with the hair on, reaching down to his heels, and ſhoes made of the ſame materials, the hairy part turned outwards. He puts into his ſhoes ſlender-eared broad-leafed cyperus graſs,* (*carex veſicaria*, *Spec. Pl.* or the Bladder Carex), that is cut in ſummer and dried. This he firſt combs and rubs in his hands, and then places it in ſuch a manner that is not only covers his feet quite round, but his legs alſo; and being thus guarded, he is quite ſecured agaiſt the intenſe cold. With this graſs they ſtuff their gloves likewiſe, in order to preſerve their hands. As this graſs keeps off the cold in winter, ſo in ſummer it hinders the feet from ſweating, and at the ſame time preſerves them from being annoyed by ſtriking againſt ſtones, &c. for their ſhoes are very thin, being made, not of tanned leather, but the raw hide."

The womens apparel differs very little from that of the other ſex; only their girdles are more ornamented with rings, chains, needle-caſes, and toys that ſometimes weigh 20 pounds. In winter, both men and women lie in their furs; in ſummer, they cover themſelves entirely with coarſe blankets to defend them from the gnats which are intolerable. The Laplanders are not only well diſpoſed, but naturally ingenious. They make all their own furniture, their boats, ſledges, bows and arrows. They form neat boxes of thin birch boards, and inlay them with the horn of the rein-deer. The Swedes are very fond of the Lapland baſkets made of the roots of trees, ſlit in long thin pieces, and twiſted together ſo nicely that they will hold water. Among the manufactures of this country we likewiſe number curious horn-ſpoons, and moulds in which they caſt the trinkets of tin which adorn their girdles. Over and above theſe domeſtic occupations, the men within doors perform the office of cooks in dreſſing victuals for the family. The women act as taylors and embroiderers; they make clothes, ſhoes, and boots, and harneſs for the rein deer: they ſpin thread of fur, and knit it into caps and gloves that are very ſoft and warm. They draw tin into wire through a horn; and with this they cover the thread which they uſe in embroidering the figures of beaſts, flowers, trees, and ſtars upon their caps and girdles.

The Laplanders make ſurpriſing excurſions upon the ſnow in their hunting expeditions. They provide themſelves each with a pair of ſkates, or ſnow-ſhoes, which are no other than fir-boards covered with the rough ſkin of the rein-deer, turned in ſuch a manner that the hair riſes againſt the ſnow, otherwiſe they would be too ſlippery. One of theſe ſhoes is uſually as long as the perſon who wears it; the other is about a foot ſhorter. The feet ſtand in the middle, and to them the ſhoes are faſtened by thongs or withes. The Laplander thus equipped wields a long pole in his hand, near the end of which there is a round ball of wood to prevent its piercing too deep in the ſnow; and with this he ſtops himſelf occaſionally. By means of theſe accoutrements he will travel at the rate of 60 miles a-day without being fatigued; aſcending ſteep mountains, and ſliding down again with amazing ſwiftneſs.

The Laplander not only travels a-foot, but is provided with a carriage drawn by the rein-deer, in which he journeys with ſtill greater rapidity. The ſledge, called *pulka*, is made in the form of a ſmall boat, with a convex bottom, that it may ſlide the more eaſily over the ſnow: the prow is ſharp and pointed; but the ſledge is flat behind. The traveller is ſwathed in this carriage like an infant in a cradle, with a ſtick in his hand to ſteer the veſſel, and diſengage it from pieces of rock or ſtumps of trees that may chance to encounter it in the route. He muſt alſo balance the ſledge with his body, otherwiſe he will be in danger of being overturned. The traces, by which this carriage is faſtened to the rein-deer, are fixed to a collar about the animal's neck, and run down over the breaſt between the fore and hind legs, to be connected with the prow of the ſledge: the reins, managed by the traveller, are tied to the horns; and the trappings are furniſhed with little bells, the ſound of which is agreeable to the animal. With this draught at his tail, it has been reported that the rein-deer will fly like lightning over hill and dale at the rate of 200 miles a-day. But this repreſentation is greatly exaggerated. According to the beſt accounts, the common pace of the rein-deer is only at the rate of about four miles an hour; though, if he be preſſed, he will travel 10 or 12 Swediſh miles (70 or 84 Engliſh miles) in a day; but by ſuch hard driving is generally deſtroyed. It, however, frequently happens, that he will perſevere in his journey 50 miles without intermiſſion, and without taking any refreſhment, except occaſionally moiſtening his mouth with the ſnow. Before he ſets out, the Laplander whiſpers in his ear the way he is to follow, and the place at which he is to halt, firmly perſuaded that the beaſt underſtands his meaning: but, in ſpite of this intimation, he frequently ſtops ſhort long before he has reached the journey's end; and ſometimes he overſhoots the mark by ſeveral leagues. In the beginning of winter the Laplanders mark the moſt frequented roads, by ſtrewing them with fir-boughs; and indeed theſe roads are no other than pathways made through the ſnow by the rein-deer and the pulkhas: their being frequently covered with new ſnow, and alternately beaten by the carriage, conſolidates them into a kind of cauſeway; which is the harder if the ſurface has felt a partial thaw, and been cruſted by a ſubſequent froſt. It requires great caution to follow theſe tracts; for if the carriage deviates to the right or left, the traveller is plunged into an abyſs of ſnow. In leſs frequented parts, where there is no ſuch beaten road, the Laplander directs his courſe by certain marks which he has made on the trees.

The chief occupation of the Laplanders is hunting, and this exerciſe they perform in various ways. In ſummer they hunt the wild beaſts with ſmall dogs, trained to the diverſion. In winter they purſue them by their tracks upon the ſnow, ſkating with ſo great velocity, that they very often run down the prey. They catch ermines in traps, and ſometimes with dogs. They kill ſquirrels, martens, and ſables, with blunt darts, to avoid wounding the ſkin. Foxes and beavers are ſlain with ſharp pointed darts and arrows; in ſhooting which, they are accounted the beſt markſmen in the world. The larger beaſts, ſuch as bears, wolves, elks, and wild rein-deer, they either kill with fire-arms purchaſed in Sweden or Norway, or take in ſnares and pits dug in the foreſts. Their particular laws relating to the chace are obſerved with great punctuality. The beaſt becomes the property of the man in whoſe ſnare or pit he is caught; and he who diſcovers a bear's den has the excluſive privilege of hunting him to death. The conqueſt of a bear is the moſt honourable atchievement that a Laplander can perform; and the fleſh of this animal they account the greateſt delicacy on earth. The bear is always diſpatched with a fuſil, ſometimes laid as a ſnare, ready cocked and primed; but more frequently in the hands of the hunter, who runs the moſt immiment riſk of his life ſhould he miſs his aim of wounding the beaſt mortally. The death of a bear is celebrated by the Laplanders as a ſignal victory. The carcaſe is drawn to the cabin or hut of the victor by a rein-deer, which is kept ſacred from any other work for a whole year after this ſervice. The bear is ſurrounded by a great number of men, women, and children, reciting a particular hymn or ſong of triumph, in which they thank the vanquiſhed enemy for having allowed himſelf to be overcome without doing any miſchief to his conqueror, and welcome his arrival: then they make an apoſtrophe to heaven, expreſſing their acknowledgement to God, that he has created beaſts for the uſe of men, and endued mankind with ſtrength and courage to overcome and attack the fierceſt of the brute creation. The hero is ſaluted by the women, who ſpit chewed elder-bark in his face. He is feaſted three days ſucceſſively, and his cap is decorated with an additional figure wrought in tin-wire.

The manner in which the young Laplander chooſes a wife is equally remarkable and ludicrous. When he has pitched upon a female, he employs ſome friends as mediators with the father; and theſe being provided with ſome bottles of brandy, the ſuitor accompanies them to the hut of his future father-in-law, who invites the mediators to enter; but the lover is left without until the liquor be drank, and the propoſal diſcuſſed: then he is called in, and entertained with ſuch fare as the hut affords; yet without ſeeing his miſtreſs, who retires and goes out on this occaſion. Having obtained leave of her parents to make his addreſſes in perſon, he puts on his beſt apparel, and is admitted to the lady, whom he ſalutes with a kiſs: then he preſents her with the tongue of a rein-deer, a piece of beaver's fleſh, or ſome other ſort of proviſion. She declines the offer, which is made in preſence of her ſiſters and relations; but makes a ſignal to the lover to follow her into the fields, where ſhe accepts the preſents. Thus encouraged, he begs her permiſſion to ſleep with her in the hut: if ſhe conſents, there is no further difficulty; if ſhe diſapproves of the propoſal, ſhe drops her preſents on the ground. When the lovers are agreed, the youth is permitted to viſit his inamorata as often as he ſhall think proper: but every time he comes, he muſt purchaſe this pleaſure with a freſh bottle of brandy; a perquiſite ſo agreeable to the father, that he often poſtpones the celebration of the nuptials for two or three years. At length the ceremany is performed at church by the prieſt of the pariſh. Even after this event, the huſband is obliged to ſerve his father-in-law a whole year; at the expiration of which he retires to his own habitation with his wife, and her patrimony of rein-deer, and receives preſents from all his friends and relations. From this period he ſequeſters his wife from the company of all ſtrangers, eſpecially of the male ſex, and watches over her conduct with the moſt jealous vigilance.

Many Lapland women are barren, and none of them are very fruitful. A woman, immediately after delivery, ſwallows a draught of whale-fat: the child is waſhed with ſnow or cold water, and wrapped up in a hare-ſkin. The mother is ſeldom above five days in the ſtraw, and in fourteen is generally quite recovered: then ſhe carries the child to church to be baptized. Before ſhe can reach the reſidence of the prieſt, ſhe is often obliged to traverſe large foreſts, mountains, lakes, and wide-extended waſtes of ſnow. The infant is faſtened in a hollowed piece of wood, ſtretched naked on a bed of fine moſs, covered with the ſoft ſkin of a young rein-deer, and ſlung by two ſtraps to the back of the mother, who always ſuckles her own child. At home this little cradle is hung to the roof of the hut, and the child lulled aſleep by ſwinging it from one ſide to the other. The boys from their infancy practiſe the bow; and are not allowed to break their faſt until they have hit the mark. The female children are as early initiated in the buſineſs peculiar to their ſex.

Theſe people, though for the moſt part vigorous and healthy, are not altogether exempted from diſtemper. They are ſubject to ſore eyes, and even to blindneſs, from the ſmoke of their huts, and the fire to which they are almoſt continually expoſed. Some waſte away in conſumptions; others are afflicted with rheumatic pains and the ſcurvy; and a few are ſubject to vertigo and apoplexy. For the cure of all their internal diſorders, they uſe no other medicine than the decoction of a certain ſpecies of moſs; and when this cannot be procured, they boil the ſtalk of angelica in the milk of rein-deer. In order to remove a fixed pain, they apply a large muſhroom, burning hot, to the part affected; and this produces a bliſter, which is ſuppoſed to draw off the peccant humour. To their wounds they apply nothing but the turpentine that drops from the fir-tree. When they are froſt-bitten, (though according to the above extract from Linnæus this ſeldom or never happens), we are told that they thruſt a red-hot iron into a cheeſe made of rein-deer's milk, and with the fat that drops from it anoint the frozen member, which generally recovers. When a Laplander is ſuppoſed to be on his death-bed, his friends exhort him to die in the faith of Chriſt, and bear his ſufferings with reſignation, by remembering the paſſion of our Saviour. They are not, however, very ready to attend him in his laſt moments; and as ſoon as he expires, quit the place with precipitation, apprehending ſome injury from his ſpirit or ghoſt, which they believe remains with the corpſe, and takes all opportunities of doing miſchief to the living. The deceaſed is wrapped up in woollen or linen, according to his circumſtances, and depoſited in a coffin by a perſon ſelected for that purpoſe: but this office he will not perform, unleſs he is firſt ſecured from the ill offices of the manes, by a conſecrated braſs ring fixed on his left arm. The Chriſtian religion in this country has not yet diſpelled all the rites of heatheniſh ſuperſtition: together with the body they put into the coffin an ax, a flint, and ſteel, a flaſk of brandy, ſome dried fiſh and veniſon. With the ax the deceaſed is ſuppoſed to hew down the buſhes or boughs that may obſtruct his paſſage in the other world: the ſteel and flint are deſigned for ſtriking a light, ſhould he find himſelf in the dark at the day of judgment; and on the proviſion they think he may ſubſiſt during his journey.

The Muſcovite Laplanders obſerve other ceremonies, that bear an affinity to the ſuperſtitions of the Greek church. They not only ſupply the defunct with money, but likewiſe provide him with money for the porter of paradiſe, and a certificate ſigned by the prieſt, and directed to St Peter, ſpecifying, that the bearer had lived like a good Chriſtian, and ought to be admitted into heaven. At the head of the coffin they place a little image of St Nicholas, who is greatly reverenced in all parts of Muſcovy as a friend to the dead. Before the interment, the friends of the deceaſed kindle a fire of fir-boughs near the coffin, and expreſs their ſorrow in tears and lamentations. They walk in proceſſion ſeveral times round the body, demanding, in a whining tone, the reaſon of his leaving them on earth. They aſk whether he was out of humour with his wife; whether he was in want of meat, drink, clothing, or other neceſſaries; and whether he had not ſucceeded in hunting and fiſhing? Theſe and other ſuch interrogations, to which the defunct makes no reply, are intermingled with groans and hideous howlings; and, between whiles, the prieſt ſprinkles the corpſe and the mourners alternately with holy water. Finally, the body is conveyed to the place of interment on a ſledge drawn by a rein-deer; and this, together with the cloths of the deceaſed, are left as the prieſt's perquiſite. Three days after the burial, the kinſmen and friends of the defunct are invited to an entertainment, where they eat the fleſh of the rein-deer which conveyed the corpſe to the burying-ground. This being a ſacrifice to the manes, the bones are collected into a baſket and interred. Two thirds of the effects of the deceaſed are inherited by his brothers, and the remainder divided among his ſiſters: but the lands, lakes, and rivers, are held in coparceny by all the children of both ſexes, according to the diviſion made by Charles IX. of Sweden, when he aſſigned a certain tract of land to each family.

The commerce of the Laplanders is more conſiderable than one would expect in a deſart country inhabited by a ſavage ignorant people. They export great quantities of fiſh to the northern parts of Bothnia and White Ruſſia. They likewiſe trade with the neighbouring countries of Norway, Sweden, Muſcovy, and Finland, by ſelling rein-deer, fine furs, baſkets and toys of their own manufacture, dried pikes, and cheeſe made of the rein-deer's milk. In return for theſe commodities they receive rixdollars, woollen cloths, linen, copper, tin, flour, oil, hides, needles, knives, ſpirituous liquors, tobacco, and other neceſſaries. The Laplanders march in caravans to the fairs in Finland and Norway: theſe are compoſed of a long ſtring of 30 or 40 rein-deer and pulkhas tied to one another, the foremoſt being led by a Laplander a-foot. When they have choſen a ſpot for an encampment, they form a large circle of their rein-deer and pulkhas ready yoked; and the animals lying down quietly on the ſnow, are fed with moſs by their maſters. The people kindle great fires, around which, men, women, and children ſit, and ſup on dried fiſh: but the more voluptuous ſpread out bear-ſkins under their tents, where they lie at their eaſe and ſmoke tobacco.

The revenue ariſing from this country is of no great conſequence: it is paid partly in rixdollars, but chiefly in furs; nay, ſome that can procure neither, pay the tribute in dried pikes. The produce of the mines forms likewiſe a conſiderable article. Fifty ſquirrel-ſkins, or one fox-ſkin, with a pair of Lapland ſhoes, are valued at one rixdollar. Part of the taxes is allotted for the maintenance of the Lapland clergy.—The frightful aſpect of this country has been deemed a more effectual defence than artificial bulwarks and garriſons, of which here are none; or than the arms and courage of the natives, who are neither warlike in themſelves, nor in the leaſt tinctured with diſcipline.

The Laplanders call themſelves *Salme-Same*, and *Samen-Almatjeb*. Their country they denominate *Same-Landa*, or *Same-eadnam*; the Swedes ſtyle it *Lapland* or *Lappmarken*, and the inhabitants *Lappar*. The natives of thoſe diſtricts under the dominion of Sweden and Denmark are Lutherans; while many of thoſe who are ſubject to Ruſſia are ſtill Pagans. Swediſh Lapland contains about eight churches, which in ſome parts lie at ſo great a diſtance from each other, that a native is frequently obliged to travel three days in order to attend divine ſervice. The Laplanders, before their converſion to Chriſtianity, which was not till lately introduced amongſt them, poſſeſſed no books or manuſcripts, though they knew many traditional hiſtories and ſongs of ancient heroes and princes who once reigned over them; but involved in great uncertainty, and mixed with the moſt fabulous accounts. They have now a tranſlation of the New Teſtament in their language; and many of the natives are able to read and write.

Plate CCLXIII.

LAPLYSIA, or Sea-hare; a genus of marine inſects belonging to the order of vermes molluſca. The body is covered with membranes reflected. It hath a ſhield-like membrane on the back, a lateral pore on the right ſide, the anus on the extremity of the back, with four feelers reſembling ears. The figure repreſents the depilans minor, which grows to two inches and a half in length, and to more than an inch in diameter: its body approaches to an oval figure, and is ſoft, punctated, of a kind of gelatinous ſubſtance, and of a pale lead colour; from the larger extremity there ariſe four oblong and thick protuberances: theſe are the tentacula; two of them ſtand nearly erect, two are thrown backward. It is not uncommon about the Britiſh ſhores, eſpecially of Angleſea. It cauſes, by its poiſonous juice, the hair to fall off the hands of thoſe that touch it; and is ſo extremely fetid as to create ſickneſs at ſtomach.—The major, or greater ſea-hare, grows to the length of eight inches.

LAPSANA, nipplewort: A genus of the polygamia æqualis order, belonging to the ſyngeneſia claſs of plants: and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is naked; the calyx caliculated, with all the inferior ſcales canaliculated or finely channelled. There are four ſpecies, which grow commonly as weeds by the ſides of ditches. The young leaves of the common kind, called *dock-creſſes*, have the taſte of radiſhes, and are eaten raw at Conſtantinople as a ſalad. In ſome parts of England the common people boil them as greens, but they have a bitter and diſagreeable taſte.

LAPSE, in eccleſiaſtical law, a ſlip or omiſſion of a patron to preſent a clerk to a benefice within ſix months of its being void: in which caſe, the benefice is ſaid to be in *lapſe*, or *lapſed*, and the right of preſentation devolved to the ordinary.

And if the ordinary neglect to preſent during the ſame time, the right of preſentation accrues to the metropolitan, and to the king by neglect of the metropolitan. This right of lapſe was firſt eſtabliſhed in the reign of Henry II. when the biſhops firſt began to exerciſe univerſally the right of inſtitution to churches: and therefore when there is no right of inſtitution, there is no right of lapſe; ſo that no donative can lapſe to the ordinary, unleſs it hath been augmented by the kings bounty; but no right of lapſe can accrue, when the original preſentation is in the crown. In caſe the benefice becomes void by death, or ceſſion through plurality of benefices, there the patron is bound to take notice of the vacancy at his own peril; but in caſe of a vacancy by reſignation or canonical deprivation, or if a clerk preſented be refuſed for inſufficiency, theſe being matters of which the biſhop alone is preſumed to be cognizant, here the law requires him to give notice thereof to the patron, otherwiſe he can take no advantage by way of lapſe; neither ſhall any lapſe accrue thereby to the metropolitan or the king. If the biſhop refuſe or neglect to examine and admit the patron's clerk, without good reaſon aſſigned or notice given, he ſhall have no title to preſent by lapſe: and if the right of preſentation be litigious or conteſted, and an action be brought againſt the biſhop to try the title, no lapſe ſhall occur till the queſtion of right be decided. If the biſhop be both patron and ordinary, he ſhall not have a double time allowed him to collate in: and if the biſhop doth not collate his own clerk immediately to the living, and the patron preſents, though after the ſix months are lapſed, yet the preſentation is good, and the biſhop is bound to inſtitute the patron's clerk. If the biſhop ſuffer the preſentation to lapſe to the metropolitan, the patron alſo has the ſame advantage if he preſents before the archbiſhop has filled up the benefice: yet the ordinary cannot, after lapſe to the metropolitan, collate his own clerk to the prejudice of the archbiſhop. But if the preſentation lapſes to the king, the patron ſhall never recover his right till the king has ſatisfied his turn by preſentation; for *nullum tempus occurrit regi*.

LAPWING, in ornithology. See Tringa.

LAQUEARIUS, a kind of athleta among the ancients, who in one hand held a *laqueus*, i. e. a ſort of ſnare, wherewith to embarraſs and entangle his antagoniſt, and in the other a poignard to ſtab him.

LAQUEUS, in ſurgery, a kind of ligature ſo contrived, that, when ſtretched by any weight or the like, it draws up cloſe. Its uſe is to extend broken or diſjointed bones, to keep them in their places while they are ſet, and to bind the parts cloſe together.

LARARIUM, was a chapel which the Romans frequently had in their houſes for the houſehold gods, called *lares*. Spartian ſays, that Alexander the ſon of Mammeus kept in his lararium the figure of our Saviour, together with his other idols.

LAR-BOARD, among ſeamen, the left-hand ſide of the ſhip when you ſtand with your face towards the head.

LARCENY, or Theft, by contraction for latrociny, *latrocinium*, is diſtinguiſhed by the law into two ſorts: the one called *ſimple larceny*, or plain theft, unaccompanied with any other atrocious circumſtance;

and *mixed* or *compound larceny*, which alſo includes in it the aggravation of a taking from one's houſe or perſon.

I. *Simple* larceny, when it is the ſtealing of goods above the value of twelvepence, is called *grand larceny*; when of goods to that value, or under, is *petit larceny*: offences, which are conſiderably diſtinguiſhed in their puniſhment, but not otherwiſe. See Theft.

II. *Mixed*, or *compound larceny*, is ſuch as has all the properties of the former, (ſee Theft); but is accompanied with either one or both of the aggravations of a taking from one's *houſe* or *perſon*. Firſt therefore of larceny from the *houſe*, and then of larceny from the *perſon*.

1. Larceny from the *houſe*, though it might ſeem to have a higher degree of guilt than ſimple larceny, yet is not at all diſtinguiſhed from the other at common law: unleſs where it is acompanied with the circumſtance of breaking the houſe by night; and then it falls under another deſcription, viz. that of burglary, (ſee Burglary). But now by ſeveral acts of parliament (the hiſtory of which is very ingeniouſly deduced by a learned modern writer †, who hath ſhown them to have gradually ariſen from the improvements in trade and opulence), the benefit of clergy is taken from larcenies committed in an houſe in almoſt every inſtance: except that larceny of the ſtock or utenſils of the plate glaſs company from any of their houſes, &c. is made only ſingle felony, and liable to tranſportation for ſeven years. The multiplicity of the general acts is apt to create ſome confuſion; but upon comparing them diligently, we may collect, that the benefit of clergy is denied upon the following domeſtic aggravations of larceny; viz. firſt, in larcenies *above the value of twelvepence*, committed, 1. In a church or chapel, with or without violence, or breaking the ſame: 2. In a booth or tent in a market or fair, in the day-time or in the night, by violence of breaking the ſame, the owner or ſome of his family being therein: 3. By robbing a dwelling-houſe in the day-time (which *robbing* implies a breaking), any perſon being therein: 4. In a dwelling-houſe by day or by night, without breaking the ſame, any perſon being therein and put in fear; which amounts in law to a robbery: and in both theſe laſt caſes the acceſſory before the fact is alſo excluded from his clergy. Secondly, in larcenies *to the value of five ſhillings*, committed, 1. By breaking any dwelling-houſe, or any out houſe, ſhop, or warehouſe thereunto belonging, in the day-time, although no perſon be therein; which alſo now extends to aiders, abettors, and acceſſories before the fact: 2. By privately ſtealing goods, wares, or merchandiſe in any ſhop, warehouſe, coach-houſe, or ſtable, by day or by night; though the ſame be not broken open, and though no perſon be therein: which likewiſe extends to ſuch as aſſiſt, hire, or command the offence to be committed. Laſtly, in larcenies *to the value of forty ſhillings* in a dwelling houſe, or its out-houſes, although the ſame be not broken, and whether any perſon be therein or not; unleſs committed againſt their maſters by apprentices under the age of 15. This alſo extends to thoſe who aid or aſſiſt in the commiſſion of any ſuch offence.

† *Barr.* 875.

Blackſt. Comment.

2. Larceny from the *perſon*, is either by *privately* ſtealing, or by open and violent aſſault, which is uſually called *robbery*.

The offence of *privately* ſtealing from man's *perſon*, as by picking his pocket or the like, privily, without his knowledge, was debarred of the benefit of clergy ſo early as by the ſtatute 8 Eliz. c. 4. But then it muſt be ſuch a larceny as ſtands in need of the benefit of clergy, viz. of above the value of 12 d.; elſe the offender ſhall not have judgment of death. For the ſtatute creates no new offence; but only takes away the benefit of clergy, which was a matter of grace, and leaves the thief to the regular judgment of the ancient law. This ſeverity (for a moſt ſevere law it certainly is) ſeems to be owing to the eaſe with which ſuch offences are committed, the difficulty of guarding againſt them, and the boldneſs with which they were practiſed (even in the queen's court and preſence) at the time when this ſtatute was made: beſides that this is an infringement of property in the manual occupation or corporal poſſeſſion of the owner, which was an offence even in a ſtate of nature. And therefore the *ſaccularii*, or cutpurſes, were more ſeverely puniſhed than common thieves by the Roman and Athenian laws.

As to open and violent larceny from the perſon, ſee Robbery.

LAR, a town of Perſia, in the province of Fars, with a caſtle. It carries on a great trade in ſilk; and its territory abounds in oranges, lemons, and very large tamarinds. E. Long. 54. 15. N. Lat. 27. 30.

LARACHA, an ancient and ſtrong town of Africa, in the kingdom of Fex. It is ſeated at the mouth of a river of the ſame name, with a good harbour. It was once in the poſſeſſion of the Spaniards; but the Moors took it from them. W. Long. 5. 55. N. Lat. 35. 0.

LARDNER (Nathaniel), an eminent Engliſh diſſenting divine, was born at Hawkhurſt in Kent, June 6. 1684. After a grammatical education, to which great attention muſt have been given, and in which a no leſs rapid progreſs muſt have been made, he was ſent firſt to a diſſenting academy in London, which was under the care of the Rev. Dr Joſhua Oldfield; and thence, in his 16th year, to proſecute his ſtudies at Utrecht, under the celebrated profeſſors D'Uries, Grævius, and Burman. Here he remained ſomewhat more than three years, and then removed for a ſhort ſpace to Leyden. In 1703 he returned to England, continuing at his father's houſe to employ himſelf by cloſe and diligent preparation for the ſacred profeſſion which he had in view. Qualified as he was, it was not till 1709 that he preached his firſt ſermon, from Romans i. 16.—"a text (his biographer remarks) than which there could not have been a more proper one for a man who was deſtined in the order of Divine Providence to be one of the ableſt advocates for the authenticity and truth of the Chriſtian revelation that ever exiſted."

A few years after this, Lardner was received into Lady Treby's family as domeſtic chaplain and tutor to her ſon, and continued in this comfortable ſituation till her ladyſhip's death in 1721. This event threw him into circumſtances of ſome perplexity, having preached to ſeveral congregations during his reſidence with Lady Treby without the approbation or choice of any one congregation. Here we are told, "that it reflects no honour on the Diſſenters, that a man of ſuch merit ſhould ſo long have been neglected." But it has been obſerved upon this, that the pulpit was not the place in which Mr Lardner was calculated either to convey improvement or acquire reputation. Dr Kippis afterwards informs us, "that his mode of elocution was very unpleaſant; that from his early and extreme deafneſs he could have no ſuch command of his voice as to give it a due modulation; and that he greatly dropped his words." It cannot then, as his biographer adds, be matter of ſurpriſe that he was not popular; nor, it may be added, can it be any reflection on the congregations to which he occaſionally preached, that they did not chooſe for their miniſter a man, who, notwithſtanding his great learning and amiable virtues, was ſo deficient as a public ſpeaker, that it was impoſſible to hear him with any pleaſure, and ſcarcely without pain.

Monthly Review, Jan. 1789.

Though Mr Lardner had no church at which he officiated as miniſter, he was engaged with ſome of his diſſenting brethren in preaching a Tueſday-evening lecture at the Old Jewry. Acquainted probably with the direction of his ſtudies, they appointed him to preach on the proof of the *Credibility of the Goſpel Hiſtory*. This he diſcuſſed, we are told, in two ſermons; and proſecuting the ſubject which he had taken up in theſe diſcourſes, in Feb. 1727, he publiſhed, in two volumes octavo, *the Firſt part of* "The Credibility of the Goſpel Hiſtory, or the Facts OCCASIONALLY mentioned in the New Teſtament confirmed by Paſſages of ancient Authors who were contemporary with our Saviour or his Apoſtles, or lived near their Time." An *Appendix* was ſubjoined, relating to the time of Herod's death.

Thus Mr Lardner commenced author, and began his literary career with ſingular reputation. "It is ſcarcely neceſſary to ſay (obſerves Dr Kippis), how well this work was received by the learned world. Not only was it highly approved by the Proteſtant Diſſenters, with whom the author was more immediately connected, but by the clergy in general of the eſtabliſhed church; and its reputation gradually extended into foreign countries. It is indeed an invaluable performance, and hath rendered the moſt eſſential ſervice to the cauſe of Chriſtianity. Whoever peruſes this work (and to him that does not peruſe it, it will be to his own loſs) will find it replete with admirable inſtruction, ſound learning, and juſt and candid criticiſm." Theſe two, with the ſubſequent fifteen, volumes octavo, and the four thin quartos intitled *Jewiſh and Heathen Teſtimonies*, occupied him, with the interruption ariſing from ſome ſmaller productions, during the ſpace of *forty-three years*.

Dr Kippis gives us a particular account of the time when each volume was publiſhed, and of the ſubjects diſcuſſed in each. The following uſeful information which the Doctor introduces, in ſpeaking of the "*Supplement* to the Credibility," deſerves well to be tranſcribed. "I cannot avoid ſtrongly recommending this work (ſays he) to the attention of all young divines. Indeed, I think that it ought to be read by every theological ſtudent before he quits the univerſity or academy in which he is educated. There are three other works which will be found of eminent advantage to thoſe who are intended for, or beginning to engage in, the Chriſtian miniſtry. Theſe are, Butler's Analogy, Biſhop Law's Conſiderations on the the Theory of Religion, and Dr Taylor's Key to Apoſtolical Writings, prefixed to his Paraphraſe on the Epiſtle to the Romans. Without agreeing with every circumſtance advanced in theſe works, it may be ſaid of them with the greateſt truth, that they tend to open and enlarge the mind; that they give important views of the evidence, nature, and deſign of revelation; and that they diſplay a vein of reaſoning and inquiry which may be extended to other objects beſides thoſe immediately conſidered in the books themſelves.—It muſt not be forgotten, that the Supplement to the Credibility has a place in the excellent collection of treatiſes in divinity which has lately been publiſhed by Dr Watſon biſhop of Landaff. For a collection which cannot fail of being eminently conducive to the inſtruction and improvement of younger clergymen, and for the noble manly, and truly evangelical preface by which it is preceded, this great prelate is entitled to the gratitude of the Chriſtian world." It may not be improper to add, that the *Supplement to the Credibility* was ſome years ago publiſhed ſeparately by the bookſellers, under the title of *The Hiſtory of the Goſpels and Epiſtles*.

Applauded as Dr Lardner's works were, he received little recompence for them. Some of the latter volumes of the Credibility were publiſhed at a loſs; and at laſt he ſold the copy-right and all the remaining printed copies to the bookſellers, for the trifling ſum of L. 150. His object, however, was not private emolument, but to ſerve the intereſts of truth and virtue; and it pleaſed Divine Providence to ſpare his life, both to complete his extenſive plan, and to ſee the laſt volume, the 4th of the *Teſtimonies*, publiſhed. This was in 1767. He was ſeized with a decline in the ſummer following; and was carried off in a few days at Hawkhurſt, the place of his nativity, where he had a ſmall paternal eſtate, in the 85th year of his age.

LAREDO, a ſea-port town of Spain, in the bay of Biſcay, with a large ſafe harbour. It is 30 miles weſt of Bilboa, and 72 north by weſt of Burgos. W. Long. 3. 45. N. Lat. 43. 23.

LARENTINALIA, in antiquity, a feaſt held among the Romans on the 23d day of December, but ordered to be obſerved twice a-year by Auguſtus; by ſome ſuppoſed to have been in honour of the Lares, but by others, with more probability, in honour of Acca Laurentia; and to have been the ſame with Laurentalia.

LARES, among the ancients, derived by Apuleius (*De Deo Socratis*), from *lar, familiaris*; a kind of domeſtic genii, or divinities, worſhipped in houſes, and eſteemed the guardians and protectors of families; ſuppoſed to reſide more immediately in the chimney corner.

The Lares were diſtinguiſhed from the Penates; as the former were ſuppoſed to preſide over houſe-keeping, the ſervants in families, and domeſtic affairs; and the latter were the protectors of the maſters of families, their wives and children. Accordingly the Lares were dreſſed in ſhort ſuccinct habits to ſhow their readineſs to ſerve; and they held a ſort of cornucopia in their hands, as a ſignal of hoſpitality and good houſe-keeping. According to Ovid, there were generally two of them, who were ſometimes repreſented with a dog at their feet.

Plutarch diſtinguiſhes good and evil Lares, as he had before done good and evil Genii.—There were alſo ſome public, others private Lares.

Apuleius tells us the domeſtic Lares were no more than the ſouls of departed perſons, who had lived well, and diſcharged the duties of their ſtation; whereas thoſe who had done otherwiſe, were vagabonds, wandering about and frightening people, called *Larvæ* and *Lemures*.

The Lares were alſo called *Penates*, and were worſhipped under the figures of little marmouſets, or images of wax, ſilver, or earthen ware.

The public Lares were alſo called *Compitales*, from *compitum* "a croſs-way;" and *Viales*, from *via* "a way or public road;" as being placed at the meetings of roads and in the high-ways, and eſteemed the patrons and protectors of travellers.

Their private Lares took care of particular houſes and families: theſe they alſo called *Præſtites*, from *præſto*;

Quod præſtant oculis omnia tuta ſuis, Ovid Faſt.

They gave the name *Urbani*, i. e. "Lares of cities," to thoſe who had cities under their care; and *Hoſtilii*, to thoſe who were to keep their enemies off. There were alſo Lares of the country, called *Rurales*, as appears by ſeveral antique inſcriptions.

The Lares were alſo genial gods, and were ſuppoſed to take care of children from their birth. It is for this reaſon that when Macrobius tells us the Egyptians had four gods who preſided over the birth of children, *viz.* the Genius, Fortune, Love, and Neceſſity, called *Præſtites*, ſome interpret him as if he had ſaid the Egyptians had Lares; but they have mentioned that there was a great difference between the Lares of the Romans and the Præſites of the Egyptians. However, the learned Mr Bryant affirms that they were the ſame.

The ancients differ extremely about the origin of the Lares. Varro and Macrobius ſay that they were the children of Mania; Ovid makes them the iſſue of Mercury, and the Naiad Lara, or Larunda; Apuleius aſſures us they were the poſterity of the Lemures; Nigridius, according to Arnobius, made them ſometimes the guardians and protectors of houſes, and ſometimes the ſame with the Curetes of Samothracia, which the Greeks call *Idæi dactyli*. Nor was Varro more conſiſtent in his opinion of theſe gods; ſometimes making them the manes of heroes, and ſometimes gods of the air.

T. Tatius king of the Sabines, was the firſt who built a temple to the Lares. The chimney and fire-place in the houſe were particularly conſecrated to them.

Tertullian tells us, the cuſtom of worſhipping the Lares aroſe from this, that they anciently interred their dead in their houſes; whence the credulous people took occaſion to imagine their ſouls continued there alſo, and proceeded to pay them divine honours. To this it may be added, that the cuſtom being afterwards introduced of burying in the highways, they might hence take occaſion to regard them as gods of the highways.

The victim offered to the Lares in the public ſacrifices was a hog: in private, they offered them wine, incenſe, a crown of wool, and a little of what was left at the table. They alſo crowned them with flowers, particularly the violet, myrtle, and roſemary. Their ſymbol was a dog, which was uſually repreſented by their ſide, on account of its fidelity and the ſervice it does to man in watching his houſe. They were ſometimes alſo repreſented as clothed in a dog's ſkin.

The term *Lares*, according to Mr Bryant, was formed from *laren*, an ancient word by which the ark was repreſented: and he ſuppoſes that the Lares and Manes were the ſame domeſtic deities under different names; and that by theſe terms the Hetrurians and Latins denoted the *dii arkitæ*, who were no other than their arkite anceſtors, or the perſons preſerved in the laren or ark; the genius of which was Iſis, the reputed parent of the world. He obſerves farther, that they are deſcribed as dæmons and genii, who once lived on earth, and were gifted with immortality. Arnobius ſtyles them *Lares quoſdam genios & functorum animas*; and he ſays, that according to Varro, they were the children of Mania. Huetius (Demoſthen. Prop. 4. p. 139.) adds, that Mania had alſo the name of *Larunda*; and ſhe is ſtyled the mother of the dæmons. By ſome ſhe is called *Lara*, and was ſuppoſed to preſide over families; and children were offered at her altar in order to procure her favour. In lieu of theſe they in after-times offered the heads of poppies and pods of garlic.

LARGE, a ſea term applied to the wind when it croſſes the line of a ſhip's courſe in a favourable direction, particularly on the beam or quarter. Thus, if a ſhip ſteer weſt, then the wind in any point of the compaſs to the eaſtward of the ſouth or north may be called *large*, unleſs when it is directly eaſt, and then it is ſaid to be right aſt. Sailing large is, therefore, advancing with a large wind, ſo as that the ſheets are ſlackened and flowing, and the bow-lines entirely diſuſed. This phraſe is generally oppoſed to ſailing cloſe-hauled.

LARGESS. See LARGITIO.

LARGITIO, in Roman antiquity, was a diſtribution of corn, proviſion, cloaths, money, &c. to the people. Gracchus when tribune, to make himſelf popular paſſed a law for ſupplying the Roman citizens with corn at a very low rate, out of the public granaries. Claudius, another tribune, with the ſame views to popular applauſe, procured it to be diſtributed *gratis*.—Cato, to win the common people from Cæſar, perſuaded the ſenate to do the ſame, and 300,000 citizens ſhared in the diſtribution. Cæſar, after his triumph, extended his bounty to 150,000, giving them each a *mina*. The Roman emperors enlarged ſtill further the liſt of thoſe who were to partake of their diſtributions. Largitio is frequently taken in a bad ſenſe, to ſignify a maſked bribery; whereby candidates purchaſed votes, when they ſtood for places of honour or truſt in the ſtate. The diſtribution of money was called *congiarium*, and the diſtributors *diviſores* and *ſequeſtres*.

LARGS, a village on the weſt coaſt of Scotland, oppoſite to the iſland of Bute; rendered memorable by the defeat of the Norwegians here in their laſt invaſion of that country.—This invaſion was made in the year 1263, with a fleet of 160 ſail and an army of 20,000 men, commanded by Haquin king of Norway, whoſe ravages on the coaſt of Ayr, Bute, and Arran, reaching the Scottiſh court, an army was immediately aſſembled by Alexander III. and a bloody engagement enſued at this village, when 16,000 of the invaders were ſlain in the battle and flight, with 5000 Scots. Haquin eſcaped to the Orkneys, where he ſoon after died of grief. The entrenchments of the Norwegian camp may ſtill be traced along the ſhore of this place. The Scottiſh commanders who fell in battle were buried in a riſing field, near the village; three or four perſons were interred in one grave, on each ſide of which was a large ſtone, a third was placed acroſs the grave, ſupported at the extremities by the ſide ſtones, and in this rude manner the warriors lay entombed. Some years ago the proprietor of the field demoliſhed theſe repoſitories of the dead, leaving only one (a ſpecial favour!), which ſerves to give an idea of the whole.

LARINO, a town of Italy in the kingdom of Naples, in the Capitanata, with a biſhop's ſee. E. Long. 15. 51. N. Lat. 41. 48.

LARISSA, an ancient, rich, and celebrated town of Greece, in the province of Janna or Theſſaly, with an archbiſhop's ſee of the Greek church, a palace, and ſeveral handſome moſques. According to Virgil, it was the country of Achilles. It was alſo the place where Philip the father of Alexander the Great reſided.—The inhabitants carry on a conſiderable trade. The city is agreeably ſituated on the river Peneus, in E. Long. 23. 36. N. Lat. 38. 51.

LARIX, the LARCH-TREE. See PINUS.

LARK, in ornithology. See ALAUDA, and *Bird-Catching*.

The lark is not only a very agreeable bird for the cage, but will live upon almoſt any food, ſo that it have once a week a freſh tuft of three-leaved graſs. The proper method of keeping them in health is this: there muſt be two pans of food, the one containing meat, the other oatmeal and hempſeed. A very good food is the following: boil an egg very hard, to which add the crumb of a halfpenny loaf, and as much hempſeed; let the egg be chopped very ſmall, and the hempſeed bruiſed in the mortar; when theſe are mixed, the bread is to be crumbled in among the reſt, and the whole to be rolled together with a common rolling-pin, and kept for uſe. There muſt be ſome fine ſmall gravel ſtrewed at the bottom of the cage, and renewed at fartheſt once in a week. This will prevent the bird's feet from getting hurt by being clogged with the dung; and his baſking in this will keep him alſo from growing louſy, after which few come to good. There muſt be a perch in the cage, and it muſt either be lined with green bays, or made of fine matting, which the lark is very fond of. When the bird is firſt taken, ſome meat muſt be ſtrewed upon the ſand in the bottom of the cage; for it will be ſometimes almoſt famiſhed before it finds the meat in the pan.

The cock-bird of this kind is known from the hen by the loudneſs and length of his call, by his tallneſs as he walks about the cage, and by his doubling his notes in the evening, as if he was going with his mate to rooſt. A better rule than all others, however, is his ſinging ſtrong; for the hen wood-lark ſings but very weakly.—But the cock and hen of this kind are ſubject to many diſorders; the principal of theſe are cramps, giddineſs of the head, and breeding lice. Cleanlineſs is the beſt cure for the firſt and the laſt of theſe complaints; but we know of no cure for the other. A good ſtrong bird, however, will often laſt very well five or ſix years, and improve all the time.

LARKSPUR. See DELPHINIUM.

LARRIBUNDAR, a ſea-port town of Aſia, in Indoſtan; ſeated at the mouth of the river Sinda, or Indus, with a harbour capable of receiving ſhips of 200 tons burden. It is but a ſmall place, conſiſting of about 100 houſes built with wood; but has a ſtone fort, with a few guns. E. Long. 67. 0. N. Lat. 25. 0.

LARVA, in natural hiſtory, a name given by Linnæus to inſects in that ſtate, called by other writers *eruca* or *caterpillar*. See *Tranſformation of* INSECTS.

LARVÆ, in antiquity, derived from the Hetruſcan word *lar* or *lars*, ſignifying "prince or lord," denoted the ghoſts of the deceaſed, conſidered as wicked and miſchievous. Hence is formed the term *larvatus*, i. e. *larvâ indutus* or *demoniac*. The ingenious Mr Farmer urges the etymology and uſe of this term to prove that the heathen demons were human ghoſts.—The larvæ were alſo called *lemures*.

LARVÆ in mineralogy, the ſame with petrifactions. See PETRIFACTIONS.

LARUS, the GULL, in ornithology: a genus belonging to the order of anſeres, the characters of which are theſe: The bill is ſtrait, cultrated, a little crooked at the point, and without teeth; the inferior mandible is gibbous below the apex; the noſtrils are linear, a little broader before, and ſituated in the middle of the beak. The different ſpecies are principally diſtinguiſhed by their colour.

1. The marinus, or black-backed gull, is in length 29 inches; in breadth five feet nine. The bill is very ſtrong and thick, and almoſt four inches long; the colour a pale yellow; but the lower mandible is marked with a red ſpot, with a black one in the middle. The head, neck, whole under-ſide, tail, and lower part of the back, are white: the upper part of the back, and wings, are black; the quill-feathers tipt with white, the legs of a pale fleſh-colour. It inhabits ſeveral parts of England, and breeds on the higheſt cliffs. The egg is blunt at each end; of a duſky olive-colour: quite black at the greater end, and the reſt of it thinly marked with duſky ſpots. It is alſo common on moſt of the northern coaſts of Europe. It frequents Greenland; but chiefly inhabits the diſtant rocks. It lays three eggs in May, placing them on the heaps of dung which the birds leave there from time to time. It is ſaid to attack other birds, and to be particularly an enemy to the eider duck. It very greedily devours carrion, though the moſt general food is fiſh. It is common alſo in America, as low as South Carolina, where it is called the *old wife*.

2. The cataractes, or Skua gull, is in length two

feet; the extent four feet and a half; the weight three pounds: the bill is two inches one-fourth long, very much hooked at the end, and very ſharp; the upper mandible covered more than half-way with a black cere or ſkin, as in the hawk kind; the noſtrils are placed near the bend, and are pervious. The feathers on the head, neck, back, ſcapulars, and coverts of the wings, are of a deep brown, marked with ruſt-colour (brighteſt in the male). The breaſt, belly, and vent, are ferruginous, tinged with aſh-colour. The tail when ſpread is circular, of a deep brown, white at the root, and with ſhafts of the ſame colour. The legs are covered with great black ſcalons: the talons black, ſtrong, and crooked; the interior remarkably ſo.—This bird inhabits Norway, the Ferroe iſles, Shetland, and the noted rock Foula a little weſt of them. It is alſo a native of the South Sea. It is the moſt formidable of the gulls; its prey being not only fiſh, but, what is wonderful in a web-footed bird, all the leſſer ſort of water-fowl, ſuch as teal, &c. Mr Schroter, a ſurgeon in the Ferroe iſles, relates that it likewiſe preys on ducks, poultry, and even young lambs. It has all the fierceneſs of the eagle in defending its young; when the inhabitants of thoſe iſlands viſit the neſt, it attacks them with great force, ſo that they hold a knife erect over their heads, on which the ſkua will transfix itſelf in its fall on the invaders. The Rev. Mr Low, miniſter of Birſa in Orkney, confirmed part of the above account: On approaching the quarters of theſe birds, they attacked him and his company with moſt violent blows; and intimidated a bold dog of Mr Low's in ſuch a manner, as to drive him for protection to his maſter. The natives are often very rudely treated by them while they are attending their ſheep on the hills; and are obliged to guard their heads by holding up their ſticks, on which the birds often kill themſelves. In Foula it is a privileged bird, becauſe it defends the flocks from the eagle, which it beats and purſues with great fury; ſo that even that rapacious bird ſeldom ventures near its quarters. The natives of Foula on this account lay a fine on any perſon who deſtroys one: they deny that it ever injures their flocks or poultry; but imagine it preys on the dung of the arctic and other larger gulls, which it perſecutes till they moot for fear.—Theſe birds are alſo frequent in many high latitudes of the ſouthern hemiſphere: circumnavigators met with them in Falkland iſles, particularly about Port Egmont, whence called *Port Egmont hens*. In this place, and at Terra del Fuego, they were obſerved to make their neſts among the dry graſs. After breeding-time, they diſperſe over the ocean, and for the moſt part are ſeen in pairs. They are met with in Kerguelen's land, and off the Cape of Good Hope, and other parts. In all places its manners are the ſame in reſpect to ferocity: it is frequently ſeen to attack the largeſt albatroſs, beating it with great violence ſo long as it remains on the wing; at which time this cowardly giant finds no other reſource than to ſettle on the water; upon which the ſkua flies away.

3. The paraſiticus, or dung-hunter, is in length 21 inches. The bill is an inch and an half long, pretty much hooked, and of a duſky colour: the noſtrils are placed in a kind of cere: the top of the head is black; the ſides of it, forehead, neck, and all beneath, white: acroſs the breaſt there is a pale duſky bar: the upper parts of the body, wings, and tail, are black; the baſe of the quills white on the inner webs; and the two middle feathers of the tail are near four inches longer than the reſt: the legs are ſcaly, not very ſtout: the colour of them is black. The female is ſaid to be entirely brown, paleſt beneath; and the middle tail feathers only two inches longer than the others. This is a northern ſpecies; and very common in the Hebrides, where it breeds on heath. It comes in May, and retires in Auguſt: and if diſturbed flies about like the lapwing, but ſoon alights. It is alſo found in the Orkneys; and on the coaſts of Yorkſhire, where it is called the *feaſer*. It is met with likewiſe on the northern coaſts of Sweden, Denmark, and Ruſſia, as far as Kamtchatka; and it is common in Greenland, where it frequents the open ſea, as well as the bays. The female makes an artleſs neſt of graſs and moſs, on a hillock in ſome marſhy place, and lays two aſh-coloured eggs, ſpotted with black, the ſize of thoſe of a hen. This bird does not often ſwim, and flies generally in a ſlow manner, except it be in purſuit of other birds; which it often attacks, in order to make them diſgorge the fiſh or other food, which this common plunderer greedily ſnatches up. Moſt authors have told us, that it is the dung of the birds which it ſearches after in the purſuit; but latter obſervations inform us that the circumſtance is not true; though, from the ſuppoſition of its being ſo, the bird has obtained the name of *ſtrunt-jager*.

4. The fuſcus, or herring-gull, weighs upwards of 30 ounces,; the length 23 inches, its breadth 52: the bill is yellow, and the lower mandible marked with an orange-coloured ſpot: the back and coverts of the wings are aſh-coloured; the upper part of the five firſt quill-feathers are black, marked with a white ſpot near their end; the legs of a pale fleſh-colour. Theſe birds breed on the ledges of rocks that hang over the ſea: they make a large neſt of dead graſs; and lay three eggs of a dirty white, ſpotted with black. The young are aſh-coloured, ſpotted with brown. They do not come to their proper colour the firſt year: this is common to other gulls; which has greatly multiplied the ſpecies among authors, who are inattentive to theſe particulars. This gull is a great devourer of fiſh, eſpecially of that from which it takes its name: it is a conſtant attendant on the nets, and ſo bold as to ſeize its prey before the fiſhermens faces.—The herring gull is common in Britain, and frequents the ſame places as the black-backed. It is alſo found in moſt of the northern parts of Europe, as well as about the Caſpian and Black ſeas and the rivers which fall into them, and about the great lakes of Siberia. It is found likewiſe in Iceland, Greenland, and Hudſon's Bay. In winter it migrates ſouth, being found in Jamaica; and is ſaid to breed on ſome of the iſlands on the coaſt of South Carolina.

5. The nævius, or wagel, is a large ſpecies, being near two feet in length, and in breadth about five; weight, near three pounds. The bill is black; two inches and a half long: the irides are duſky: the whoſe plumage is compoſed of a mixed brown, aſh-colour, and white; the middle of each feather brown:

the under parts of the body are the ſame, but paler: the quills are black: the lower part of the tail is mottled black and white; near the end is a bar of black, and beyond this the end is white: the legs are of a dirty fleſh-colour, in ſome white.—This ſpecies frequents the ſea-ſhores of many parts of England, though not in any conſiderable numbers. At times it is ſeen on the banks of the Thames along with other gulls; and is there ſuppoſed to be the female of the black-backed: but this has not yet been determined ſufficiently by authors.

6. The hybernus, or winter-gull, winter-mew, or coddy-moddy, weighs from 14 to 17 ounces: the length 18 inches, the breadth three feet nine. The irides are hazel: the bill is two inches long, but the ſlendereſt of any gull; black at the tip, and whitiſh towards the baſe. The crown of the head, and hind-part and ſides of the neck, are white, marked with oblong duſky ſpots; the forehead, throat, middle of the breaſt, belly, and rump, white; the back and ſcapulars of a pale grey, the laſt ſpotted with brown: the coverts of the wings are of a pale brown, edged with white; the firſt quill feather is black, the ſucceeding ones are tipt with white: the tail is white, croſſed near the end with a black bar; the legs are of a dirty bluiſh white. This kind frequents, during winter, the moiſt meadows in the inland parts of England, remote from the ſea. The gelatinous ſubſtance, known by the name of *ſtar-ſhot*, or *ſtar-gelly*, owes its origin to this bird, or ſome of the kind; being nothing but the half digeſted remains of earth worms, which theſe birds feed on, and often diſcharge from their ſtomachs.

7. The canus, or common gull, is in length 16 or 17 inches; in breadth 36; weight one pound. The bill is yellow: the irides are hazel, and the eye-lids brown: the head, neck, under parts of the body, and tail, are white; the back and wings, pale grey: the outer edge of the four firſt quills, and tips of the firſt five, are black; but the fourth and fifth have a white ſpot at the tips; the reſt, except the three neareſt the body, have the ends white: the legs are of a dull greeniſh white. This ſeems to be the moſt common of all the gulls, being found in vaſt numbers on ſhores and rivers which are contiguous to the ſea. It is ſeen alſo very far north, as far as Iceland, and the Ruſſian lakes: it is met with in the neighbourhood of the Caſpian Sea, in various ſhores of the Mediterranean, and as far ſouth as Greece: and it is found alſo in America, on the coaſt of Newfoundland. It breeds on the rocks and cliffs, like others of the genus; and the eggs are two inches and an half in length, of a deep olive brown, marked with irregular deep reddiſh blotches. It is a tame ſpecies, and may be ſeen by hundreds on the ſhores of the Thames and other rivers, in the winter and ſpring, at low tides, picking up the various worms and ſmall fiſh left by the tides; and will often follow the plough in the fields contiguous, for the ſake of worms and inſects which are turned up, particularly the cockchafer or dorbeetle in its larvæ ſtate, which it joins with the rooks in devouring moſt greedily.

8. The trydactylus, or tarrock, is in length 14 inches, breadth 36; weight ſeven ounces. The bill is ſhort, thick, and black: the head, neck, and under parts, are white: near each ear, and under the throat, there is a black ſpot; and at the hind part of the neck a creſcent of black: the back and ſcapulars are bluiſh grey; the wind-coverts duſky edged with grey, ſome of the larger wholly grey: the exterior ſides and ends of the firſt four quills are black, tips of the two next black, all the reſt white: the ten middle feathers of the tail are white tipped with black, the two outermoſt wholly white: the legs are of a duſky aſh-colour; in lieu of the back toe, it has only a protuberance. This breeds in Scotland with the kittiwake; and inhabits other parts of northern Europe, quite to Iceland and Spitzbergen, the Baltic, and White Sea, as alſo Kamtchatka. It is common in Greenland in ſummer. It comes in ſpring, and frequents the ſea-ſhores; builds in the rocky crags of the bays; in June lays two eggs of a greeniſh aſh-colour ſpotted with brown; and retires from the ſhores in autumn. It is obſerved frequently to attend the whales and ſeals, for the ſake of the fiſh which the laſt drive before them into the ſhallows, when theſe birds dart into the water ſuddenly and make them their prey. They are very noiſy birds, eſpecially during the time of incubation. They ſwim well, and fly equally well, and for a long time together: they are often obſerved on portions of ice ſwimming in the ſea. Both the fleſh and eggs are eſteemed by the Greenlanders, and the ſkins uſed as garments.

9. The riſſa, or kittiwake, is in length 14 inches, in extent three feet two. When arrived at full age, the head, neck, belly, and tail, are of a ſnowy whiteneſs; behind each ear is ſometimes a duſky ſpot: the back and wings are grey: the exterior edge of the firſt quill-feather, and tips of the four or five next, are black: the bill is yellow, tinged with green; and the inſide of the mouth is orange: the legs are duſky, with only a knob inſtead of the back toe. It inhabits the romantic cliffs of Flamborough-head (where it is called *petrel)*, the Baſs iſle, the vaſt rocks near the caſtle of Slains in the county of Aberdeen, and Prieſtholm iſle. The young of theſe birds are a favourite diſh in North Britain, being ſerved up roaſted, a little before dinner, in order to provoke the appetite; but from their rank taſte and ſmell, ſeem much more likely to produce a contrary effect. This bird is likewiſe met with at Newfoundland; in Greenland, Spitzbergen, Iceland, and the north of Europe; the arctic coaſt of Aſia; and Kamtchatka. By the Icelanders it is called *ritſa*. Some authors affirm the kittiwake to be the tarrock in a ſtate of perfection; while others maintain the contrary.

10. The ridibundus, pewit, or black-head gull, is in length 15 inches, breadth three feet, weight 10 ounces. The bill is rather ſlender, and of a blood-red: the eye-lids are red, and the irides hazel: the head and throat are duſky brown, in old birds black; and on each eye-lid is a ſmall white ſpot: the back and wings are of an aſh-colour: the neck, all the under parts, and tail, are white: the ten firſt quills are white, margined and more or leſs tipped with black; the others of an aſh-colour, with white ends: the legs are of the colour of the bill, the claws black. This ſpecies breeds on the ſhores of ſome of the rivers; but full as often in the inland fens of Lincolnſhire, Cambridgeſhire, and other parts of England. They make their

neſt on the ground, with ruſhes, dead graſs, and ſuch like; and lay three eggs of a greeniſh brown marked with red brown blotches. After the breeding ſeaſon, they again diſperſe to the ſea-coaſts. They breed alſo in Northumberland and Scotland; and are found throughout Ruſſia and Siberia, as far as Kamtchatka, but not farther to the north. They are ſeen throughout the winter at Aleppo, in great numbers; and ſo tame, that the women are ſaid to call them from the terraces of their houſes, throwing up pieces of bread, which theſe birds catch in the air. They inhabit North America, coming into New England in May and departing in Auguſt. The young birds in the neighbourhood of the Thames are thought good eating, and are called the *red-legs*. They were formerly more eſteemed, and numbers were annually taken and fattened for the table. Plott gives a marvellous account of their attachment to the lord of the ſoil they inhabit; inſomuch, that on his death they never fail to ſhift their quarters for a certain time. Whitelock. in his Annals, mentions a piece of ground near Portſmouth, which produced to the owner 40 l. a year by the ſale of pewits, or this ſpecies of gull. Theſe are the *ſea-gulles* that in old times were admitted to the noblemen's tables. The note of theſe gulls is like a hoarſe laugh.

11. The atricilla, or laughing-gull, is in length 18 inches, breadth three feet. It differs from the former bird only in the legs, which are black inſtead of red. It is found in Ruſſia on the river Don, particularly about Tſchercaſk. The note reſembles a coarſe laugh, whence the name of the bird. It is met with alſo in different parts of the continent of America: and is very numerous in the Bahama iſlands.

There are 9 or 10 other ſpecies of this genus.

LARYNX, in anatomy, the upper part of the windpipe. See ANATOMY, n° 116.

LASCARIS (Andrew John), ſurnamed *Ryndacenus*, of an ancient Greek family, went into Italy, after the taking of Conſtantinople by the Turks in 1453. He was well received by Laurence de Medicis, a diſtinguiſhed protector of learned men; and was twice ſent to Conſtantinople to collect the beſt Greek manuſcripts, by which means numberleſs ſcarce and valuable treaſures of literature were carried into Italy. At his return Louis XII. king of France prevailed on him to ſettle in the univerſity of Paris, and ſent him twice ambaſſador to Venice. Ten years after, cardinal John de Medicis being elected pope, under the name of *Leo X*. John Laſcaris, his old friend, went to Rome, and had the direction of a Greek college. He died at Rome in 1535, at about the 90th year of his age. He brought into the Weſt moſt of the fine Greek manuſcripts that are now extant, and compoſed ſome epigrams in Greek and Latin.

LASCARIS (Conſtantine), one of the Greeks who were principally concerned in the revival of learning in the Weſt, retired into Italy in 1454, and taught polite literature at Milan, whither he was called by Francis Sforza; he afterwards went to Rome, where he was well received by Cardinal Beſſarion. He afterwards taught rhetoric and the Greek tongue at Naples; and ended his days at Meſſina, leaving the ſenate of that city many excellent manuſcripts which he had brought from Conſtantinople. He was interred at the public expence, and the ſenate of Meſſina erected a marble tomb to his memory. He wrote ſome grammatical works.

LASERPITIUM, LAZAR-WORT: A genus of the digynia order, belonging to the pentandria claſs of plants; and in the natural method ranking under the 45th order, *Umbellatæ*. The fruit is oblong, with eight membranaceous angles; the petals inflexed, emarginated, and patent. There are nine ſpecies, none of which are at all remarkable for their beauty, ſo are only preſerved in botanic gardens for the ſake of variety. They are natives of Germany, Italy, and the ſouth of France. All of them abound with an acrid juice, which turns to an exceſſively acrimonious reſin. This was uſed by the ancients to take away black and blue ſpots that came by bruiſes or blows, as alſo to take away excreſcences: it was alſo by ſome of the ancients uſed internally; but produced ſuch violent effects, that the more prudent refrained from the uſe of it. It is generally ſuppoſed that the ſilphium of the ancients was procured from one of the ſpecies of this genus; but of this we are at preſent ignorant.

LASH, or LACE, in the ſea-language, ſignifies to bind and make faſt; as, to laſh the bonnet to the courſe, or the drabbler to the bonnets; alſo the carpenter takes care that the ſpare yards be laſhed faſt to the ſhip's ſide; and in a rolling ſea, the gunners mind that the guns be well laſhed, leſt they ſhould break looſe. Laſhers are properly thoſe ropes which bind faſt the tackles and the breechings of the ordnance, when hauled or made faſt within-board.

LASSITUDE, or WEARINESS, in medicine, a morbid ſenſation, that comes on ſpontaneouſly, without any previous motion, exerciſe, or labour. This is a frequent ſymptom in acute diſtempers: it ariſes either from an increaſe of bulk, a diminution of proper evacuation, or too great a conſumption of the fluids neceſſary to maintain the ſpring of the ſolids, or from a vitiated ſecretion of that juice.

LASSUS, or LASUS, a dithyrambic poet, born at Hermione in Peloponneſus about 500 years before Chriſt. He is reckoned among the wiſe men of Greece by ſome. He is particularly known by the anſwer he gave to a man who aſked him what could beſt render life pleaſant and comfortable? Experience. He was acquainted with muſic. Some fragments of his poetry are to be found in Athenæus. He wrote an ode upon the Centaurs, and an hymn to Ceres, without inſerting the letter S in the compoſition.

LAST, in general, ſignifies the burden or load of a ſhip. It ſignifies alſo a certain meaſure of fiſh, corn, wool, leather, &c. A laſt of codfiſh, white herrings, meal, and aſhes for ſoap, is twelve barrels; of corn or rapeſeed, ten quarters; of gunpowder, twenty-four barrels; of red-herrings, twenty cades; of hides, twelve dozen; of leather, twenty dickers; of pitch and tar, fourteen barrels; of wool, twelve ſacks; of ſtock-fiſh, one thouſand; of flax or feathers, 1700 lb.

LASTAGE, or LESTAGE, a duty exacted in ſome fairs and markets, for carrying things bought whither one will. It ſignifies alſo the ballaſt or lading of a ſhip; and ſometimes is uſed for garbage, rubbiſh, or ſuch like filth.

LATERAN was originally the proper name of a man: whence it deſcended to an ancient palace in Rome, and to the buildings ſince erected in its place; particularly a church called *St John of Lateran*, which is the principal ſee of the popedom.

Councils of the LATERAN, are thoſe held in the baſilica of the Lateran: of theſe there have been five, held in 1123, 1139, 1179, 1215, and 1513.

Canons Regular of the Congregation of the LATERAN, is a congregation of regular canons, whereof that church is the principal place or ſeat.

It is pretended there has been an uninterrupted ſucceſſion of clerks, living in community from the time of the apoſtles; and that a number of theſe were eſtabliſhed in the Lateran in the time of Conſtantine. But the canons were not introduced till the time of Leo. I. and theſe held the church 800 years, till the reign of Boniface, who took it from them, and placed ſecular canons in their room: 150 years after, the regulars were reinſtated.

A LATERE, a term uſed to denote the qualifications of the cardinals whom the pope ſends as legates into foreign countries. They are called *legates a latere*, as being his holineſs's aſſiſtants and counſellors in ordinary. Theſe are the moſt conſiderable of the other three kinds of legates, being ſuch as the pope commiſſions to take his place in councils; and ſo called, in regard that he never gives this office to any but his favourites and confidants, who are always *a latere*, at his ſide. A legate a latere has the power of conferring benefices without a mandate, of legitimating baſtards to hold offices, and has a croſs carried before him as the enſign of his authority.

De LATERE, legates who are not cardinals, but yet are entruſted with an apoſtolical legation. See the article LEGATE.

LATE-WAKE, a ceremony uſed at funerals in the Highlands of Scotland. The evening after the death of any perſon, the relations and friends of the deceaſed meet at the houſe, attended by bagpipe or fiddle; the neareſt of kin, be it wife, ſon, or daughter, opens a melancholy ball, dancing, and *greeting* (i. e. crying violently) at the ſame time, and this continues till daylight; but with ſuch gambols and frolics among the younger part of the company, that the loſs which occaſioned them is often more than ſupplied by the conſequences of that night. If the corpſe remains unburied for two nights, the ſame rites are renewed. Thus, Scythian-like, they rejoice at the deliverance of their friends out of this life of miſery.

LATEEN-SAIL, a long triangular ſail extended by a lateen yard, and frequently uſed by xebecs, poleacres, ſetees, and other veſſels navigated in the Mediterranean ſea.

LATH, in building, a long, thin, and narrow ſlip of wood nailed to the rafters of a roof or cieling, in order to ſuſtain the covering.

Lath-Bricks, a particular ſort of bricks made in ſome parts of England, of 22 inches in length and 6 in breadth, which are uſed in the place of laths or ſpars, ſupported by pillars in caſts, for the drying of malt. This is an excellent contrivance; for beſides that they are not liable to fire, as the wooden laths are, they retain the heat vaſtly better; ſo that being once heated, a very ſmall quantity of fire will ſerve to keep them ſo.

LATHE, a very uſeful engine for the turning of wood, ivory, metals, and other materials (See TURNING.) The invention of the lathe is very ancient: Diodorus Siculus ſays, the firſt who uſed it was a grandſon of Dædalus, named Talus. Pliny aſcribes it to Theodore of Samos; and mentions one Thericles, who rendered himſelf very famous by his dexterity in managing the lathe. With this inſtrument the ancients turned all kinds of vaſes, many whereof they enriched with figures and ornaments in baſſo relievo. Thus Virgil:

Lenta quibus torno facili ſuperaddita vitis.

The Greek and Latin authors make frequent mention of the lathe; and Cicero calls the workmen who uſed it *vaſcularii*. It was a proverb among the ancients, to ſay a thing was formed in the lathe, to expreſs its delicacy and juſtneſs.

The lathe is compoſed of two wooden cheeks or ſides, parallel to the horizon, having a groove or opening between; perpendicular to theſe are two other pieces called *puppets*, made to ſlide between the cheeks, and to be fixed down at any point at pleaſure. Theſe have two points, between which the piece to be turned is ſuſtained; the piece is turned round, backwards and forwards, by means of a ſtring put round it, and faſtened above to the end of a pliable pole, and underneath to a tredle or board moved with the foot. There is alſo a reſt which bears up the tool, and keeps it ſteady.

As it is the uſe and application of this inſtrument that makes the greateſt part of the art of turning, we refer the particular deſcription thereof, as well as the manner of applying it in various works, to that head. See TURNING.

LATHRÆA, in botany: A genus of the angioſpermia order, belonging to the didynamia claſs of plants; and in the natural method ranking under the 40th order, *Perſonatæ*. The calyx is quadrifid; there is a depreſſed glandule at the baſe of the ſuture of the germen. The capſule is unilocular.

LATHREVE, LEIDGREVE, or TRITHENGREVE, was an officer under the Saxon government, who had authority over a third part of the county; and whoſe territory was therefore called *trithing*, otherwiſe a *leid* or *leithin*, in which manner the county of Kent is ſtill divided; and the rapes in Suſſex ſeem to anſwer to the ſame. As to the juriſdiction of this officer, thoſe matters that could not be determined in the hundred court, were thence brought to the trithing; where all the principal men of the three or more hundreds being aſſembled by the *lathreve*, or *trithingreve*, did debate and decide it; or if they could not, then the *lathreve* ſent it up to the county court, to be there finally determined.

LATHYRUS, CHICKLING: A genus of the decandria order, belonging to the diadelphia claſs of plants; and in the natural method ranking under the 32d order, *Papilionaceæ*. The ſtylus is plain, villous above, towards the end broader; the upper two ſegments of the calyx are ſhorter than the reſt.

Species. 1. The latifolius, or everlaſting pea, hath thick, fibrous, perennial roots; climbing, thick, branching annual ſtalks, having membranaceous wings between the joints, riſing upon ſupport by their cirri ſix or eight feet high; diphyllous leaves, of two ſpear-ſhaped lobes, terminated by claſpers; and numerous large red or purple flowers on long footſtalks, appearing plentifully from June till October, ſucceeded by abundance of ſeed. 2. The odorata, or ſweet-ſcented pea, hath a fibrous annual root; a climbing ſtalk, riſing upon ſupport by its claſpers three or four feet high; diphyllous leaves of two oval lobes, terminated by climbing tendrils; and flowers by two's on long flower ſtalks, of different colours in the varieties. 3. The tangitanus, or Tangier-pea, hath a fibrous annual root, a climbing ſtalk riſing upon ſupport for four or five feet high; diphyllous leaves, of two ſpear-ſhaped alternate lobes, terminated by tendrils; and from the joints of the ſtalk large reddiſh flowers by two's on long footſtalks.

Culture. All theſe ſpecies are of hardy growth; and may be propagated by ſeed in the common ground, in patches where it is deſigned the plants ſhould flower, for they do not ſucceed ſo well by tranſplantation. They may be ſowed in ſpring: though, if ſowed in autumn, the plants will flower earlier the following year.

LATIAR, in Roman antiquity, a feaſt or ceremony inſtituted by Tarquinius Superbus, in honour of Jupiter Latiaris or Latialis.——Tarquin having made a treaty of alliance with the Latins, propoſed, in order for perpetuating it, to erect a common temple, where all the allies, the Romans Latins, Hernici, Volſci, &c. ſhould aſſemble themſelves every year, hold a kind of fair, exchange merchandizes, feaſt, ſacrifice, and make merry together. Such was the inſtitution of the Latiar. The founder only appointed one day for this feaſt; the firſt conſul added another to it, upon concluding the peace with the Latins; and a third was added after the people who had retired to the Mons Sacer were returned to Rome; and a fourth, after appeaſing the ſedition raiſed on occaſion of the plebeians aſpiring to the conſulate.

Theſe four days were called the *Latin feriæ*; and all things done during the courſe of the feriæ, as feaſts, ſacrifices, offerings, &c. were called *Latiares*.

LATICLAVE, (*Laticlavium*), in Roman antiquity, was an honourable diſtinction, peculiar, in the times of the republic, to the ſenators; but whether it was a particular kind of garment, or only an ornament upon it, the critics are not agreed: But the more general opinion is, that it was a broad ſtripe of purple ſewed upon the fore-part of their tunic, and round the middle of the breaſt. There were buttons ſet on the *latus clavus* or *laticlave*, which appeared like the heads of large nails, whence ſome think it derived its name.—The ſenators, prætors, and chief magiſtrates of colonies and muncipal cities, had a right to wear it. The prætexta was always worn over it; but when the prætor pronounced ſentence of death, the prætexta was then put off, and the laticlave retained. The *laticlavium* differed from the *anguſticlavium*, but authors do not agree in what reſpect this difference conſiſted; the moſt general opinion ſeems to be, that the ſlips or ſtripes of purple were narrower in the anguſticlave.

LATIMER (Hugh), biſhop of Worceſter, was born about the year 1480 at Thurcaſton in Leiceſterſhire, the only ſon of a yeoman of that village. At the age of fourteen he was ſent to Chriſt's college, Cambridge; where he applied himſelf to the ſtudy of divinity, and in proper time took the degree of bachelor in that ſcience. At this time he was a zealous Papiſt, and was honoured with the office of keeper of the croſs to the univerſity: but when he was about thirty years of age, he became a convert to the Proteſtant religion; and being now one of the twelve licenced preachers from Cambridge, he promulgated his opinions with great freedom. It was not long before he was accuſed of hereſy; and being ſummoned before cardinal Wolſey, was obliged to ſubſcribe certain articles of faith, which he certainly did not believe. About the year 1529 he was preſented by the king to the rectory of Weſtkinton in Wiltſhire; to which place, after reſiding ſome time at court with his friend and patron Dr Butts, he retired; but, reſuming his former invectives againſt the Popiſh doctrines, he was again ſummoned to anſwer certain interrogatories, and again obliged to ſubſcribe. In 1535 he was promoted to the biſhopric of Worceſter; in the poſſeſſion of which dignity he continued till the year 1539, when, rather than aſſent to the act of the ſix articles, he reſigned his mitre, and retired into the country; but was in a ſhort time accuſed of ſpeaking againſt the ſix articles, and committed to the Tower, where he continued priſoner till the death of Henry VIII. which happened in January 1547. On the acceſſion of Edward VI. Latimer was releaſed, but not reſtored to his biſhopric, though he preached ſeveral times before the king, and continued to exerciſe his miniſterial function with unremitting zeal and reſolution. Young Edward, alas! finiſhed his ſhort reign in 1553; and Mary, of infamous memory, aſcending the throne, poor Latimer was immediately doomed to deſtruction, and, together with Cranmer and Ridley, confined in the Tower. In April 1554, they were removed to Oxford, that they might diſpute with the learned doctors of both univerſities. Latimer declining the diſputation on account of his great age and infirmities, delivered his opinion in writing; and refuſing to ſubſcribe the Popiſh creed, was condemned for hereſy; and in October following was, together with biſhop Ridley, burnt alive. He behaved with uncommon fortitude on the occaſion, and died a real martyr to the Reformation. His general character is that of a learned, virtuous, and brave man. His works are, 1. Sermons, 1635, fol. 2. Letters; in Fox's Acts and Monum. vol. ii. fol. 1580. 3. An injunction to the prior and convent of St Mary's in Worceſterſhire. See record at the end of Burnet's Hiſtory of the Reformation, part ii. p. 293.

LATIN, a dead language, firſt ſpoken in Latium, and afterwards at Rome; and ſtill uſed in the Romiſh church, and among many of the learned.

This language is principally derived from the Greek, and particularly from the Eolic dialect of that tongue, though it has a great number of words which it borrowed from the languages of the Etruſci, Oſci, and other ancient people of Italy; and foreign commerce and wars, in courſe of time, added a great many more.

The Latin is a ſtrong nervous language, perfectly ſuitable to the character of the people who ſpoke it: we have ſtill works of every kind admirably well written in the Latin, though there are vaſt numbers loſt.

The Latin tongue was for a while confined almoſt wholly within the walls of Rome; nor would the Romans allow the common uſe of it to their neighbours, or to the nations they ſubdued: but by degrees they in time became ſenſible of the neceſſity of its being generally underſtood for the conveniency of commerce; and accordingly uſed their endeavours, that all the nations ſubject to their empire ſhould be united by one common language; ſo that at length they impoſed the uſe of it by a particular law for that purpoſe. After the tranſlation of the ſeat of the empire from Rome to Conſtantinople, the emperors of the eaſt, being always deſirous of retaining the title of Roman emperors, appointed the Latin to be ſtill uſed; but at length neglecting the empire of the weſt, they abandoned all care of the Latin tongue, and uſed the Greek. Charlemague coming to the empire of the weſt, revived this language; but at length it gave way, and the French took place of the Latin: it was, however, prodigiouſly degenerated before it came to be laid aſide, in which condition it was found at the time of the Reformation, when Vives, Eraſmus, &c. began to open the way for its recovery: ſince which time the monkiſh latinity has been declining, and all endeavours have been uſed to retrieve the pure language of the Auguſtan age. See LANGUAGE.

Latin-Church. See CHURCH.

LATINS, an ancient nation of Italy. See LATIUM.

LATINUS, king of the Latins in Italy, was the ſon of Faunus; and, it is ſaid, began to reign about the 1216th year before the Chriſtian era. Lavinia, his only daughter, married Æneas, after that Trojan prince had killed Turnus king of the Rutuli. See ROME.

LATISSIMUS, in anatomy, the name of ſeveral muſcles. See ANATOMY, *Table of the Muſcles*.

LATITUDE, in aſtronomy, is the diſtance of a ſtar north or ſouth from the ecliptic. In geography it ſignifies the diſtance of any place north or ſouth, from the equator, See ASTRONOMY and GEOGRAPHY, *paſſim*.

LATITUDINARIAN, a perſon of moderation with regard to religious opinions, who believes there is a latitude in the road to heaven, which may admit people of different perſuaſions.

LATIUM (anc. geog.), the country of the Latins, at firſt contained within very narrow bounds, but afterwards increaſed by the acceſſion of various people. The appellation, according to Virgil, is *a latendo*, from Saturn's lying hid there from the hoſtile purſuits of his ſon Jupiter; and from *Latium* comes the name *Latini*, the people, (Virgil): though Dionyſius Halicarnaſſæus derives it from king Latinus, who reigned about the time of the Trojan war. But whatever be in this, it is certain, that Latium, when under Æneas and his deſcendents, or the Alban kings, contained only the Latins, excluſive of the Æqui, Volſci, Hernici, and other people; only that Æneas reckoned the Rutuli, after their conqueſt, among the Latins. And this conſtituted the ancient *Latium*, confined to the Latins: but afterwards, under the kings, and after their time, it reached from the Tiber to Circeii. Under the conſuls, the country of the Equi, Volſci, Hernici, &c. after long and bloody wars, was added to Latium, under the appellation *adjectitious* or *ſuperadded Latium*, as far as the river Liris, the eaſtern boundary, and to the north as far as the Marſi and Sabines. The various people, which in ſucceſſion, occupied Latium, were the Aborigines, the Pelaſgi, the Arcades, the Siculi, the Arunci, the Rutuli; and beyond Circeii, the Volſci, the Oſci, the Auſones: but who firſt, who next, occupied the country, it is difficult to ſay.

LATMUS (anc. geog.), a mountain of Ionia, or on the confines of Caria, famous for the fable of Endymion, of whom the Moon was ſaid to be enamoured: hence called *Latmius Heros*, and *Latmius Venator*. In the mountain was a cave in which Endymion dwelt (Scholiaſt on Apollonius Rhodius). Suppoſed by Hecatæus to be the *Phtheiron Mons* of Homer; but by others to be *Grius Mons*, nor far from Latmus (Strabo).

LATOMIA, properly ſignifies a *ſtone quarry*: But the places whence ſtones had been dug having been made uſe of ſometimes as dungeons, jails, or priſons for criminals, it is oftentimes applied as a name for a priſon. There was a place of confinement of this ſort at Rome, near the Tullianum; another at Syracuſe, in which Cicero ſays Verres had ſhut up Roman citizens.

LATONA, in mythology, a pagan goddeſs, whoſe hiſtory is very obſcure. Heſiod makes her the daughter of Titan Coëus and Phœbe his ſiſter. She was admired for her beauty, and celebrated for the favours which ſhe granted to Jupiter. Juno always jealous of her huſband's amours, made Latona the object of her vengeance, and ſent the ſerpent Python to diſturb her peace and perſecute her. Latona wandered from place to place in the time of her pregnancy, continually alarmed for fear of Python. She was driven from heaven; and Terra, influenced by Juno, refuſed to give her a place where ſhe might reſt and bring forth. Neptune, moved with compaſſion, ſtruck with his trident and made immoveable the iſland of Delos, which before wandered in the Ægean, and appeared ſometimes above, and ſometimes below, the ſurface of the ſea. Latona, changed into a quail by Jupiter, came to Delos; where ſhe reſumed her original ſhape, and gave birth to Apollo and Diana, leaning againſt a palm tree or an olive. Her repoſe was of ſhort duration: Juno diſcovered the place of her retreat, and obliged her to fly from Delos. She wandered over the greateſt part of the world; and in Caria, where her fatigue compelled her to ſtop, ſhe was inſulted and ridiculed by the peaſants of whom ſhe aſked for water while they were weeding a marſh. Their refuſal and inſolence provoked her, and ſhe intreated Jupiter to puniſh their barbarity. They were all changed into frogs. She was alſo inſulted by Niobe; who boaſted herſelf greater than the mother of Apollo and Diana, and ridiculed the preſents which the piety of her neighbours had offered to Latona. At laſt, Latona, though perſecuted and expoſed to the reſentment of Juno, became a powerful deity, and ſaw her children receive divine honours. Her worſhip was generally eſtabliſhed where her children received adoration; particularly at Argos, Delos, &c. where ſhe had temples. She had an oracle in Egypt, celebrated for the true and deciſive anſwers which it gave. Latona, Venus, and Diana, were the three goddeſſes moſt in veneration among the Roman women.

LATRIA, in theology, a religious worſhip due only to God. See ADORATION.

The Romaniſts ſay, "They honour God with the worſhip of *latria*, and the ſaints with the worſhip of *dulia*." But the terms, however diſtinct, are uſually confounded.

The worſhip of *latria*, beſides its inner characters, has its external marks to diſtinguiſh it; the principal whereof is ſacrifice, which cannot be offered to any other but God himſelf, as being a ſolemn acknowledgment or recognition of the ſovereignty of God, and our dependence on him.

Mr Daille ſeems to own, that ſome of the fathers of the fourth century allowed the diſtinction between *latria* and *dulia*.

LATRINÆ, were public houſes of office, or neceſſaries, amongſt the Romans. We do not find, in the writings or buildings that remain of antiquity, that they had any privies in their dwellings. The latrinæ were public places where the ſlaves waſhed and emptied their maſter's cloſe-ſtools. We are pretty well aſſured that the Romans had public places of convenience, which were covered over, and had a ſponge hanging up in them for cleanlineſs. Rich men had cloſe-ſtools, which were taken away occaſionally to the common ſhores.

LATRUNCULI, a game amongſt the Romans, of much the ſame nature with our cheſs. The *latrunculi* were properly the cheſs-men, called alſo *latrones* and *calculi*. They were made of glaſs, and diſtinguiſhed by black and white colours. Sometimes they were made of wax or other convenient ſubſtances. Some give the invention of this game to Palamædes when at the ſiege of Troy; Seneca attributes it to Chilon, one of the ſeven Grecian ſages; others honour Pyrrhus with the invention; and others again contend that it is of Perſian origin—but is not this *Lis de lana caprina?* Frequent alluſions to this game are met with in the Roman claſſics, and a little poem was wrote upon it addreſſed to Piſo, which ſome ſay was the work of Ovid, others of Lucan, in the end of ſome editions of whoſe works it is to be found, and to which we refer for a fuller account of the game. This game expreſſes ſo well the chance and order of war, that it is, with great appearance of probability, attributed to ſome military officer as the inventor. One Canius Julius was ſo exceedingly fond of Cheſs, that after he was ſentenced to death by Caligula, he was found playing, but interrupted in his game by a call to execution; he obeyed the ſummons, but firſt deſired the centurion who brought the fatal order, to bear witneſs that he had one man upon the board more than his antagoniſt, that he might not falſely brag of victory when he ſhould be no more.

LATTEN denotes iron-plates tinned over, of which tea-canniſters are made.

Plates of iron being prepared of a proper thinneſs, are ſmoothed by ruſting them in an acid-liquor, as common water made eager with rye. With this liquor they fill certain troughs, and then put in the plates, which they turn once or twice a-day, that they may be equally ruſted over. After this they are taken out, and well ſcoured with ſand; and, to prevent their ruſting again, are immediately plunged into pure water, in which they are to be left till the inſtant they are to be tinned or blanched; the manner of doing which is this: They flux the tin in a large iron crucible, which has the figure of an oblong pyramid with four faces, of which two oppoſite ones are leſs than the two others. The crucible is heated only from below, its upper part being luted with the furnace all round. The crucible is always deeper than the plates which are to be tinned are long; they always put them in downright, and the tin ought to ſwim over them; to this purpoſe artificers of different trades prepare plates of different ſhapes, though Mr Reaumur thinks them all exceptionable. But the Germans uſe no ſort of preparation of the iron to make it receive the tin more than the keeping it always ſteeped in water till the time; only when the tin is melted in the crucible, they cover it with a layer of a ſort of ſuet, which is uſually two inches thick, and the plate muſt paſs through this before it can come to the melted tin. The firſt uſe of this covering is to keep the tin from burning; for if any part ſhould take fire, the ſuet would ſoon moiſten it, and reduce it to its primitive ſtate again. The blanchers ſay, this ſuet is a compounded matter. It is indeed of a black colour; but Mr Reaumur ſuppoſed that to be only an artifice to make it a ſecret, and that it is only coloured with ſoot or the ſmoke of a chimney: but he found it true ſo far, that the common unprepared ſuet was not ſufficient; for after ſeveral attempts, there was always ſomething wanting to render the ſucceſs of the operation certain. The whole ſecret of blanching, therefore, was found to lie in the preparation of this ſuet; and this at length he diſcovered to conſiſt only in the firſt frying and burning it. This ſimple operation not only gives it the colour, but puts it into a condition to give the iron a diſpoſition to be tinned, which it does ſurpriſingly.

The melted tin muſt alſo have a certain degree of heat: for if it is not hot enough, it will not ſtick to the iron; and if it is too hot, it will cover it with too thin a coat, and the plates will have ſeveral colours, as red, blue, and purple, and upon the whole will have a caſt of yellow. To prevent this, by knowing when the fire has a proper degree of heat, they might try with ſmall pieces of iron; but in general, uſe teaches them to know the degree, and they put in the iron when the tin is at a different ſtandard of heat, according as they would give it a thicker or thinner coat. Sometimes alſo they give the plates a double layer, as they would have them very thickly covered. This they do by dipping them into the tin when very hot the firſt time, and when leſs hot the ſecond. The tin which is to give the ſecond coat muſt be freſh covered with ſuet; and that with the common ſuet, not the prepared.

LATTEN-Braſs, plates of milled braſs reduced to different thickneſs, according to the uſes they are intended for.

LATTIMO, in the glaſs-trade, a name for a fine milk-white glaſs. There are ſeveral ways of making it, but the beſt of all is this: take 400 weight of cryſtal frit, and 60 pounds of calcined tin, and two pounds and a half of prepared manganeſe; mix theſe well with the frit, and ſet them in a pot in a furnace to melt and refine. At the end of 18 hours this will be purified; then caſt it into water, purify it again afterwards in the furnace, and make a proof of it. If it be too clear, add 15 pounds more of calcined tin; mix it well with the metal, and let it ſtand one day to purify; it will then be of a whiteneſs ſurpaſſing even that of ſnow, and is fit to work into veſſels.

LAVA, a ſtream of melted minerals which runs out of the mouths, or burſts out through the ſides of burning mountains during the time of an eruption. See ÆTNA, VESUVIUS, HECLA, VOLCANO, &c.

1
Exceſſive heat of lavas.

The lava at its firſt diſcharge is in a ſtate of prodigious ignition, greatly ſuperior to any thing we can have an idea of from the ſmall artificial furnaces made by us. Sir William Hamilton informs us, that the lava of Veſuvius, at the place whence it iſſued (in the year 1767), "had the appearance of a river of red-hot and liquid metal, ſuch as we ſee in the glaſs-houſes, on which were large floating cinders half lighted, and rolling over one another with great precipitation down the ſide of the mountain, forming on the whole a moſt beautiful and uncommon caſcade." Now, if we conſider the materials of which the lava conſiſts, which undoubtedly are the common matters to be found every where in the earth, namely, ſtones, metallic ores, clay, ſand, &c. we ſhould find that our hotteſt furnaces would by no means be able to bring them into any degree of fuſion; ſince the materials for glaſs cannot be melted without a great quantity of very fuſible ſalts, ſuch as alkalies, nitre, &c. mixed along with them. The heat of a volcano muſt therefore be immenſe: and beſides its heat, it is ſometimes attended with a very uncommon circumſtance; for Sir William Hamilton informs us, that "the red-hot ſtones thrown up by Veſuvius on the 31ſt of March 1766 were perfectly *tranſparent*;" and the like remark he makes on the vaſt ſtream of lava which iſſued from this volcano in 1779: (See VESUVIUS). This we cannot look upon to be the mere effect of heat: for mere heat with us will not make a ſolid body tranſparent; and theſe ſtones, we are ſure, were not in a ſtate of fuſion, or the reſiſtance of the air would have broke them all to pieces, even ſuppoſing them, which is very improbable, to have been in that ſtate detached from the reſt of the lava. For the tranſparency, therefore, we muſt have recourſe to electricity; which in ſome of our experiments hath the property of rendering opaque bodies tranſparent *. Indeed it is ſcarcely poſſible but the lava and every other matter thrown out of a volcano muſt be in the higheſt degree electrical, ſeeing the fire itſelf moſt probably takes its riſe from electricity, as is ſhown under the article VOLCANO.

2
Probably in a highly electrified ſtate alſo.

The lava, after having once broke out, does not conſtantly continue running from the ſame vent, but often has intermiſſions, after which it will burſt out ſometimes at the ſame place, and ſometimes at another. No real flame ever appears to come from the lava. In the day-time its progreſs is marked by a thick white ſmoke, from which the light of the red hot matter being reflected in the night-time, makes it appear like flame. But if, during its progreſs, it meets with trees or other combuſtible ſubſtances, which it frequently does, a bright flame immediately iſſues from its ſurface, as hath alſo been remarked by Sir William Hamilton.—This liquid ſubſtance, after having run pure for about 100 yards (more or leſs, no doubt, according to different circumſtances), begins to collect cinders, ſtones, and a ſcum is formed on the ſurface. Our author informs us, that the lava which he obſerved, with its ſcum, had the appearance of the river Thames, as he had ſeen it after a hard froſt and a great fall of ſnow, when beginning to thaw, carrying down vaſt maſſes of ſnow and ice. In ſome places it totally diſappeared, and ran in a ſubterraneous paſſage formed by the ſcum for ſeveral paces; after which it came out pure, having left the ſcum behind, though a new one was quickly formed. This lava at the fartheſt extremity from its ſource did not appear liquid, but like a heap of red-hot coals, forming a wall in ſome places 10 or 12 feet high, which rolling from the top ſoon formed another wall, and ſo on.—This was the appearance alſo put on by the lava which iſſued in the great eruption of 1783 in Iceland; with this difference, that the wall was at one time 210 feet high, and the general thickneſs of it was more than 100: (See HECLA). While a lava is in this ſtate, Sir William is of opinion, that it is very practicable to divert it into another channel, in a manner ſomewhat ſimilar to what is practiſed with rivers. This he was afterwards told had been done with ſucceſs during the great eruption of Etna in 1669: that the lava was directing its courſe towards the walls of Catania, and advancing very ſlowly, when they prepared a channel for it round the walls of the town, and turned it into the ſea. A ſucceſſion of men covered with ſheep ſkins wetted, were employed to cut through the tough flanks of lava, till they made a paſſage for that in the centre, which was in perfect fuſion, to diſgorge itſelf into the channel prepared for it. But this, it is evident, can only take place in ſmall ſtreams of this burning matter; with that abovementioned it would have been impoſſible. It hath been alſo obſerved of the lavas of Etna, that they do not conſtantly fall down to the loweſt places, but will ſometimes aſcend in ſuch a manner as to make the valleys riſe into hills. On this Sir William Hamilton has the following note: "Having heard the ſame remark with regard to the lavas of Veſuvius, I determined, during an eruption of that volcano, to watch the progreſs of a current of lava, and I was ſoon enabled to comprehend this ſeeming phænomenon, though it is, I fear, very difficult to explain. Certain it is, that the lavas, while in their moſt fluid ſtate, follow always the laws of other fluids; but when at a great diſtance from their ſource, and conſequently encumbered with ſcoriæ and cinders, the air likewiſe having rendered their outward coat tough, they will ſometimes (as I have ſeen) be forced up a ſmall aſcent, the freſh matter puſhing forward that which went before it, and the exterior parts of the lava acting always as conductors (or pipes, if I may be allowed the expreſſion) for the interior parts, that have retained their fluidity from not being expoſed to the air."

4
Do not always deſcend to the loweſt places.

From the year 1767 to 1779, this gentleman made many curious obſervations on the lavas of Veſuvius. He found, that they conſtantly formed channels in the mountain as regular as if they had been made by art; and that, whilſt in a ſtate of perfect fuſion, they continued their courſe in thoſe channels, which were ſometimes full to the brim, and at others more or leſs ſo according to the quantity of matter thrown out. Theſe channels, after ſmall eruptions, were generally from two to five or ſix feet wide, and ſeven or eight in depth. They were often hid from the ſight by a quantity of ſcoriæ that had formed a cruſt over them, and the lava, having been conveyed in a covered way for ſome yards, came out again freſh into an open channel. Our author informs us, that he had walked in ſome of theſe ſubterraneous galleries, which were exceedingly curious, the ſides, top, and bottom, being exceedingly ſmooth and even: others were incruſted with what he calls very extraordinary ſcoriæ, beautifully ramified white ſalts in the form of dropping ſtalactites, &c.

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* See *Electricity, Index*.

On viewing a ſtream of lava while in its fluid ſtate in the month of May 1779, he perceived the operation of it in the channels above deſcribed in great perfection. After quitting them, it ſpread itſelf in the valley, and ran gently like a river that had been frozen, and had maſſes of ice floating upon it. The wind happening then to ſhift, our traveller was ſo incommoded by the ſmoke, that the guide propoſed to croſs it, which was inſtantly put in execution without any other inconvenience than the violent heat with which the legs and feet were affected. The cruſt was ſo tough, that their weight made no impreſſion upon it, and the motion ſo ſlow that they were in no danger of falling. This circumſtance, according to Sir William, points out a method of eſcape ſhould any perſon happen to be incloſed betwixt two lavas, but ought never to be tried except in caſes of real neceſſity; and indeed, if the current of melted matter was very broad, muſt undoubtedly be attended with extreme danger, both from the heat of the upper cruſt and the chance of its breaking and falling down with the paſſenger into the burning liquid below. That which Sir William Hamilton croſſed was about 50 or 60 feet broad.

Having paſſed this burning ſtream, our travellers walked up along the ſide of it to its very ſource. Here they ſaw it boiling and bubbling violently up out of the ground, with a hiſſing and crackling noiſe like that which attends the playing off an artificial fire-work. An hillock of about 15 feet high was formed by the continual ſplaſhing up and cooling of the vitrified matter. Under this was an arched hollow, red-hot within, like an heated oven; the lava which ran from it being received into a regular channel raiſed upon a ſort of wall of ſcoriæ and cinders, almoſt perpendicularly, of about the height of 8 or 10 feet, and much reſembling an ancient aqueduct. On quitting this fountain of lava, they went quite up to the crater, where as uſual they found a little mountain throwing up ſtones and red-hot ſcoriæ with loud exploſions; but the ſmoke and ſmell of ſulphur was ſo intolerable, that they were obliged to quit the place with precipitation.

By the great eruption in Auguſt 1779, the curious channels abovementioned were entirely deſtroyed, the cone of the mountain was covered with ſtratum of lava full of deep cracks, from whence continually iſſued a ſulphureous ſmoke that tinged the ſcoriæ and cinders with a deep yellow, or ſometimes white tint. The lava of this eruption appeared to be more perfectly vitrified than that of any former one he had obſerved. The pores of the freſh lava were generally full of a perfect vitrification, and the ſcoriæ themſelves, viewed through a magnifying glaſs, appeared like a confuſed heap of filaments of a foul vitrification. When a piece of the ſolid lava had been cracked in its fall, without ſeparating entirely, fibres of perfect glaſs were always obſerved reaching from ſide to ſide within the cracks. The natural ſpun-glaſs which fell in ſome places along with the aſhes of this eruption, and which has likewiſe been obſerved in other places, he is of opinion muſt have proceeded from an operation of the kind juſt mentioned; the lava cracking and ſeparating in the air at the time of its emiſſion from the crater, and by that means ſpinning out the pure vitrified matter from its pores or cells; the wind at the ſame time carrying off the filaments of glaſs as faſt as they were produced.

Our author obſerved a kind of pumice-ſtone ſticking to ſome very large fragments of the new lava. On cloſe inſpection, however, he found that this ſubſtance had been forced out of the minute pores of the ſolid lava itſelf; and was a collection of fine vitreous fibres or filaments confounded together at the time of their being preſſed out by the contraction of the large fragments of lava in cooling, and which had been bent downwards by their own weight. "This curious ſubſtance (ſays he) has the lightneſs of a pumice, and reſembles it in every reſpect, except that it is of a darker colour."

When the pores of this lava were large, and filled with pure vitrified matter, the latter was ſometimes found blown into bubbles on the ſurface; probably by the air which had been forced out at the time the lava contracted itſelf in cooling; and from theſe thin bubbles it appeared, that this kind of volcanic glaſs has much the ſame tranſparency with our common glaſs bottles, and like them is of a dirty yellow colour; but when large pieces of it were broken off with a hammer, they appeared perfectly black and opaque.

In the lava of this eruption it was obſerved, that many detached pieces were in the ſhape of a barley-corn or plum-ſtone, ſmall at each end, and thick in the middle. Some of theſe did not weigh above an ounce; but others could not be leſs than 60 pounds. Our author took them to be drops from the liquid fountain of fire, which might naturally acquire ſuch a form in their fall. There were alſo many other curious vitrifications, different from any he had ſeen before, mixed with this huge ſhower of ſcoriæ and maſſes of lava.

In treating of Mount Ætna, M. Houel makes mention of a piece of lava which, after having been once ejected by the volcano, was ſwallowed up, and thrown out a ſecond time. The intenſe heat to which it was then ſubjected, had ſuch an affect upon it, that it appeared all full of chinks to a conſiderable depth, and which run at right angles to one another. He had alſo an opportunity of obſerving to great advantage ſome of the hollow channels formed by the lavas of Ætna ſimilar to thoſe deſcribed by Sir William Hamilton, but on a much larger ſcale. Here the great eruption of water in 1755 had overturned, in a vertical direction, an huge tube of this kind for the length of half a mile. The tube itſelf appeared to be compoſed of enormous maſſes, ſomewhat reſembling planks; each two feet thick, and twelve or fifteen in breadth, continued in a ſtraight line through the whole of that ſpace. At the ſame time by the action of the lava a kind of walls had been formed, from ten to ſixteen feet in height, and curved at the top. Some of theſe walls appear rolled together like paper; and M. Houel is of opinion, that theſe various appearances on the ſurface of the lava when cooled muſt have ariſen from particles heterogeneous to the real lava; and which detach themſelves from it, riſing to the ſurface under a variety of forms proportioned to the ſpaces of time taken up in cooling. Theſe cruſts are formed of different kinds of ſcoriæ and dirty lava, mixed with ſand or aſhes. At the ſame place are found alſo great numbers of ſmall pieces like thoſe of ice heaped upon one another after having floated for ſome time on a river. Beneath theſe the pure lava is met with, and which has evidently been in a ſtate of perfect fuſion. This is extremely denſe; and by looking narrowly into its chinks, the compoſition of the whole appears to be merely homogeneous. "It is curious (ſays he) to obſerve, ſo near one ſpecies of lava which is very pure, another which has likewiſe arrived at the ſame place in a fluid ſtate, and has there undergone ſo great a change as ſcarce to retain an appearance of its original ſtate. It is, however, like iron droſs, in grains of unequal ſizes. We find it alſo at various diſtances, ſuch as one, two, or more hundred fathoms. It is ſometimes found in large pieces like tables, covered over with ſharp points, ſome longer and others ſhorter. All theſe pieces are quite detached from one another, as if they had been brought thither and ſcattered from a tumbril. The matter of which the cruſt of the lava is formed, ſeems to have iſſued from it in the ſame manner in which froth riſes upon ſolution of ſoap in water. It appears afterwards to have ſwelled, burſt, and aſſumed its preſent form, preſenting to the view various ſpaces filled with ſmall looſe ſtones. A great number of new lavas were likewiſe obſerved, all of them putting forth various kinds of effloreſcences in great quantity.

The hardneſs, denſity, and ſolidity, of lavas, no doubt proceed from the degree of heat to which they have been expoſed, and which ſeems to be greater or leſs according to their quantity. Hence the Icelandic volcanoes, which pour forth the greateſt quantities of lava, produce it alſo in the greateſt degree of liquefaction, and Dr Van Troil obſerves, that what he ſaw muſt have been liquefied to an extreme degree.

5 **Obſervations on the different compoſitions of lavas by Sir W. Hamilton.**

The compoſition of the lavas of different volcanoes, and even of different parts of thoſe of the ſame volcano, is extremely different. Sir William Hamilton is of opinion that this difference in compoſition contributes not a little to the facility or difficulty with which they afterwards receive earth capable of vegetation. "Some (ſays he) have been in a more perfect ſtate of vitrification than others, and are conſequently leſs liable to the impreſſions of time. I have often obſerved on Mount Veſuvius, when I have been cloſe to a mouth from whence the lava was diſgorging itſelf, that the quality of it varied greatly from time to time. I have ſeen it as fluid and coherent as glaſs when in fuſion; and I have ſeen it farinaceous, the particles ſeparating as they forced their way out, juſt like meal coming from under the grindſtones. A ſtream of lava of this ſort being left compact, and containing more earthy particles, would certainly be much ſooner fit for vegetation than one compoſed of the more perfect vitrified matter." Mr Bergman, who has accurately analyſed ſome Icelandic lavas, informs us, that one kind is very coarſe, heavy, and hard, full of bladders, almoſt black, intermixed with white grains reſembling quartz, which in ſome places have a figure not very unlike a ſquare. This black matter is not attracted by the magnet; but if a piece of it is held againſt a compaſs, the needle viſibly moves. When tried in the crucible, it yields from ten to twelve pounds of iron in every hundred weight. It does not diſſolve in the leaſt with ſal ſodæ, and very difficultly with borax, and ſcarce at all with urinous ſalt. It ſeems to contain a great deal of clay in its compoſition, which may be extracted by all acid ſolvents. This laſt he is likewiſe, from experiments, aſſured, is the caſe with the lava of Solfaterra in Italy.

6 By Mr Bergman.

The white lava, which poſſeſſes more or leſs of thoſe tranſparent grains or rays with which lavas are generally chequered, does not ſeem to be of the nature of quartz, as it cannot be attacked by ſal ſodæ; it is however, ſoluble with ſome difficulty by borax and fuſible urinous ſalt, or microcoſmic acid. Theſe effects are perfectly ſimilar to thoſe produced upon the diamond, ruby, ſapphire, topaz, and hyacinth. The chryſolite, garnet, tourmalin, and ſhirl, can neither be diſſolved by ſal ſodæ, though they are ſomewhat attacked by it when reduced to a fine powder; and upon the two laſt mentioned ones it produces a ſlight efferveſcence; on which account, ſays Mr Bergman, it is poſſible that the precious ſtones found upon Mount Veſuvius, which are ſold at Naples, are nearer related to the real precious ſtones than is generally imagined. He found no ſuch grains in a finer kind of lava, quite porous within, and entirely burnt out, and conſiderably lighter than the former ones.

The Iceland agate is of a black or blackiſh brown colour, a little tranſparent at the thin edges like glaſs, and gives fire with ſteel. It cannot eaſily be melted by itſelf; but becomes white, and flies in pieces. It can hardly be diſſolved in the fire by fuſible urinous ſalt; but it ſucceeds a little better with borax, though with ſome difficulty. With ſal ſodæ it diſſolves very little; though in the firſt moments ſome ebullition is perceived, and the whole maſs is afterwards reduced to powder. Hence Mr Bergman concludes, that this agate hath been produced by an exceſſive fire out of the black lava formerly mentioned.

In the Iceland pumice-ſtone, quartz and cryſtals are often found, particularly in the black and reddiſh-brown kind. The ſtones thrown out of the volcano, whether grey, or burnt brown, ſeemed to conſiſt of a hardened clay, mixed with a ſiliceous earth. They were ſprinkled with rays and grains reſembling quartz, and ſome few flakes of mica. They fuſed with great difficulty in the fire; with ſal ſodæ they ſhowed ſome effervеſcence at firſt, but which ceaſed in a ſhort time. The parts reſembling quartz produced no motion at all; from whence Mr Bergman concludes, that the black lava already mentioned proceeds principally from this maſs. Several other ſtones which were ſent him from Iceland, Mr Bergman ſuppoſed to have no connection with the eruptions, but to have been produced in ſome other way.

7 By Mr Ferber. In Mr Ferber's travels through Italy, we are informed, that he has ſeen a ſpecies of lava ſo exactly reſembling blue iron ſlags, that it was not to be diſtinguiſhed from them but with great difficulty. The ſame author tells us likewiſe, that, "the Vicentine and Veroneſe lavas and volcanic aſhes contain incloſed ſeveral ſorts of fire-ſtriking and flint-horn ſtones, of a red, black, white, green, and variegated colour, ſuch as jaſpers and agates; that hyacinths, chryſolites, and *pietre obſidiane*, deſcribed by Mr Arduini in his *Giornale d'Italia*, are found at Leonedo; and that chalcedony or opal pebbles, and noduli with incloſed water-drops, (*chalcedonii opali enhydri*), are dug out of the volcanic cineritious hills near Vicenza.

8 M. Dolomieu's opinion. M. Dolomieu conſiders the chemical analyſis of lava as but of little account. When ſubjected to the force of fire a ſecond time, they are all of them reducible to the ſame kind of glaſs; from which it has been concluded, that all volcanic products have been formed of the ſame kind of materials, and that the ſubterraneous fire has always acted on and variouſly modified the ſame kind of ſtone. But an analyſis by fire, he juſtly obſerves, is of all others the moſt fallacious. The ſubſtances are all fuſible, and we have no proper methods of meaſuring the intenſity of our fire; ſo that the ſame ſubſtance which to-day may come out of our furnaces untouched, may to-morrow be found completely altered, even though the fire employed ſhould not appear to us to be any more violent than the former. Analyſes by different menſtrua have not been
9 Bergman's analyſis of lava. more ſucceſsful. Mr Bergman has indeed analyſed ſome lavas with acids, and gives with aſtoniſhing preciſion the following reſult, viz. that an hundred parts of lava contains 49 of ſiliceous earth, 35 of argillaceous earth, four of calcareous earth, and 12 of iron. Theſe experiments, however, our author obſerves, give us no information with regard to lavas in general. They only ſhow the compoſition of the particular ſpecimens that he tried; and even after the deſcriptions that he has given, we are a good deal at a loſs to diſcover the ſpecies of lava which he ſubjected to analyſis. "It would be as ridiculous (ſays M. Dolomieu) to apply this analyſis to every volcanic product, as it would be to believe that the component parts of a fiſſile rock were the ſame with thoſe of every rock compoſed of laminæ or thin ſtrata." For theſe reaſons he is of opinion, that, in order to underſtand the nature of lavas, we ſhould conſider not only that of volcanoes themſelves, but of the baſes on which they
10 Of the ſeat of volcanic fires. reſt. Had this been done, we would have found that the volcanic fires generally exiſt in beds of argillaceous ſchiſtus and horn ſtone; frequently in a ſpecies of porphyry, the gluten of which is intermediate betwixt horn-ſtone and petroſilex; containing a large quantity of ſchoerl, feldt-ſpar, and greeniſh quartz or chryſolite, in little rounded nodules. Theſe ſubſtances, he tells us, would have been found in thoſe mountains which are called primitive, and in ſtrata buried under beds of calcareous ſtone; and, among other things, would have convinced us, that the fluidity of lavas does not make them loſe the diſtinctive characters of their baſes. In the mountains called *Primitive*, thoſe rocks which are aſſigned as the baſes of the more common lavas are found intermixed with micaceous ones, with gneiſs, granite, &c. and they generally reſt on maſſes of granite. Hence lavas muſt conſiſt of all theſe matters, and the fire muſt act upon them all whenever it meets with them. Our author has conſtantly obſerved, that volcanoes ſituated at the greateſt diſtance from the centre of the chain, or group of mountains on which they are eſtabliſhed, produce lavas of a more homogeneous compoſition, and leſs varied, and which contain, moſt iron and argillaceous earth. Thoſe, on the contrary, placed nearer the centre, are more diverſified in their products; containing ſubſtances of an infinite variety of different kinds. The ſeat of the fire, however, he obſerves, does not long continue among the granites, the inflammation being either extinguiſhed, or returning to the centre of the ſchiſtus rocks in its neighbourhood.

11 Materials abundant in the earth at great depths ſhown by volcanic fires. From this knowledge of the materials of which lavas are compoſed, we acquire alſo a conſiderable knowledge of the matters that are found in greateſt quantity in the bowels of the earth. The excavations made by mines, &c. on the ſurface of the earth, are mere ſcratches in compariſon of the depths of volcanic fires; and as he conſiders the mountains themſelves as the productions of thoſe fires, it thence follows, that by attentively examining the materials of which they are compoſed, we may thence determine what kind of ſubſtances are moſt common at theſe great depths in the earth.

Thus our author thinks it probable, that ſchoerls and porphyries, though rare on the ſurface, are very common in the internal parts of the earth. As an inſtance of the truth of his obſervations, our author informs us, that he was convinced, from no other circumſtance but merely inſpecting the lavas of Mount Etna, that, in ſome parts of the iſland of Sicily, there exiſted granites, porphyries, with ſchiſtus and argillaceous horn-ſtones. In this opinion he perſiſted, notwithſtanding the generally oppoſite ſentiments of the inhabitants themſelves. He ſearched in vain three-fourths of the iſland; and at laſt found that all the mountains, forming the point of Sicily, called *Pelorus*, contain rocks of the kind abovementioned. He then ſaw that the baſe of theſe mountains was produced under Mount Etna on one ſide, and under the Lipari iſlands on the other. "We muſt, therefore, (ſays he) believe, that theſe mountains have furniſhed the materials on which the volcanoes have, for thouſands of years, exerted their power."

By travelling among thoſe elevations called the *Neptunian Mountains*, or *Mons Pelorus*, he was enabled to diſcover the reaſon why the products of Etna and the Lipari iſlands differ from one another. This, he ſays, is the unequal diſtribution of the granite and ſchiſtus rocks among them. The iſlands reſt almoſt immediately on the granite, or are ſeparated from it by a very thin ſtratum of argillaceous rock which contains porphyry; but the Sicilian volcano is ſituated on the prolongation of the ſchiſtous rock, which it muſt pierce before it reaches the granite; and accordingly very little of its lava ſeems to have granite for its baſis. If the ſeat of the fire was ſtill more diſtant from the centre of the mountains, their lavas would be more homogeneous; becauſe the ſchiſt, which ſucceeds to the horn-ſtone, is leſs various, and hardly includes any bodies foreign to its own ſubſtance. Thus the lavas, in the extinguiſhed volcanoes of the *Val di Noto*, which lie 15 leagues to the ſouth-eaſt of Etna, contain neither granite nor porphyry; but have for their baſes ſimple rocks, with particles of chryſolite and ſome ſchoerls.

To the granites which extend to Metazzo, oppoſite to Lipari, he aſcribes the formation of pumice; as they contain an immenſe quantity of ſcaly and micaceous rocks, black and white, with foſſile granites or *gneiſs*, the baſis of which is a very fuſible feldt-ſpar; and theſe he ſuppoſes to be the proper materials of the pumice, having found pieces of them almoſt untouched in pumice-ſtones. There are beds of almoſt pure feldt-ſpar; to the ſemivitrification of which he aſcribes an opaque enamel like lava mentioned in other parts of his works. Few porphyries, however, he acknowledges, are to be met with among the Neptunian mountains, though theſe ſtones abound in the lavas of Etna. "They are not diſtant (ſays he) from the granites; and thoſe I have found have neither the hardneſs nor perfection of thoſe pieces which I gathered in the gullies, and which had been apparently waſhed out of the anterior parts of the mountain by water. But though the porphyries I ſaw here bear no proportion to thoſe in the products of Etna, I was ſufficiently convinced of their exiſtence, and their analogy with thoſe of volcanoes, by diſcovering that the centre of theſe mountains contains a great number of them. Porphyries, in general, are very rare on the ſurface of the earth. Nature generally conceals them from us by burying them under calcareous ſtrata, or by incloſing them in ſchiſtus rocks with which they are almoſt always mixed: but we are indebted to the labour of volcanoes for informing us that they are among the moſt common ſubſtances in the bowels of the earth; and they are never ſo much diſguiſed by the ſubterranean fire as to be miſtaken in the lavas of which they form the baſis."

In Cronſtedt's Mineralogy we find all the volcanic products claſſed under the general name of *Slags*; of which he enumerates the following ſpecies.

1. *The Achates Iſlandicus Niger*, or Iceland Agate. It is black, ſolid, and of a glaſſy texture; but in thin pieces: it is greeniſh, and ſemitranſparent, like bottle-glaſs which contains much iron. It is found in Iceland and in the iſland of Aſcenſion. The jewellers employ it as an agate, though it is too ſoft to reſiſt the wear. "The moſt remarkable thing concerning this (ſays he) is, that ſuch large ſolid maſſes are found of it, that there is no poſſibility of producing the like in any glaſs-houſe. In Magellan's notes on this ſubject, we find the Iceland agate claſſed among the tranſparent baſaltes. To the ſame claſs belong the *Lapis Obſidianus* of Pliny, and the *Lapis Gallinaceus* of Peru, which by its beautiful blackneſs approaches to the colour of a large black-bird of the crow kind, in that country called the *Gallinago*.

2. *Lapis molaris Rhenanus*, Rheniſh Millſtone, is blackiſh-grey, porous, and perfectly reſembling a ſort of ſlag produced by Mount Veſuvius.

3. *Pumex*, the pumice-ſtone. See PUMEX.

4. The Pearl-Slag is compounded of white and greeniſh glaſs particles, which ſeem to have been conglutinated while yet ſoft or in fuſion. It is found in the iſland of Aſcenſion.

5. Slag-ſand, or aſhes, thrown out by volcanoes in larger or ſmaller grains. "This (ſays Cronſtedt) may perhaps be the principle of the Terra Puzzolana, becauſe ſuch an earth is ſaid at this time to cover the ruins of Herculaneum near Naples, which was deſtroyed by Veſuvius." In the notes, we are informed, that if the aſhes of a volcano be plentifully moiſtened, they produce that kind of *tufa* or *tophi*, *traas*, and *pori*, all of which are nearly of the ſame kind. Great heaps of *tufa* or *tophi* are found in Italy, forming various hills, and covering large tracts of land; from whence it is cut, and carried, for making the walls, vaults, and upper ceilings of houſes. It is a very ſoft kind of ſtone, extremely advantageous for theſe purpoſes, on account of its little weight, and being eaſily cut into any form. The inhabitants of Umbria and other parts of Italy dig with very little labour various ſubterranean excavations for the keeping of wines and proviſions of different kinds.

Mr Kirwan is of opinion, that the lavas ought to be diſtinguiſhed from the other volcanic productions. All lavas, according to him, are magnetic, give fire with ſteel, are generally of a granular texture, and fuſible *per ſe*. They may be reduced to three varieties, *viz.* the cellular, the compact, and the vitreous. The cellular, appear to have undergone only the firſt degree of fuſion, being juſt molified and heated ſufficiently to expel the fixed air contained in the argillaceous particles. Hence they abound in ſmall cavities ariſing from the expanſion of that air after it had recovered its elaſtic ſtate; and thus they are often ſo light as to float upon water, and have been miſtaken for pumice-ſtones. They are of black, grey, brown, or reddiſh colours; and their cavities are even filled with cryſtallizations. Of this kind is Cronſtedt's ſecond ſpecies, the millſtone of the Rhine. Theſe contain from 45 to 50 *per cent.* of ſiliceous earth; from 15 to 20 of iron; four or five of pure calcareous earth; the remainder being argillaceous.

The compact lavas have undergone a more perfect degree of fuſion, though even theſe are not deſtitute of cavities. They contain finer cryſtals, or ſuch as are more completely vitrified than the former: they have a black or brown colour: but ſtill their fracture is obſcure and not glaſſy. Their conſtituent parts are the ſame with the preceding ones; the uſual fluxes attack them with difficulty, and the fuſible ſalt of urine has ſcarce any power over them.

The vitreous lava has been more completely melted, and forms vitrifications of different colours, generally black or aſh-coloured, but rarely blue or greeniſh. A ſpecies of this was analyſed by Mr Bergman, as has been already mentioned, and afforded 49 *per cent.* of ſilex, 35 of argillaceous, 4 of calcareous earth, and 12 of iron. Another ſpecimen from the Lipari iſlands afforded 69 parts of ſilex, 20 of argillaceous earth, and 9 of iron. This kind of lava melts by itſelf with great difficulty. The black agate of Iceland belongs to this ſpecies, as does alſo the harder ſort of pitch ſtone, which gives fire with ſteel. This ſtone is of various colours, grey, green, black, red, or brown; has a glaſſy appearance, being compoſed of ſemivitrified ſubſtances, and melts eaſily *per ſe*. It contains 65 *per cent.* of ſilex, 16 of argillaceous earth, and four of iron; 14 parts were diſſipated in the analyſis made by Wiegleb, as Mr Kirwan aſſerts.

The beds of lava are deepeſt and narroweſt near the crater, and broader and ſhallower as they advance, unleſs ſome valley intervenes. Pumice-ſtones lie at a ſtill greater diſtance: and from theſe obſervations, ſays Mr Kirwan, extinguiſhed volcanoes may be traced.

Cronſtedt conjectured that there might be a kind of circulation among the different earths, from the vegetable mould, which he ſuppoſed to occupy one extreme, to the *ſlags* or volcanic productions, which might be reckoned to occupy another, and back again from the ſlags to the vegetable mould. "It is obvious (ſays he) how the old heaps of ſlags from the iron furnaces decay, and at laſt produce vegetables, which cannot be aſcribed ſolely to a black mould carried thither by the wind. The ſame may perhaps happen with the natural ſlags in the open air." Other naturaliſts have verified this conjecture. All lavas are found to be decompoſable by long expoſure to the air, ſooner or later according to the quantity of iron and calcareous earth they contain, and according as their fuſion was more or leſs complete. Sir William Hamilton has concluded that they gain only one or two feet mould in 1000 years: from which, and Recupero's calculations, extravagant ideas have been formed of the duration of the world; but all theſe are found, when properly examined, to be built on a falſe foundation. See the article EARTH, n° 176, 177.

12
Vaſt quantities of lava thrown out.

The quantity of matter thrown out from volcanoes under the name of *lava* is prodigious. After the great eruption of Etna in 1669, Borelli went from Piſa to Sicily to obſerve the effects of it. The matter thrown out at that time amounted to 93,830,750 cubical paces; ſo that, had it been extended in length upon the ſurface of the earth, it would have reached more than four times round the whole earth. All this matter, however, was not lava, but conſiſted alſo of ſand, ſtone, gravel, &c. The lava he computed at 6,300,000 paces which formed a river, according to our author, ſometimes two miles broad; but according to others it was ſix or ſeven miles broad, and ſometimes 20 or 30 yards in depth. Sir William Hamilton informs us, that the lavas of Etna are very commonly 15 or 20 miles in length, ſix or ſeven in breadth, and 50 feet deep. The moſt conſiderable is ſcarce leſs than 30 miles long and 15 broad. The moſt conſiderable lavas of Veſuvius do not exceed ſeven miles in length. The ſame author, however, tells us, that the lava which iſſued from Veſuvius in 1767, was ſix miles long, two in breadth, and in moſt places 60 or 70 feet deep. In one place it had run along a hollow-way made by currents of rain not leſs than 200 feet deep and 100 wide; and this vaſt hollow it had in one place filled up. He ſays, he could not have believed that ſo great a quantity of matter could have been thrown out in ſuch a ſhort time, if he had not examined the whole courſe of it himſelf. Even this quantity, however, great as it is, appears very trifling in compariſon of that thrown out in Iceland in the year 1783, which covered a ſpace of ground 90 miles in length and 42 in breadth, to the depth of more than 100 feet. Dr Van Troil, in his Letters on Iceland, tells us, that he and his companions travelled over a tract of lava upwards of 300 miles in length: and in 1728, we are told that an eruption of lava took place, which continued for two years to run into a great lake, which it almoſt filled up.

13
Require a long time to cool.

As the lavas are thrown out from the volcanoes in the higheſt degree of ignition, it may eaſily be ſuppoſed that ſuch vaſt bodies will retain their heat for a long time. It would indeed be well worth obſerving, what length of time is required to cool a lava perfectly; as from thence we might in ſome meaſure judge how far thoſe philoſophers are in the right, who argue concerning the length of time required to cool an ignited globe of the ſize of our earth or larger. Sir William Hamilton tells us, that in the month of April 1771, he thruſt ſticks into ſome of the crevices of the lava which had iſſued from Veſuvius in October 1767, and they immediately took fire. On Mount Etna, in 1769, he obſerved the lava that had been diſgorged three years before to ſmoke in many parts. No particular obſervation, however, hath been made in what proportion the heat of lavas is gradually loſt.

14
Cold and noxious vapours produced by old lavas.

Sir William Hamilton informs us of a curious fact relating to a lava in the iſland called *Lacco*. Here is a cavern ſhut up with a door; and this cavern is made uſe of to cool liquors and fruit, which it does in a ſhort time as effectually as ice. Before the door was opened, he felt the cold on his legs very ſenſibly; but when it was opened, the cold ruſhed out ſo as to give him pain; and within the grotto it was intolerable. He was not ſenſible of wind attending this cold; tho' upon Mount Etna and Veſuvius, where there are caverns of this kind, the cold is evidently occaſioned by a ſubterraneous wind: the natives call ſuch places *ventaroli*. From old lavas there alſo frequently happens an eruption of noxious vapours called *mofetes*. Theſe likewiſe break out from wells and ſubterraneous places in the neighbourhood of a volcanoe before an eruption. Our author tells us, that the vapour affects the noſtrils, throat, and ſtomach, juſt as the ſpirit of hartſhorn or any ſtrong volatile ſalt; and would ſoon prove fatal if you did not immediately withdraw from it. Theſe mofetes, he ſays, are at all times to be met with under the ancient lavas of Veſuvius, particularly the great eruption of 1631.

15
Uſes of lava.

Sir William Hamilton informs us, that the lavas of Etna and Veſuvius are much the ſame, but thoſe of Etna rather blacker and more porous than thoſe of Veſuvius. Some kinds of lava take a fine poliſh, and are frequently manufactured into boxes, tables, &c. In Naples, the inhabitants commonly make uſe of it for paving the ſtreets, and even the ſubterraneous cities of Pompeii and Herculaneum have been paved with the ſame ſubſtance. A fine large cubic piece of lava is preſerved in the hall of the Britiſh Muſeum.

LAVANDULA, lavender: A genus of the angioſpermia order, belonging to the didynamia claſs of plants; and in the natural method ranking under the 42d order, *Verticillatæ*. The calyx is ovate, and a little dentated, ſupported by a bractea or floral leaf; the corolla is reſupinated: the ſtamina within the tube.

Species. 1. The ſpica, or lavender ſpike, hath a ſhort ſhrubby ſtalk, riſing two or three feet high; ſmall ſpear-ſhaped entire leaves; and from the ends of the branches, numerous, long, erect, naked ſpikes of ſmall ringent flowers, of different colours in the varieties. The varieties of this are common narrow-leaved lavender, with blue flowers, and with white flowers; broad-leaved lavender; dwarf lavender: all of them flowering in July. This ſpecies is the common lavender; but the narrow-leaved variety, with blue flowers, is the ſort commonly cultivated for its flowers for medicine, &c. The ſtœchas, or French lavender, hath a ſhrubby very branchy ſtalk, riſing two or three feet high; very narrow, ſpear-ſhaped, pointed, hoary leaves, oppoſite; and all the branches terminated by ſhort buſhy ſpikes of purple flowers in June and July; ſucceeded by ſeeds in Auguſt. There is a variety with white flowers. 3. The dentata, or dentate-leaved ſtœchas, hath a woody ſtalk, branching on every ſide three or four feet high; leaves deeply indented in a pinnated manner; and the branches terminated by ſcaly four-cornered ſpikes of flowers, appearing moſt part of ſummer.

Culture. All the ſorts are propagated plentifully by ſlips of cuttings of their young ſhoots in ſpring. In march or April, take off a quantity of ſlips or cuttings, from three or four to ſix inches long; ſtrip off the under leaves; then plant them in a ſhady border, four inches aſunder; give a good watering, repeat it occaſionally in dry weather, and the plants will be well rooted in ſummer, and each become a good plant fit to be tranſplanted into any place early in autumn, that is September or October; removing them, if poſſible, with balls of earth; and if intended to plant them for uſe, ſet them in rows two or three feet aſunder, and two feet diſtance in each row: if any are deſigned for the ſhrubbery, they ſhould be ſtationed ſingly at good diſtances near the front. Thoſe of the third ſort being tender, ſhould be potted to move to ſhelter in winter. The lavendula ſtœchas is alſo often raiſed from ſeed, ſown in March or April, in a bed of light earth.

Uſes. The two firſt ſpecies are proper both for the kitchen-garden, for medicinal and other family-uſes; and to plant in the pleaſure-ground to adorn the front of ſmall ſhrubbery compartments, where they will increaſe the variety very agreeably; and are finely-ſcented aromatics, both when growing, and their flowers when gathered, eſpecially thoſe of the firſt ſpecies, which are in great eſteem for putting among cloaths, and for diſtilling and other economical uſes. The flowers of the firſt ſort are gathered for uſe in July, which being the time of their perfection, cut off the ſpikes cloſe in a dry day, and tie them in ſmall bunches for uſe. Theſe and the ſummits are in a very eminent degree cephalic and nervine. They are given in palſies, vertigos, lethargies, tremors, and ſuppreſſion of the menſtrual evacuation. The compound ſpirit diſtilled from them is famous in theſe and many other like caſes. The diſtilled oil is particularly celebrated for deſtroying the *pediculi inguinales*, and other cutaneous inſects. If ſoft ſpongy paper, dipt in this oil, either alone or mixed with oil of almonds, be applied at night to the parts infected, the inſects will certainly, ſays Geoffroy, be all found dead in the morning.

LAVATERA, in botany: A genus of the polyandria order, belonging to the polyadelphia claſs of plants; and in the natural method ranking under the 37th order, *Columniferæ*. The exterior calyx is double and trifid; the arilli or ſeed coats are very many and monoſpermous. There are ſeveral ſpecies, moſt of them herbaceous flowery annuals, or ſhrubby perennials, growing erect from two or three to eight or ten feet high, garniſhed with large roundiſh, heart-ſhaped, and angular leaves, and quinquepetalous flowers of the mallow kind. They are eaſily propagated by ſeed in the open ground in the ſpring; and thrive beſt when ſown where they are deſigned to remain. The lavatera tribe affect a warm ſandy ſituation and ſoil, in which they will ſometimes continue to exhibit their beauties for many years; but in general they are ſhort-lived, continuing only two or three years: this renders them peculiarly eligible to be ſcattered plentifully in a newly made ſhrubbery; they will add warmth to young plants, and will die away themſelves before the ſpaces they occupy will be required by the ſurrounding ſhrubs.

LAVATORY, or Lavadero, a name given to certain places in Chili and Peru, where gold is got out of the earth by waſhing.

M. Frezier gives us the following deſcription of the *lavatories* of Chili:—They dig deep into the earth, in ſuch places as they have reaſon to expect gold in; and, in order to facilitate this digging, turn a ſtream of water upon the ſpot, looſening the earth as much as poſſible all the time, that the current may have the greater effect, and tear up the the earth more ſtrongly. When they are got to the earth they want, they turn off the ſtream, and dig dry.

The earth that they now get, is carried on mules, and diſcharged into a baſon, made ſomewhat in the manner of a ſmith's bellows; into which a little rivulet of water runs with a great deal of rapidity, diſſolving the parts of the earth, and carrying every thing away with it, excepting the particles of gold, which, by their great weight precipitate to the bottom of the baſon, and mix with fine black ſand, where they are almoſt as much hidden as they were before in the earth.

Sometimes they find very conſiderable pieces in *lavatories*, particularly pieces of 24 ounces each.—There are ſeveral *lavatories*, where they find pepitas, or pieces of virgin gold, of a prodigious ſize. Among others they tell of one that weighed 512 ounces, bought by the count de la Moncloa, viceroy of Peru.

Nine or ten leagues to the eaſt of Coquimbo, are the *lavatories* of *Andacoll*, the gold whereof is 23 carats fine.—Their works here always turn to great profit, excepting when the water fails them.—The natives maintain that the earth is creative, that is, it produces gold continually; becauſe, after having been waſhed 60 or 80 years, they find it impregnated afreſh, and draw almoſt as much out of it as at firſt.

LUBACH, a handſome and ſtrong town of Germany, in the circle of Auſtria, and in Carniola, with a biſhop's ſee, a caſtle, and very handſome houſes. It is ſeated on a river of the ſame name, wherein are the largeſt craw-fiſh in Europe. E. Long. 14. 45. N. Lat. 46. 20.

LAUD (William), archbiſhop of Canterbury in England in the 17th century, was born at Reading in 1573, and educated in St John's college, Oxford, of which he was afterwards a fellow and grammar-reader. In 1610, he went into orders. In 1611, he was elected preſident of St John's college; but his election being diſputed, it was confirmed by his majeſty. The ſame year he was ſworn the king's chaplain. In 1621, he was nominated biſhop of St David's. In 1628, he was tranſlated to the biſhopric of London. In 1630, he was elected chancellor of the univerſity of Oxford. In 1633, he attended the king into Scotland, and was ſworn a privy-councellor for that kingdom. During his ſtay in Scotland, he formed the reſolution of bringing that church to an exact conformity with the church of England. In the ſame year, he ſucceeded archbiſhop Abbot in the ſee of Canterbury; and ſoon after came out his majeſty's declaration about lawful ſports on Sundays which the archbiſhop was charged with having revived and enlarged, and that with the vexatious proſecutions of ſuch clergymen as refuſed to read it in their churches. In 1634-5, the archbiſhop was put into the great committee of trade and the king's revenue; on the 4th of March following, he was appointed one of the commiſſioners of the treaſury; and on the 6th of March 1635-6, he received the ſtaff of lord high-treaſurer of England. In order to prevent the printing and publiſhing what he thought improper books, he procured a decree to be paſſed in the ſtar-chamber, on the 11th of July 1637, whereby it was enjoined that the maſter-printers ſhould be reduced to a certain number, and that none of them ſhould print any books till they were licenced either by the archbiſhop or the biſhop of London, or ſome of their chaplains, or by the chancellors or vice chancellors of the two univerſities. A new parliament being ſummoned, met on the 13th of April 1640; and the convocation the day following: but the commons launching out into complaints againſt the archbiſhop, and inſiſting upon a redreſs of grievances before they granted any ſupply, the parliament was diſſolved on the 7th of May. The convocation, however, continued ſitting; and made 17 canons, which were ſuppoſed to be formed under the immediate direction of the archbiſhop. In the beginning of the long parliament he was attacked on account of thoſe canons: and they being condemned by the houſe of commons on the 16th of December 1640, "as containing many things contrary to the king's prerogative, to the fundamental laws and ſtatutes of the realm, to the rights of parliament, to the property and liberty of the ſubject, and tending to ſedition, and of dangerous conſequence;" he was, on the 18th of December, accuſed by the commons of high treaſon, and ſent to the Tower. Being tried before the houſe of lords, for endeavouring to ſubvert the laws, and to overthrow the Proteſtant religion, he was found guilty, and beheaded on Towerhill on January 10th following, in the 72d year of his age. This learned prelate, notwithſtanding his being charged with a deſign to bring in Popery, wrote an anſwer to Dr Fiſher, which is eſteemed one of the beſt pieces that has been printed againſt that religion. He was temperate in his diet, and regular in his private life: but his fondneſs for introducing new ceremonies, in which he ſhowed a hot and indiſcreet zeal, his encouraging of ſports on Sundays, his illegal and cruel ſeverity in the ſtar-chamber and high-commiſſion courts, and the fury with which he perſecuted the diſſenters, and all who preſumed to contradict his ſentiments, expoſed him to popular hatred. Beſides his Anſwer to Fiſher, he publiſhed ſeveral Sermons, and other works.

LAUDANUM. See Opium.

LAUDATIO, in a legal ſenſe, was anciently the teſtimony delivered in court of the accuſed perſon's good behaviour and integrity of life. It reſembled the cuſtom, which prevails in our trials, of calling perſons to ſpeak to the character of the priſoner. The leaſt number of the *laudatores* amongſt the Romans was ten.

LAUDER (William), a native of Scotland, was educated at the univerſity of Edinburgh, where he finiſhed his ſtudies with great reputation, and acquired a conſiderable knowledge of the Latin tongue. In May 22. 1734, he received a teſtimonial from the heads of the univerſity, certifying that he was a fit perſon to teach humanity in any ſchool or college whatever. In 1739 he publiſhed at Edinburgh an edition of Johnſton's Pſalms. In 1742, he was recommended by Mr Patrick Cuming and Mr Colin Maclaurin, profeſſors of church-hiſtory and mathematics, to the maſterſhip of the grammar ſchool at Dundee, then vacant. Whether he ſucceeded in his application or not, is uncertain: but a few years afterwards we find him in London, contriving to ruin the reputation of Milton; an attempt which ended in the deſtruction of his own. His reaſon for the attack probably ſprung from the virulence of a violent party ſpirit, which triumphed over every principle of honour and honeſty. He began firſt to retail part of his deſign in The Gentleman's Magazine, 1747; and finding that his forgeries were not detected, was encouraged in 1751 to collect them, with additions, into a volume, intitled, "An Eſſay on Milton's Uſe and Imitation of the Moderns in his Paradiſe Loſt," 8vo. The fidelity of his quotations had been doubted by ſeveral people; and the falſehood of them was ſoon after demonſtrated by Dr Douglaſs, in a pamphlet intitled, "Milton vindicated from the Charge of Plagiariſm brought againſt him by Lauder, and Lauder himſelf convicted of ſeveral Forgeries and groſs Impoſitions on the Public: In a letter humbly addreſſed to the Right honourable the Earl of Bath, 1751," 8vo. The appearance of this Detection overwhelmed Lauder with confuſion. He ſubſcribed a confeſſion, dictated by a learned friend, wherein he ingenuouſly acknowledged his offence, which he profeſſed to have been occaſioned by the injury he had received from the diſappointment of his expectations of profit from the publication of Johnſton's Pſalms. This misfortune he aſcribed to a couplet in Mr Pope's Dunciad, book iv. ver. 3. and from thence originated his rancour againſt Milton. He afterwards imputed his conduct to other motives; abuſed the few friends who continued to countenance him; and, finding his character was not to be retrieved, quitted the kingdom, and went to Barbadoes, where he ſome time taught a ſchool. His behaviour there was mean and deſpicable; and he paſſed the remainder of his life in univerſal contempt. "He died (ſays Mr Nichols) ſome time about the year 1771, as my friend Mr Reed was informed by the gentleman who read the funeral ſervice over him."

LAUDICŒNI, amongſt the Romans, applauders, who for reward entered the rehearſal-rooms, attended the repetition of plays, and were in waiting when orations were pronounced, in order to raiſe or increaſe the acclamation and applauſe.

LAUDOHN (Field-marſhal), a celebrated general in the imperial ſervice, born in 1716, was a native of Livonia, and deſcended from a Scottiſh family. He made his firſt campaigns under Marſhal Munich, in the war of 1738, between the Ruſſians and Turks; and was at the taking of Oczakow, Choczim, and Stawutzchane, where the Turks were entirely defeated. Frederick the Great refuſed, in 1741, to take young Laudohn into his ſervice, ſaying he did not like his countenance; though this monarch, who was conſidered as the greateſt general of his age, afterwards ſaid, that he often admired the poſitions of other generals, but that he had ever dreaded the battles of Laudohn. In 1756, when but juſt entered into the ſervice of the houſe of Auſtria, with the rank of lieutenant-colonel, he made ſuch a rapid progreſs, that within leſs than a year he was a general of artillery, and within three years commander in chief of the whole army. He reſcued Olmutz, when beſieged by the Pruſſians; beat the king himſelf at Frankfort on the Oder; at Zorndorf, took General Fouquet priſoner; carried Glatz and Schweidnitz by aſſault; and ſtopped the progreſs of Frederick in a war which might have proved fatal to the houſe of Auſtria. In 1778, when elevated to the rank of marſhal, at the head of 60,000 men, he hindered Henry, brother to the king of Pruſſia, from joining his army to that of the king. At Dubicza, Novi, Gradiſca, and Belgrade, in the late war between the Emperor and the Turks, he had but to preſent himſelf before the place, and ſay with Cæſar, *Veni, vidi, vici.* But at his head-quarters in Moravia, he was ſeized with a fever, in conſequence of an operation he underwent for an obſtruction in the urethra. His impatience under the medical applications, the impetuous ardour of his character, and the knowledge, above all, of his importance in the war, contributed to irritate his mind, and promote the violence of the fever. He reſiſted the application of cataplaſms, before and after the inciſions were made, with a fatal obſtinacy which raiſed the inflammation to ſuch a height, that he expired under the acceſſion of the fever on the 14th of July 1790, in the 74th year of his age.

LAUDS, Laudes, the ſecond part of the ordinary office of the breviary, ſaid after matins; though heretofore, it ended the office of the night.

The laudes conſiſt principally of pſalms, hymns, &c. whence they took their name, from *laus, laudis,* "praiſe."

LAVENHAM, or Lanham, 61 miles from London, is a pleaſant and pretty large town of Suffolk, on a branch of the river Bret, from whence it riſes gradually to the top of a hill, where are its church, which is a very handſome Gothic ſtructure, and in which are ſeveral ancient monuments; and a ſpacious market-place, encompaſſed with nine ſtreets or diviſions, in a very healthy free air. It had formerly a very conſiderable trade in blue cloth; and had three guilds or companies, with each their hall. It has ſtill a conſiderable manufactory of ſerges, ſhalloons, ſays, ſtuffs, and ſpinning fine yarn for London; and many hundred loads of wool are delivered in a year from its wool-hall. It is governed by 6 capital burgeſſes, who are for life, and chooſe the inferior officers. The church and its ſteeple, which is 137 feet high, are reckoned the fineſt in the county. Its tenor bell, though not much more than a ton, has as deep a note as a bell of twice that weight. Here is a free-ſchool and a bridewell, part of which is a workhouſe where the poor children, &c. of the pariſh are employed in ſpinning hemp, flax, and yarn; beſides which, here are other conſiderable charities. The tenants of the manor and the other inhabitants were always exempted from ſerving at any court held for its hamlet. They have that tenure of land here which is called *Borough Engliſh.* Its markets are on Tueſday, and on Thurſday for wool. Its fairs are on Shrove-Tueſday, and October 10.

LAVENDER. See Lavandula.

LAVER, in ſcripture hiſtory, a ſacred utenſil placed in the court of the Jewiſh tabernacle, conſiſting of a baſon, whence they drew water by cocks, for waſhing the hands and feet of the officiating prieſts, and alſo the entrails and legs of the victims.

LAVERNA, in antiquity, the goddeſs of thieves and cheats among the Romans, who honoured her with public worſhip, becauſe ſhe was ſuppoſed to favour thoſe who wiſhed that their deſigns might not be diſcovered. Varro ſays, that ſhe had an altar near one of the gates of Rome; hence called *porta lavernalis.*

LAUGERIA, in botany: A genus of the monogynia order, belonging to the pentandria claſs of plants; and in the natural method ranking among thoſe of which the order is doubtful. The corolla is quinquefid; the fruit is a plum with a quinquelocular kernel.

LAUGHTER, an affection peculiar to mankind, occaſioned by ſomething that tickles the fancy.

In laughter, the eye-brows are raiſed about the middle, and drawn down next the noſe; the eyes are almoſt ſhut; the mouth opens and ſhows the teeth, the corners of the mouth being drawn back and raiſed up; the cheeks ſeem puffed up, and almoſt hide the eyes; the face is uſually red, the noſtrils are open; and the eyes wet.

Authors attribute laughter to the fifth pair of nerves, which ſending branches to the eye, ear, lips, tongue, palate, and muſcles of the cheek, parts of the mouth, præcordia, &c. there hence ariſes a ſympathy, or conſent, between all theſe parts; ſo that when one of them is acted upon, the others are proportionably affected. Hence a ſavoury thing ſeen, or ſmelt, affects the glands, and parts of the mouth; a thing, ſeen or heard, that is ſhameful, affects the cheeks with bluſhes: on the contrary, if it pleaſe and tickle the fancy, it affects the præcordia, and muſcles of the mouth and face with laughter; if it cauſe ſadneſs and melancholy, it likewiſe affects the præcordia, and demonſtrates itſelf by cauſing the glands of the eyes to emit tears. Dr Willis accounts for the pleaſure of kiſſing from the ſame cauſe; the branches of this fifth pair being ſpread to the lips, the præcordia, and the genital parts; whence ariſes a ſympathy between thoſe parts.

The affection of the mind by which laughter is produced is ſeemingly ſo very different from the other paſſions with which we are endowed, that it hath engaged the attention of very eminent perſons to find it out.—1. Ariſtotle, in the fifth chapter of his Poetics, obſerves of comedy, that "it imitates thoſe vices or meanneſſes only which partake of the ridiculous:—now the ridiculous (ſays he) conſiſts of ſome fault or turpitude not attended with great pain, and not deſtructive." 2. "The paſſion of laughter (ſays Mr Hobbes) is nothing elſe but ſudden glory ariſing from ſome ſudden conception of ſome eminency in ourſelves, by compariſon with the infirmity of others, or with our own formerly. For men (continues he) laugh at the follies of themſelves paſt, when they come ſuddenly to remembrance, except when we bring with them any ſudden diſhonour." 3. Akenſide, in the third book of his excellent poem, treats of ridicule at conſiderable length. He gives a detail of ridiculous characters; ignorant pretenders to learning, boaſtful ſoldiers, and lying travellers, hypocritical churchmen, conceited politicians, old women that talk of their charms and virtues, ragged philoſophers who rail at riches, virtuoſi intent upon trifles, romantic lovers, wits wantonly ſatirical, fops that out of vanity appear to be diſeaſed and profligate, daſtards who are aſhamed or afraid without reaſon, and fools who are ignorant of what they ought to know. Having finiſhed the detail of characters, he makes ſome general remarks on the cauſe of ridicule; and explains himſelf more fully in a proſe definition illuſtrated by examples. The definition, or rather deſcription, is in theſe words. "That which makes objects ridiculous, is ſome ground of admiration or eſteem connected with other more general circumſtances comparatively worthleſs or deformed: or it is ſome circumſtance of turpitude or deformity connected with what is in general excellent or beautiful; the inconſiſtent properties exiſting either in the objects themſelves, or in the apprehenſion of the perſon to whom they relate; belonging always to the ſame order or claſs of being; implying ſentiment and deſign, and exciting no acute or vehement commotion of the heart.—4. Hutcheſon has given another account of the ludicrous quality, and ſeems to think that it is the contraſt or oppoſition of dignity and meanneſs which occaſions laughter.

All theſe opinions are refuted by Dr Beattie in his Eſſay on Laughter and Ludicrous Compoſition, where he has treated the ſubject in a maſterly manner. "To provoke laughter (ſays he), is not eſſential either to wit or humour. For though that unexpected diſcovery of reſemblance between ideas ſuppoſed diſſimilar, which is called *wit*—and that comic exhibition of ſingular characters, ſentiments, and imagery, which is denominated *humour*,—do frequently raiſe laughter, they do not raiſe it always. Addiſon's poem to Sir Godfrey Kneller, in which the Britiſh kings are likened to heathen gods, is exquiſitely witty, and yet not laughable. Pope's Eſſay on Man abounds in ſerious wit: and examples of ſerious humour are not uncommon in Fielding's Hiſtory of Parſon Adams, and in Addiſon's account of Sir Roger de Coverley. Wit, when the ſubject is grave, and the alluſions ſublime, raiſes admiration inſtead of laughter: and if the comic ſingularities of a good man appear in circumſtances of real diſtreſs, the imitation of theſe ſingularities in the epic or dramatic comedy will form a ſpecies of humour, which, if it ſhould force a ſmile, will draw forth a tear at the ſame time. An inquiry, therefore, into the diſtinguiſhing characters of wit and humour has no neceſſary connection with the preſent ſubject.

"Some authors have treated of ridicule, without marking the diſtinction between *ridiculous* and *ludicrous* ideas. But I preſume the natural order of proceeding in this inquiry, is to begin with aſcertaining the nature of what is *purely ludicrous*. Things *ludicrous* and things *ridiculous* have this in common, that both excite laughter; but the former excite pure laughter, the latter excite laughter mixed with diſapprobation and contempt. My deſign is to analyſe and explain that quality in things or ideas, which makes them provoke *pure laughter*, and intitles them to the name of *ludicrous* or *laughable*.

"When certain objects, qualities, or ideas, occur to our ſenſes, memory, or imagination, we ſmile or laugh at them, and expect that other men ſhould do the ſame. To ſmile on certain occaſions is not leſs natural, than to weep at the ſight of diſtreſs, or cry out when we feel pain.

"There are different kinds of laughter. As a boy, paſſing by night through a church-yard, ſings or whiſtles in order to conceal his fear even from himſelf; ſo there are men, who, by forcing a ſmile, endeavour ſometimes to hide from others, and from themſelves too perhaps, their malevolence or envy. Such laughter is unnatural. The ſound of it offends the ear; the features diſtorted by it ſeem horrible to the eye. A mixture of hypocriſy, malice, and cruel joy, thus diſplayed on the countenance, is one of the moſt hateful ſights in nature, and transforms the "human face divine" into the viſage of a fiend. Similar to this is the ſmile of a wicked perſon pleaſing himſelf with the hope of accompliſhing his evil purpoſes. Milton gives a ſtriking picture of it in that well-known paſſage:

> He ceas'd; for both ſeem'd highly pleas'd; and Death
> Grinn'd horrible a ghaſtly ſmile, to hear
> His famine ſhould be fill'd, and bleſt his maw
> Deſtin'd to that good hour.——

But enough of this. Laughter that makes man a fiend or a monſter, I have no inclination to analyſe. My inquiries are confined to that ſpecies of laughter which is at once natural and innocent.

"Of this there are two ſorts. The laughter occaſioned by tickling or gladneſs is different from that which ariſes on reading the Tale of a Tub. The former may be called *animal-laughter:* the latter (if it were lawful to adopt a new word which has become very common of late) I ſhould term *ſentimental.* Smiles admit of ſimilar diviſions Not to mention the ſcornful, the envious, the malevolent ſmile, I would only remark, that of the innocent and agreeable ſmile there are two ſorts. The one proceeds from the riſible emotion, and has a tendency to break out into laughter. The other is the effect of good-humour, complacency, and tender affection. This laſt ſort of ſmile renders a countenance amiable in the higheſt degree. Homer aſcribes it to Venus in an epithet (φιλομμειδης), which Dryden and Pope, after Waller, improperly tranſlate *laughter-loving*; an idea that accords better with the character of a romp or hoyden, than with the goddeſs of love and beauty.

"Animal-laughter admits of various degrees; from the gentle impulſe excited in a child by moderate joy, to that terrifying and even mortal convulſion which has been known to accompany a change of fortune. This paſſion may, as well as joy and ſorrow, be communicated by ſympathy; and I know not whether the entertainment we receive from the playful tricks of kittens and other young animals may not in part be reſolved into ſomething like a fellow feeling of their vivacity.—Animal and ſentimental laughter are frequently blended; but it is eaſy to diſtinguiſh them. The former is often exceſſive; the latter never, unleſs heightened by the other. The latter is always pleaſing, both in itſelf and in its cauſe; the former may be painful in both. But their principal difference is this:—The one always proceeds from a ſentiment or emotion excited in the mind, in conſequence of certain ideas or objects being preſented to it, of which emotion we may be conſcious even when we ſuppreſs laughter;—the other ariſes not from any ſentiment or perception of ludicrous ideas, but from ſome bodily feeling, or ſudden impulſe on what is called the *animal ſpirits*, proceeding, or ſeeming to proceed, from the operation of cauſes purely material. The preſent inquiry regards that ſpecies that is here diſtinguiſhed by the name of *ſentimental laughter*.

"The pleaſing emotion, ariſing from the view of ludicrous ideas, is known to every one by experience; but, being a ſimple feeling, admits not of definition. It is to be diſtinguiſhed from the laughter that generally attends it, as ſorrow is to be diſtinguiſhed from tears; for it is often felt in a high degree by thoſe who are remarkable for gravity of countenance. Swift ſeldom laughed, notwithſtanding his uncommon talents in wit and humour, and the extraordinary delight he ſeems to have had in ſurveying the ridiculous ſide of things. Why this agreeable emotion ſhould be accompanied with laughter as its outward ſign, or ſorrow expreſs itſelf by tears, or fear by trembling or paleneſs, I cannot ultimately explain, otherwiſe than by ſaying, that ſuch is the appointment of the Author of nature.—All I mean by this inquiry is, to determine, "What is peculiar to thoſe things which produce laughter;—or rather, which raiſe in the mind that pleaſing ſentiment or emotion whereof laughter is the external ſign."

"Philoſophers have differed in their opinions concerning this matter. In Ariſtotle's definition quoted above, it is clear that he means to characteriſe, not laughable qualities in general (as ſome have thought), but the objects of comic ridicule only; and in this view the definition is juſt, however it may have been overlooked or deſpiſed by comic writers. Crimes and miſfortunes are often in modern plays, and were ſometimes in the ancient, held up as objects of public merriment; but if poets had that reverence for nature which they ought to have, they would not ſhock the common ſenſe of mankind by ſo abſurd a repreſentation.—The definition from Ariſtotle does not, however, ſuit the general nature of ludicrous ideas; for it will appear by and by, that men laugh at that in which there is neither fault or turpitude of any kind.

"The theory of Mr Hobbes would hardly have deſerved notice, if Addiſon had not ſpoken of it with approbation in the 47th paper of the Spectator. He juſtly obſerves, after quoting the words of Mr Hobbes formerly mentioned, that, "according to this account, when we hear a man laugh exceſſively, inſtead of ſaying that he is very merry, we ought to tell him that he is very proud." It is ſtrange, that the elegant author ſhould be aware of this conſequence, and yet admit the theory: for ſo good a judge of human nature could not be ignorant, that laughter is not conſidered as a ſign of pride; perſons of ſingular gravity being often ſuſpected of that vice, but great laughers ſeldom or never. When we ſee a man attentive to the innocent humours of a merry company, and yet maintain a fixed ſolemnity of countenance, is it natural for us to think that he is the humbleſt, and the only humble perſon in the circle?

"Another writer in the Spectator, n° 249, remarks, in confirmation of this theory, that the *vaineſt* part of mankind are moſt addicted to the paſſion of laughter. Now, how can this be, if the *proudeſt* part of mankind are alſo moſt addicted to it, unleſs we ſuppoſe vanity and pride to be the ſame thing? But they certainly are different paſſions. The proud man deſpiſes other men, and derives his chief pleaſure from the contemplation of his own importance: the vain man ſtands in need of the applauſe of others, and cannot be happy without it. Pride is apt to be reſerved and ſullen; vanity is often affable, and officiouſly obliging. The proud man is ſo confident of his merit, and thinks it ſo obvious to all the world, that he will ſcarce give himſelf the trouble to inform you of it: the vain man, to raiſe your admiration, ſcruples not to tell you, not only the whole truth, but even a great deal more. In the ſame perſon theſe two paſſions may, no doubt, be united; but ſome men are too proud to be vain, and ſome vain men are too conſcious of their own weakneſs to be proud. Be all this, however, as it will, we have not as yet made any diſcovery of the cauſe of laughter: in regard to which, I apprehend, that the vain are not more intemperate than other people; and I am ſure that the proud are much leſs ſo.

"Hutchinſon's account of the origin of laughter is equally unſatisfactory. Granting what he ſays to be true, I would obſerve, in the firſt place, what the ingenious author ſeems to have been aware of, that there may be a mixture of meanneſs and dignity where there is nothing ludicrous. A city, conſidered as a collection of low and lofty houſes, is no laughable object. Nor was that perſon either ludicrous or ridiculous, whom Pope ſo juſtly characteriſes,

"The greateſt, wiſeſt, meaneſt, of mankind."

—But, ſecondly, caſes might be mentioned, of laughter ariſing from a group of ideas or objects, wherein there is no diſcernible oppoſition of meanneſs or dignity. We are told of the dagger of Hudibras, that

" It could ſcrape trenches, or chip bread,
" Toaſt cheeſe or bacon, though it were
" To bait a mouſe-trap, 'twou'd not care;
" 'Twou'd make clean ſhoes, or in the earth
" Set leeks and onions, and ſo forth."

The humour of the paſſage cannot ariſe from the meanneſs of theſe offices compared with the dignity of the dagger, nor from any oppoſition of meanneſs and dignity in the offices themſelves, they being all equally mean; and muſt therefore be owing to ſome peculiarity in the deſcription. We laugh, when a droll mimics the ſolemnity of a grave perſon; here dignity and meanneſs are indeed united: but we laugh alſo (though not ſo heartily perhaps) when he mimics the peculiarities of a fellow as inſignificant as himſelf, and diſplays no oppoſition of dignity and meanneſs. The levities of Sancho Panca oppoſed to the ſolemnity of his maſter, and compared with his own ſchemes of preferment, form an entertaining contraſt: but ſome of the vagaries of that renowned ſquire are truly laughable even when his preferment and his maſter are out of the queſtion. Men laugh at puns; the wiſeſt and wittieſt of our ſpecies have laughed at them; Queen Elizabeth, Cicero, and Shakeſpeare, laughed at them; clowns and children laugh at them; and moſt men, at one time or other, are inclined to do the ſame: but in this ſort of low wit, is it an oppoſition of meanneſs and dignity that entertains us? Is it not rather a mixture of ſameneſs and diverſity,—ſameneſs in the ſound, and diverſity in the ſignification?

" In the characters mentioned by Akenſide, the author does not diſtinguiſh between what is *laughable* and what is *contemptible*; ſo that we have no reaſon to think, that he meant to ſpecify the qualities peculiar to thoſe things which provoke *pure laughter*; and whatever account we may make of his definition, which to thoſe who acquieſce in the foregoing reaſonings may perhaps appear not quite ſatisfactory, there is in the poem a paſſage that deſerves particular notice, as it ſeems to contain a more exact account of the ludicrous quality than is to be found in any of the theories abovementioned. This paſſage we ſhall ſoon have occaſion to quote."

Our author now goes on to lay down his own theory concerning the origin of laughter, which he ſuppoſes to ariſe from the view of things incongruous united in the ſame aſſemblage. " However imperfect (ſays he) the abovementioned theories may appear, there is none of them deſtitute of merit; and indeed the moſt fanciful philoſopher ſeldom frames a theory without conſulting nature in ſome of her more obvious appearances. Laughter very frequently ariſes from the view of dignity and meanneſs united in the ſame object; ſometimes, no doubt, from the appearance of aſſumed inferiority, as well as of ſmall faults and unimportant turpitudes; and ſometimes, perhaps, though rarely, from that ſort of pride which is deſcribed in the paſſage already quoted from Hobbes.

" All theſe accounts agree in this, that the cauſe of laughter is ſomething compounded; or ſomething that diſpoſes the mind to form a compariſon, by paſſing from one object or idea to another. That this is in fact the caſe, cannot be proved *a priori*; but this holds in all the examples hitherto given, and will be found to hold in all that are given hereafter. May it not then be laid down as a principle, That laughter ariſes from the view of two or more objects or ideas diſpoſing the mind to form a compariſon? According to the theory of Hobbes, this compariſon would be between the ludicrous object and ourſelves; according to thoſe writers who miſapply Ariſtotle's definition, it would ſeem to be formed between the ludicrous object and things or perſons in general; and if we incline to Hutcheſon's theory, which is the beſt of the three, we ſhall think that there is a compariſon of the parts of the ludicrous object, firſt with one another, and ſecondly with ideas or things extraneous.

" Further: every appearance that is made up of parts, or that leads the mind of the beholder to form a compariſon, is not ludicrous. The body of a man or woman, of a horſe, a fiſh, or a bird, is not ludicrous, though it conſiſts of many parts; and it may be compared to many other things without raiſing laughter; but the picture deſcribed in the beginning of the epiſtle to the Piſoes, with a man's head, a horſe's neck, feathers of different birds, limbs of different beaſts, and the tail of a fiſh, would have been thought ludicrous 1800 years ago if we believe Horace, and in certain circumſtances would no doubt be ſo at this day. It would ſeem then, that 'the parts of a laughable aſſemblage muſt be in ſome degree unſuitable and heterogeneous."

" Moreover: any one of the parts of the Horatian monſter, a human head, a horſe's neck, the tail of a fiſh, or the plumage of a fowl, is not ludicrous in itſelf; nor would thoſe ſeveral pieces be ludicrous, if attended to in ſucceſſion, without any view to their union. For to ſee them diſpoſed on the different ſhelves of a muſeum, or even on the ſame ſhelf, nobody would laugh, except, perhaps, the thought of uniting them were to occur to his fancy, or the paſſage of Horace to his memory. It ſeems to follow, that " the incongruous parts of a laughable idea or object muſt either be combined ſo as to form an aſſemblage, or muſt be ſuppoſed to be ſo combined."

" May we not then conclude, 'that laughter ariſes from the view of two or more inconſiſtent, unſuitable, or incongruous parts or circumſtances, conſidered as united in one complex object or aſſemblage, or as acquiring a ſort of mutual relation from the peculiar manner in which the mind takes notice of them?" The lines from Akenſide formerly referred to, ſeem to point at the ſame doctrine:

Where-e'er the pow'r of ridicule diſplays
Her quaint-eye'd viſage, *ſome incongruous form,*
Some ſtubborn diſſonance of things combin'd,
Strikes on the quick obſerver.

And to the ſame purpoſe, the learned and ingenious Dr Gerard, in his *Eſſay on Taſte*: 'The ſenſe of ridicule is gratified by an inconſiſtence and diſſonance of circumſtances in the ſame object, or in objects nearly related in the main; or by a ſimilitude or a relation unexpected between things on the whole oppoſite and unlike."

"And therefore, inſtead of ſaying, with Hutcheſon, that the cauſe or object of laughter is an 'oppoſition of dignity and meanneſs;' I would ſay, in more general terms, that it is 'an oppoſition of ſuitableneſs or unſuitableneſs, or of relation and the want of relation, united, or ſuppoſed to be united, in the ſame aſſemblage.' Thus the offices aſcribed to the dagger of Hudibras ſeem quite heterogeneous; but we diſcover a bond of connection among them, when we are told that the ſame weapon could occaſionally perform them all. Thus, even in that mimicry which diſplays no oppoſition of dignity and meanneſs, we perceive the actions of one man joined to the features and body of another; that is, a mixture of unſuitableneſs, or want of relation, ariſing from the difference of perſons with congruity and ſimilitude, ariſing from the ſameneſs of the actions. And here let it be obſerved in general, that the greater number of incongruities that are blended in the ſame aſſemblage, the more ludicrous it will probably be. If, as in Butler's reſemblance of the morning to a boiled lobſter, there is a mixture of dignity and meanneſs, as well as of likeneſs and diſſimilitude, the effect of the contraſt will be more powerful, than if only one of theſe oppoſitions had occurred in the ludicrous idea. The ſublimity of Don Quixote's mind, contraſted and connected with his miſerable equipage, forms a very comical exhibition; but when all this is ſtill further connected and contraſted with Sancho Panca, the ridicule is heightened exceedingly. Had the knight of the lions been better mounted and accoutred, he would not have made us ſmile ſo often; becauſe, the hero's mind and circumſtances being more adequately matched, the whole group would have united fewer inconſiſtencies, and reconciled fewer incongruities. Butler has combined a ſtill greater variety of uncouth and jarring circumſtances in Ralpho and Hudibras: but the picture, though more elaborate, is leſs natural. Yet this argues no defect of judgment. His deſign was, to make his hero not only ludicrous, but contemptible; and therefore he jumbles together, in his equipage and perſon, a number of mean and diſguſting qualities, pedantry, ignorance, naſtineſs, and extreme deformity. But the knight of La Mancha, though a ludicrous, was never intended for a contemptible, perſonage. He often moves our pity, he never forfeits our eſteem; and his adventures and ſentiments are generally intereſting; which could not have been the caſe if his ſtory had not been natural, and himſelf been endowed with great as well as good qualities. To have given him ſuch a ſhape, and ſuch weapons, arguments, boots, and breeches, as Butler has beſtowed on his champion, would have deſtroyed that ſolemnity which is ſo ſtriking a feature in Don Quixote; and Hudibras, with the manners and perſon of the Spaniſh hero, would not have been that paltry figure which the Engliſh poet meant to hold up to the laughter and contempt of his countrymen. Sir Launcelot Greaves is of Don Quixote's kindred, but a different character. Smollet's deſign was not to expoſe him to ridicule, but rather to recommend him to our pity and admiration. He has therefore given him youth, ſtrength, and beauty, as well as courage and dignity of mind; has mounted him on a generous ſteed, and arrayed him in an elegant ſuit of armour. Yet, that the hiſtory might have a comic air, he has been careful to contraſt and connect Sir Launcelot with a ſquire and other aſſociates of very diſſimilar temper and circumſtances.

"What has been ſaid of the cauſe of laughter does not amount to an exact deſcription, far leſs to a logical definition: there being innumerable combinations of congruity and inconſiſtency, of relation and contrariety, of likeneſs and diſſimilitude, which are not ludicrous at all. If we could aſcertain the peculiarities of theſe, we ſhould be able to characteriſe with more accuracy the general nature of ludicrous combination. But before we proceed to this, it would be proper to evince, that of the preſent theory thus much at leaſt is true, that though every incongruous combination is not ludicrous, every ludicrous combination is incongruous.

"It is only by a detail of facts or examples that any theory of this ſort can be either eſtabliſhed or overthrown. By ſuch a detail the foregoing theories have been, or may be, ſhown to be ill-founded, or not ſufficiently comprehenſive. A ſingle inſtance of a laughable object, which neither unites, nor is ſuppoſed to unite, incongruous ideas, would likewiſe ſhow the inſufficiency of the preſent; nor will I undertake to prove (for indeed I cannot), that no ſuch inſtance can be given. A complete enumeration of ludicrous objects it would be in vain to attempt: and therefore we can never hope to aſcertain, beyond the poſſibility of doubt, that common quality which belongs to all ludicrous ideas that are, or have been, or may be, imagined. All that can be done in a caſe of this kind is to prove by a variety of examples, that the theory now propoſed is more comprehenſive, and better founded, than any of the foregoing." This our author afterwards ſhows at full length; but as the variety of examples adduced by him would take up too much room to be inſerted here, and as every reader muſt be capable of adducing numberleſs inſtances of ludicrous caſes to himſelf, we ſhall content ourſelves with the above explanation of the different theories of laughter, referring thoſe who deſire further ſatisfaction to the treatiſe already quoted.

LAVINGTON-EAST, a town of Wilts, 4 miles ſouth of the Devizes, and 89 miles from London. It is called in hiſtories Stepult-Lavington; but now Cheaping or Market-Lavington on account of its markets, which are on Monday and Wedneſday, the laſt a great corn-market. It is ſuppoſed to have been a market-town above 200 years. Here is a charity-ſchool for 36 children, who have books given them, and the girls are taught to knit and ſew.

LAVINIUM (anc. geog.), a town of Latium, ſix miles to the eaſt of Laurentum, according to an ancient map; ſo named from *Lavinia*, conſort of Æneas, and daughter of king Latinus, and built by the Trojans. The firſt town of Roman original in

Latium, and the ſeat of the Dii Penates, (Livy): ſituated near the river Numicus, or Numicius; between which and the Tiber Æneas landed, according to Virgil. Holſtenius ſuppoſes the town to have ſtood on an eminence, now called *il Monte di Levano*.

LAUNCE. See LANCE.

LAUNCESTON, a town of Cornwall in England, ſeated on the river Tamar, 214 miles from London. It is alſo called *Dunhivid*, from its ſituation on a down. King Henry III. made it a free borough. It was compoſed before of two other boroughs, *viz.* Dunhivid and Newport. It has been the place for chooſing knights of the ſhire ever ſince the reign of King Edward I. and the aſſizes-town ever ſince Richard II. till by a late act of parliament the lord chancellor or lord keeper was empowered to name any other place in the county for it; ſince which the ſummer aſſizes have been held at Bodmin. It was incorporated by Queen Mary in 1555. It is governed by a mayor, recorder, and eight aldermen, has a free ſchool which was founded by Queen Elizabeth, and is a populous trading town. Its markets are on Thurſday and Saturday, and it has four fairs. In the 32d of Henry VIII. an act was made for the repair of this and other decayed Corniſh boroughs; and it endowed this town with the privileges of a ſanctuary, though it does not appear to have uſed them. It had a monaſtery and a noble caſtle, which, becauſe of its ſtrength, was called *caſtle-terrible*, and was given by King Richard I. to his brother, afterwards King John. Here are two charity-ſchools for 48 children of both ſexes, where the girls are taught to knit, ſew, and make bonelace, and are allowed what they can earn. Leland ſays it was walled in his time, and one mile in compaſs. Its liſt of burgeſſes commences in the 23d of Edward I. The lower part of its ancient caſtle is made uſe of for the gaol.

LAUNCH, in the ſea-language, ſignifies to put out: as, *Launch the ſhip*, that is, Put her out of dock; *launch aft*, or *forward*, ſpeaking of things that are ſtowed in the hold, is, put them more forward; *launch ho!* is a term uſed when a yard is hoiſted high enough, and ſignifies *hoiſt no more*. See alſo LANCH.

LAUNDER, in mineralogy, a name given in Devonſhire, and other places, to a long and ſhallow trough, which receives the powdered ore after it comes out of the box or coffer, which is a ſort of mortar, in which it is powered with iron peſtles. The powdered ore, which is waſhed into the launder by the water from the coffer, is always fineſt neareſt the grate, and coarſer all the way down.

LAURA, in church hiſtory, a name given to a collection of little cells at ſome diſtance from each other, in which the hermits in ancient times lived together in a wilderneſs.

Theſe hermits did not live in community, but each monk provided for himſelf in his diſtinct cell. The moſt celebrated lauras mentioned in eccleſiaſtical hiſtory were in Paleſtine: as the laura of St Euthymus, at four or five leagues diſtance from Jeruſalem; the laura of St Saba, near the brook Cedron; the laura of the Towers, near the river Jordan, &c.

POET-LAUREATE, an officer of the houſehold of the kings of Britain, whoſe buſineſs conſiſts only in compoſing an ode annually on his majeſty's birth-day, and on the new year; ſometimes alſo, though rarely, on occaſion of any remarkable victory.—Of the firſt inſtitution of poets laureate, Mr Wharton has given the following account in his hiſtory of Engliſh poetry. "Great confuſion has entered into this ſubject, on account of the degrees in grammar, which included rhetoric and verſification, anciently taken in our univerſities, particularly at Oxford: on which occaſion, a wreath of laurel was preſented to the new graduate, who was afterwards uſually ſtyled *Poeta Laureatus*. Theſe ſcholaſtic laureations, however, ſeem to have given riſe to the appellation in queſtion. I will give ſome inſtances at Oxford, which at the ſame time will explain the nature of the ſtudies for which our academical philologiſts received their rewards. About the year 1470, one John Watſon, a ſtudent in grammar, obtained a conceſſion to be graduated and laureated in that ſcience; on condition that he compoſed one hundred Latin verſes in praiſe of the univerſity, and a Latin comedy. Another grammarian was diſtinguiſhed with the ſame badge, after having ſtipulated, that, at the next public act, he would affix the ſame number of hexameters on the great gates of St Mary's church, that they might be ſeen by the whole univerſity. This was at that period the moſt convenient mode of publication. About the ſame time, our Maurice Byrchenſaw, a ſcholar in rhetoric, ſupplicated to be admitted to read lectures, that is, to take a degree in that faculty; and his petition was granted, with a proviſion, that he ſhould write one hundred verſes on the glory of the univerſity, and not ſuffer Ovid's Art of Love, and the Elegies of Pamphilus, to be ſtudied in auditory. Not long afterwards, one John Bulman, another rhetorician, having complied with the terms impoſed, of explaining the firſt book of Tully's Offices, and likewiſe the firſt of his Epiſtles, without any pecuniary emolument, was graduated in rhetoric; and a crown of laurel was publicly placed on his head by the hands of the chancellor of the univerſity. About the year 1489, Skelton was laureated at Oxford, and in the year 1493 was permitted to wear his laurel at Cambridge. Robert Whittington affords the laſt inſtance of a rhetorical degree at Oxford. He was a ſecular prieſt, and eminent for his various treatiſes in grammar, and for his facility in Latin poetry: having exerciſed his art many years, and ſubmitting to the cuſtomary demand of an hundred verſes, he was honoured with the laurel in the year 1512.

"With regard to the poet-laureate of the kings of England, he is undoubtedly the ſame that is ſtyled the *king's verſifier*, and to whom 100 ſhillings were paid as his annual ſtipend in the year 1251. But when or how that title commenced, and whether this officer was ever ſolemnly crowned with laurel at his firſt inveſtiture, I will not pretend to determine, after the ſearches of the learned Selden on this queſtion have proved unſucceſsful. It ſeems moſt probable, that the barbarous and inglorious name of *verſifier* gradually gave way to an appellation of more elegance and dignity: or rather, that at length thoſe only were in general invited to this appointment, who had received academical ſanction, and had merited a crown of laurel in the univerſities for their abilities in Latin compoſition, particularly Latin verſification. Thus the *king's laureate* was nothing more than 'a *graduated* rhetorician employed in the ſervice of the king.' That he originally wrote in Latin, appears from the ancient title *verſificator:* and may be moreover collected from the two Latin poems, which Baſton and Gulielmus, who appear to have reſpectively acted in the capacity of royal poets to Richard I. and Edward II. officially compoſed on Richard's cruſade, and Edward's ſiege of Striveling caſtle.

"Andrew Bernard, ſucceſſively poet-laureate of Henry VII. and VIII. affords a ſtill ſtronger proof that this officer was a Latin ſcholar. He was a native of Tholouſe, and an Aguſtine monk. He was not only the king's poet-laureate, as it is ſuppoſed, but his hiſtoriographer, and preceptor in grammar to Prince Arthur. He obtained many eccleſiaſtical preferments in England. All the pieces now to be found, which he wrote in the character of poet-laureate, are in Latin. Theſe are, "An *Addreſs* to Henry VIII. for the moſt auſpicious beginning of the 10th year of his reign, with an *Epithalamium* on the marriage of Francis the dauphin of France with the king's daughter;" *A New Year's Gift* for the 1515; and, Verſes wiſhing proſperity to his majeſty's 13th year. He has left ſome Latin hymns; and many of his Latin proſe pieces, which he wrote in the quality of hiſtoriographer to both monarchs, are remaining.

"I am of opinion, that it was not cuſtomary for the royal laureate to write in Engliſh, till the reformation of religion had begun to diminiſh the veneration for the Latin language; or, rather, till the love of novelty, and a better ſenſe of things, had baniſhed the narrow pedantries of monaſtic erudition, and taught us to cultivate our native tongue."

LAUREL. See PRUNUS and LAURUS.

LAURELS, pieces of gold coined in the year 1619, with the king's head laureated, which gave them the name of *laurels;* the 20 s. pieces whereof were markked with XX. the 10 s. X. and the 5 s. pieces with V.

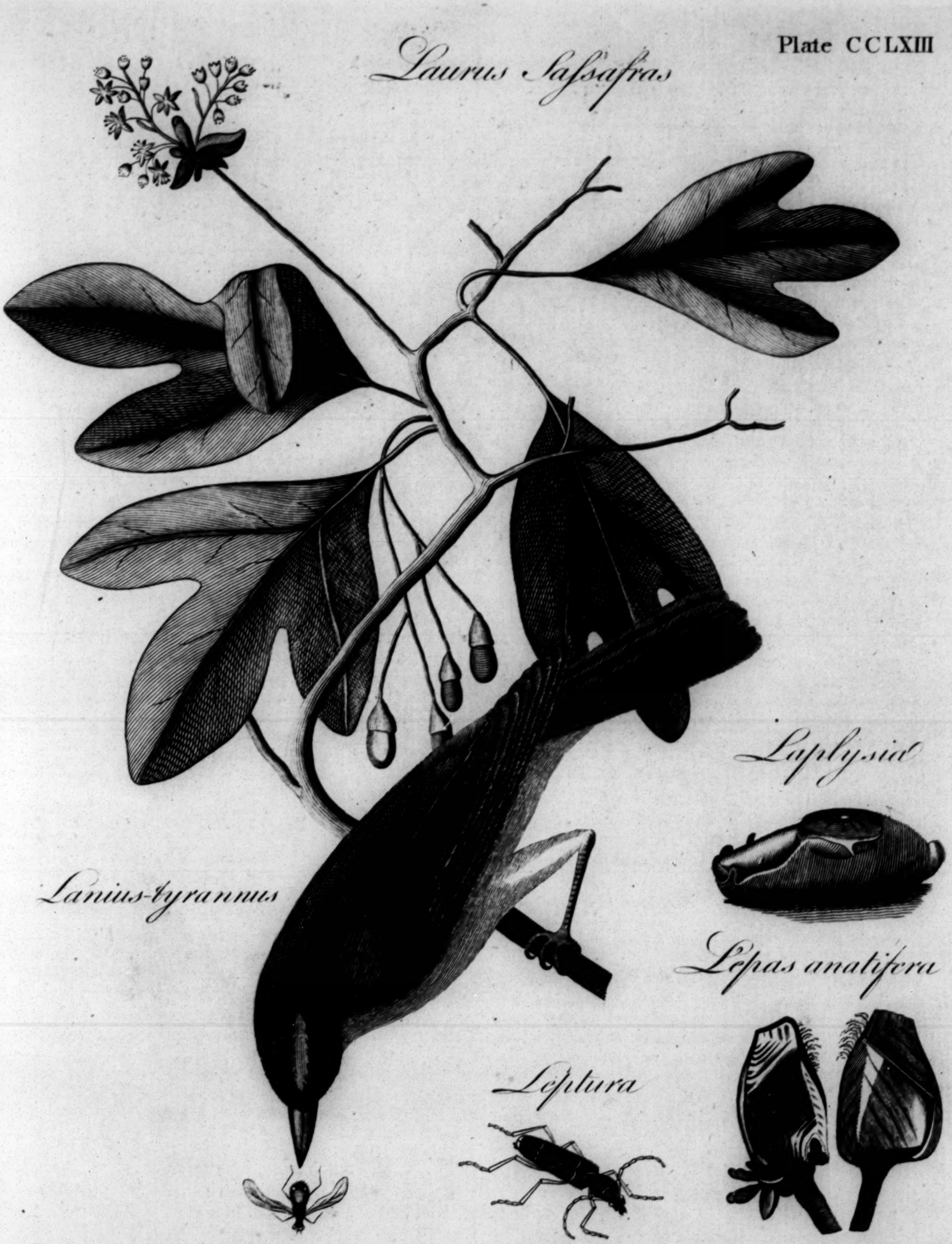
LAURENS CASTRA. See LAURENTUM.

LAURENTALIA, or LARENTALIA, called alſo *Larentinalia, Laurentales,* and *Larentales,* feaſts celebrated among the Romans on the 10th of the kalends of January, or 23d of December, in memory of Acca Laurentia, wife of the ſhepherd Fauſtulus, and nurſe of Romulus and Remus.

Acca Laurentia, from whom the ſolemnity took its name, is repreſented as no leſs remarkable for the beauty of her perſon, than her laſciviouſneſs; on account of which, ſhe was nick-named by her neighbours *lupa,* "ſhe-wolf;" which is ſaid to have given riſe to the tradition of Romulus and Remus being ſuckled by a wolf. She afterwards married a very rich man, who brought her great wealth, which, at her death, ſhe left to the Roman people; in conſideration whereof they performed to her theſe honours; though others repreſent the feaſt as held in honour of Jupiter Latiaris. See LARENTINALIA and LARES.

LAURENTIUS, one of the firſt printers, and, according to ſome, the inventor of the art, was born at Haerlem about the year 1370, and executed ſeveral departments of magiſtracy of that city. Thoſe writers are miſtaken who aſſign to him the ſurname of *Coſter,* or aſſert that the office of ædituus was hereditary in his family. In a diploma of Albert of Bavaria in 1380, in which, among other citizens of Haerlem, our Laurentius's *father* is mentioned by the name of *Joannes Laurentii filius,*" Beroldus is called *ædituus,* who was ſurely of another family; and in 1396 and 1398, Henricus à Lunen enjoyed that office; after whoſe reſignation, Count Albert conferring on the citizens the privilege of electing their ædituus, they, probably ſoon after, fixed on Laurentius; who was afterwards called *Coſter* from his office, and not from his family-name, as he was deſcended from an illegitimate branch of the Gens Brederodia. His office was very lucrative; and that he was a man of great property, the elegance of his houſe may teſtify. That he was the *inventor* of printing, is aſſerted in the narrative of Junius. His firſt work was an *Horarium,* containing the letters of the alphabet, the Lord's prayer, the apoſtle's creed, and two or three ſhort prayers; the next was the *Speculum ſalutis,* in which he introduced *pictures* on *wooden blocks;* then *Donatus,* the larger ſize; and afterwards the ſame work in a leſs ſize. All theſe were printed on *ſeparate moveable wooden types* faſtened together by threads. If it be thought improbable, that ſo ingenious a man ſhould have proceeded no farther than the invention of *wooden types;* it may be anſwered, that he printed for profit, not for fame; and *wooden* types were not only *at that time* made ſooner and cheaper than *metal* could be, but were ſufficiently durable for the ſmall impreſſions of each book he muſt neceſſarily have printed.—His preſs was nearly ſhaped like the common wine-preſſes.—He printed ſome copies of *all* his books both on paper and vellum.—It has been very erroneouſly ſuppoſed, that he quitted the profeſſion, and died broken-hearted; but it is certain, that he did not live to ſee the art brought to perfection.—He died in 1440, aged 70; and was ſucceeded either by his ſon-in-law Thomas Peter, who married his only daughter Lucia; or by their immediate deſcendants, Peter, Andrew, and Thomas; who were old enough (even if their father was dead, as it is likely he was) to conduct the buſineſs, the eldeſt being at leaſt 22 or 23. What books they printed it is not eaſy to determine; they having, after the example of Laurentius (more anxious for profit than for fame), neither added to their books their names, the place where they were printed, or the date of the year. Their firſt eſſays were new editions of *Donatus* and the *Speculum.* They afterwards reprinted the latter, with a Latin tranſlation, in which they uſed their grandfather's wooden pictures; and printed the book partly on *wooden blocks,* partly on *wooden ſeparate types,* according to Mr Meerman, who has given an exact engraving of *each ſort,* taken from different parts of the ſame book, which was publiſhed between the years 1442 and 1450. Nor did they ſtop here: they continued to print ſeveral editions of the *Speculum,* both in Latin and in Dutch; and many other works, particularly "Hiſtoria Alexandri Magni;" "Flavii *Vedatii* [for *Vegetii*] Renati Epitome de Re Militari;" and "Opera varia à Thomas Kempis." Of each of theſe Mr Meerman has given an engraved ſpecimen. They were

Plate CCLXIII


Laurus Saſsafras
Laplysia
Lanius-tyrannus
Lepas anatifera
Leptura

Scot Philad.a

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were all printed with *ſeparate wooden types*; and, by their great neatneſs, are a proof that the deſcendants of Laurentius were induſtrious in improving his invention. Kempis was printed at Haerlem in 1472, and was the laſt known work of Laurentius's deſcendants, who ſoon after diſpoſed of all their materials, and probably quitted the employment; as the uſe of *fuſile types* was about that time univerſally diffuſed through Holland by the ſettling of Martens at Aloſt, where he purſued the art with reputation for upwards of 60 years. See (*Hiſtory of*) PRINTING.

LAURENTIUM, or LAURENS CASTRA, (anc. geog.), a town of Latium, ſuppoſed to be the royal reſidence of thoſe moſt ancient kings Latinus, Picus, and Faunus, (Virgil). Hither the emperor Commodus retired during a peſtilence. Its name was from an adjoining grove of bay-trees, midway between Oſtia and Antium. Sppoſed to have ſtood in the place now called *San Lorenzo*; which ſeems to be confirmed from the Via Laurentina leading to Rome.

LAURO (Philippo), a celebrated painter, born at Rome in 1623. He learned the firſt rudiments of the art from his father Balthaſar, who was himſelf a good painter. He afterward ſtudied under Angelo Caroſello, his brother-in-law; and proved ſo great a proficient, that in a ſhort time he far ſurpaſſed his tutor in deſign, colouring, and elegance of taſte. He applied himſelf to painting hiſtorical ſubjects in a ſmall ſize, enriching the back-grounds with lively landſcapes, that afforded the eye and the judgment equal entertainment; but though his ſmall paintings are beſt approved, he finiſhed ſeveral grand compoſitions for altar-pieces that were highly eſteemed. He died in 1694; and his works are eagerly bought up at high prices all over Europe.

LAURO, or *Lauron* (anc. geog.) a town of the Hither Spain, where Cn. Pompeius, ſon of Pompey the Great, was defeated and ſlain. Now Lorigne, five leagues to the north Lliria in Valencia.

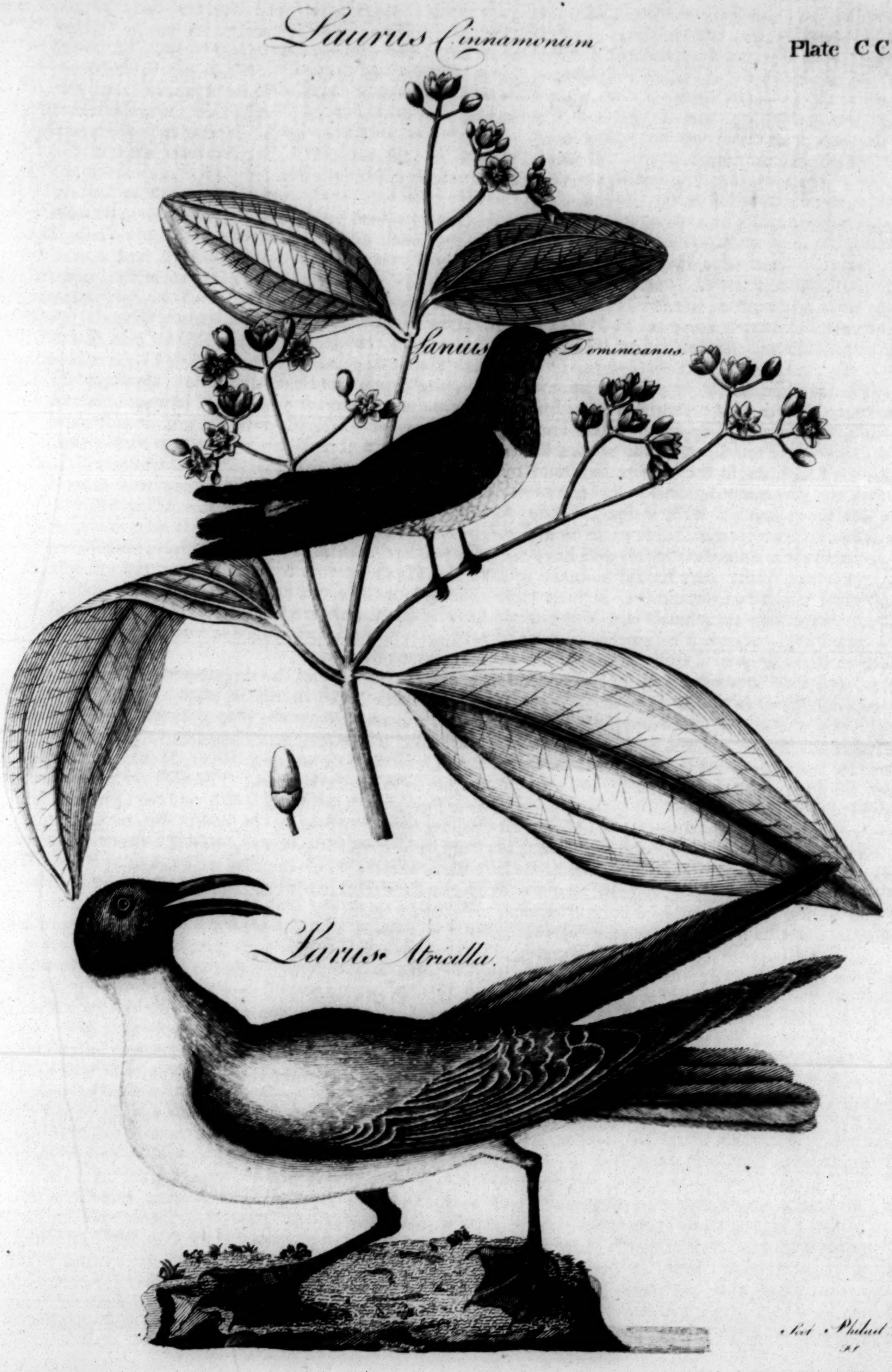
LAURUS, the BAY-TEEE: A genus of the monogynia order, belonging to the enneandria claſs of plants; and in the natural method ranking under the 12th order, *Holoraceæ*. There is no calyx; the corolla is calycine, or ſerving in place of the calyx, and ſexpartite; the nectarium with three glandules, each terminated by two briſtles ſurrounding the germen. The interior filaments furniſhed with glandules at the baſe; the fruit a monoſpermous plum.

Species. 1. The nobilis, or evergreen bay-tree, is a native of Italy, and hath an upright trunk branching on every ſide from the bottom upward; with ſpear-ſhaped, nervous, ſtiff, evergreen leaves, three inches long and two broad; and ſmall, yellowiſh, quadrifid, diœcious flowers, ſucceeded by red berries in autumn and winter. Of this ſpecies there are varieties, with broad, narrow, ſtriped, or waved leaves. 2. The æſtivalis, or deciduous bay, grows naturally in North America. It riſes with an upright ſtem, covered with a purpliſh bark; having oblong, oval, acuminated, veined, deciduous leaves, two or three inches long, and half as broad, growing oppoſite; with ſmall white flowers ſucceeded by red berries. 3. The benzoin, or benjamin tree, is alſo a native of North America; grows 15 or 20 feet high, divided into a very branchy head; with oval, acute, deciduous leaves, three or four inches long, and half as broad; and ſmall yellowiſh flowers, not ſucceeded by berries in Britain. 4. The ſaſſafras is a native of the ſame country. It hath a ſhrub-like ſtraight ſtem, garniſhed with both oval and three-lobed, ſhining, deciduous leaves, of different ſizes, from three to ſix inches long, and near as broad, with ſmall yellowiſh flowers ſucceeded by blackiſh berries, but not in Britain. 5. The indica, or Indian bay-tree, riſes with an upright ſtraight trunk, branching regularly 20 or 30 feet high; adorned with very large, ſpear-ſhaped, plane, nervous, evergreen leaves on reddiſh footſtalks; and bunches of ſmall whitiſh-green flowers, ſucceeded by large oval black berries which do not ripen in Britain. 6. The borbonia, or Carolina red bay-tree, riſes with an upright ſtraight ſtem, branching 15 or 20 feet high; with large, ſpear-ſhaped, evergreen leaves, tranſverſely veined; and long bunches of flowers on red footſtalks, ſucceeded by large blue berries ſitting in red cups. 7. The camphora, or camphor-tree, grows naturally in the woods of the weſtern parts of Japan, and in the adjacent iſlands. The root ſmells ſtronger of camphor than any of the other parts, and yields it in greater plenty. The bark of the ſtalk is outwardly ſomewhat rough; but in the inner ſurface ſmooth and mucous, and therefore eaſily ſeparated from the wood, which is dry and of a white colour. The leaves ſtand upon ſlender footſtalks, have an entire undulated margin, running out into a point; have the upper ſurface of a lively and ſhining green, the lower herbaceous and ſilky; and are furniſhed with a few lateral nerves, which ſtretch arch-wiſe to the circumference, and frequently terminate in ſmall warts; a circumſtance peculiar to this ſpecies of laurus. The flowers are produced on the tops of footſtalks, which proceed from the arm-pits of the leaves; but not till the tree has attained conſiderable age and ſize. The flower-ſtalks are ſlender, branched at the top, and divided into very ſhort pedicles, each ſupporting a ſingle flower. Theſe flowers are white, and conſiſt of ſix petals, which are ſucceeded by a purple and ſhining berry of the ſize of a pea, and in figure ſomewhat top-ſhaped. It is compoſed of a ſoft pulpy ſubſtance that is purple, and has the taſte of cloves and camphor; and of a nucleus or kernel of the ſize of a pepper, that is covered with a black, ſhining, oily corticle, of an inſipid taſte. 8. The cinnamomum, or cinnamon-tree, is a native of Ceylon. It hath a large root, and divides into ſeveral branches, covered with a bark, which on the outer ſide is of a greyiſh brown, and on the inſide has a reddiſh caſt. The wood of the root is hard, white, and has no ſmell. The body of the tree, which grows to the height of 20 or 30 feet, is covered as well as its numerous branches, with a bark which at firſt is green and afterwards red. The leaf is longer and narrower than the common bay-tree; and it is three-nerved, the nerves vaniſhing towards the top. When firſt unfolded, it is of a flame colour: but after it has been for ſome time expoſed to the air, and grows dry, it changes to a deep green on the upper ſurface, and to a lighter on the lower. The flowers are ſmall and white, and grow in large bunches at the extremity of the branches: they have an agreeable ſmell, ſomething like that of the lily of the valley. The fruit is ſhaped like an acorn, but is not ſo large. 9. The caſſia, or baſe cinnamon, has lanceolated leaves triple-nerved. 10. The Perſea, avocado-pear tree, or alligator pear, riſes to a conſiderable height, with a ſtraight trunk, of which the bark and wood are of a greyiſh colour. The leaves are long, oval, pointed, of a ſubſtance like leather, and of a beautiful green colour. The flowers are produced in large knots or cluſters at the extremities of the branches, and conſiſt each of ſix petals diſpoſed in the form of a ſtar, and of a dirty white or yellow colour, with an agreeable odour, which diffuſes itſelf to a conſiderable diſtance. It is a native of the Weſt Indies. The Perſea begins to bear two years and a half, or at moſt three years after being planted; and, like moſt of the trees in warm climates, bears twice a year. There are two other ſpecies of this genus, but poſſeſſed of no remarkable properties.

Culture. The firſt ſpecies is propagated by layers, or by the berries. In order to raiſe a quantity of theſe trees by layers, ſome ſtools ſhould be planted for the purpoſe; and after theſe are ſhot about a yard high, the branches muſt be brought down to the ground in the winter, all the preceding ſummer's ſhoots laid on it, and pegged down (being firſt ſlit in the joint), and the leaves taken off, which would otherwiſe be under ground. In one year's time theſe layers will have taken root; and in the ſpring they ſhould be taken up, and planted in the nurſery a foot aſunder, in rows two feet diſtance. After they are planted out, if the weather ſhould prove dry; they muſt be conſtantly watered; for without ſuch care, it is difficult to make this tree grow. After they have taken well to the ground, they will require no farther trouble than keeping them clean from weeds, and digging between the rows each winter, till they are finally planted out. 2. In order to raiſe this tree from the berries, they ought to hang on the trees till about January before they are gathered. A well-ſheltered ſpot of ground for the ſeminary muſt be made choice of; and having the mould ſmooth and fine, they ſhould be ſown ſoon after they are gathered, in beds or drills, rather more than half an inch deep. Towards the cloſe of the ſpring the plants will come up, and during ſummer muſt be duly atttended, by watering and weeding. In the winter following, their ſheltered ſituation muſt not be truſted to, to defend them from the froſt: Furze-buſhes, or ſome ſuch things, ought to be ſtuck in rows between the beds or drills, to guard them from the black froſts. Indeed, without this precaution, if the winter ſhould prove very froſty, few of the young ſeedlings will be alive in ſpring. During the following ſummer, weeding and watering muſt be obſerved, and the winter after that they ſhould be defended with covering as before; for they will be ſtill in danger of being deſtroyed by ſevere froſts. In the enſuing ſpring, the ſtrongeſt may be taken out of the ſeed-beds, and planted in the nurſery way; though, if they have not by that time made good ſhoots, it will be adviſeable to let them remain in their beds till the third ſpring; for a ſmall plant of this kind is with more difficulty made to grow than one which is larger. When they are planted in the nurſery, the diſtance which ſhould be allowed them is the ſame as the layers, a foot aſunder and two feet diſtance in the rows; and this will not be found too cloſe; for notwithſtanding the greateſt care is exerted in planting them in the nurſery, even making choice of rainy and cloudy weather, which muſt always be obſerved in ſetting them out, many of them will be loſt by being tranſplanted. After they are thus planted out in the nurſery, whether layers or ſeedlings, they muſt be ſtill watered in dry weather, kept free from weeds, and the rows dug between every winter. You will even find, that thoſe plants which ſuffer leaſt by being tranſplanted will have met with a check, which they will not recover in two or three years; and till they have acquired new ſtrength they ſhould not be taken from the nurſery; but when they appear to be good ſtiff plants, having the year before made a vigorous ſhoot, they will be then proper plants for planting out where they are to remain. Holes ſhould be got ready for their reception; and as ſoon as the firſt autumnal rains fall, the work ſhould be ſet about, eſpecially if the land be gravelly or dry; but if it be moiſt, the ſpring will do as well. Being now planted at one yard diſtance, they will make a poor progreſs for two or three years more; but after this, when they have overcome all theſe difficulties, they will grow very faſt, and arrive to be good trees in a few years. Although this tree flouriſhes beſt in old gardens, where the ſoil has been made rich and deep, and loves the ſhade, Hanbury tells us, "it thrives nevertheleſs exceedingly well in our hotteſt gravels and ſands; and after it has ſurmounted the hardſhips of tranſplanting, will grow in ſuch ſituations extremely faſt, and arrive to a large bulk."

The propagation of the three next ſorts of trees may be performed two or three ways, 1. By the ſeeds. Theſe we receive from the places where the trees grow naturally, in the ſpring. They ſhould be preſerved in ſand; and as ſoon as they arrive, ſhould be ſown in largiſh pots an inch deep. The ſoil for their reception ſhould be taken from a rich paſture at leaſt a year before, with the ſward. It ſhould alſo be laid on an heap, and frequently turned, until the ſward is grown rotten, and the whole appears well mixed and fine. If the paſture from whence it was taken near the ſurface is a ſandy loam, this is the beſt compoſt for theſe ſeeds; if not, a ſmall addition of drift or ſea-ſand ſhould be added, and well mixed with the other mould. After filling the pots with this ſoil, the ſeeds ſhould be ſown an inch deep; and then they ſhould be plunged into common mould up to the rim. If the ſoil be naturally moiſt, it will keep them cooler, and be better; and if the place be well ſheltered and ſhaded, it will be better ſtill. Nothing more than weeding, which muſt be conſtantly obſerved during the ſummer, will be neceſſary; and in this ſtation they may remain, until the March following: about the middle of which month, having prepared a good hot-bed, the pots ſhould be taken up and plunged therein. Soon after the ſeeds will come up; and when the young plants have ſufficiently received the benefit of this bed, they ſhould be enured by degrees to the open air. Weeding and watering muſt be obſerved during the ſummer; and at the approach of the cold weather in the autumn, they ſhould be removed under a hot-bed frame, or ſome cover, to be protected from the froſts during the win-

Plate CCLXIV


Laurus Cinnamonum
Lanius Dominicanus
Larus Atricilla

Scot Philad.ª
Sc

BRITISH MUSEUM

ter. In the ſpring, when this danger is over, they ſhould reſume their firſt ſtation: namely, the pots ſhould be plunged up to the rim, as when the ſeeds were firſt ſown: and if this place be well ſheltered, they may remain there all winter; if not, and ſevere froſts threaten, they ſhould be taken up and placed under cover as before. After they have been thus managed three years from the ſeeds, they ſhould be taken out of the pots with care, and planted in the nurſery-ground at ſmall diſtances, where they may remain until they are ſtrong enough to be finally ſet out. By ſowing the ſeeds in pots, and aſſiſting them by an hot-bed, a year at leaſt is ſaved; for they hardly ever come up, when ſown in a natural border, under two years from the ſeeds; nay, they have been known to remain three, and even ſome plants to come up the fourth year after ſowing; which at once ſhows the preference of the former practice, and ſhould caution all who have not ſuch convenience, not to be too haſty in diſturbing the beds when the ſeeds are ſown in the natural ground; as, eſpecially if they are not well preſerved in mould or ſand, theſe may be ſome years before they appear. Indeed, it is the long time we are in obtaining theſe plants, either by ſeeds, layers, &c. that makes them at preſent ſo very ſcarce amongſt us. 2. Theſe plants may alſo be increaſed by layers; but very ſlowly; for they will be two, and ſometimes three, or even four years, before they have ſtruck out good roots; though the Benjamin tree is propagated the faſteſt by this method. The young twigs ſhould be laid in the ground in the autumn; and it will be found that twiſting the wire round the bud, ſo as in ſome degree to ſtop the progreſs of the ſap, and taking away with a knife a little of the bark, is a more effectual method of obtaing good roots ſoon than by the ſlit or twiſting, eſpecially when practiſed on the ſaſſafras tree. 3. Plants of theſe ſorts are likewiſe ſometimes obtained by ſuckers, which they will at all times throw out, and which may be often taken off with pretty good roots; but when they are weak, and with bad roots, they ſhould be planted in pots, and aſſiſted by a moderate heat in a bed: With ſuch management they will be good plants by the autumn, and in the ſpring may be planted out any where. 4. Cuttings of theſe trees, when planted in a good bark-bed, and duly watered, will alſo oftentimes grow. When this method is practiſed, and plants obtained, they muſt be inured by degrees to the open air, till they are hardy enough to be finally planted out.

The Indian bay, the camphor, the avocado, and the cinnamon-tree, require the treatment common to green-houſe plants; the latter, however, is rather a ſtove plant in this country.—Of its culture or propagation in its native places, no particular account has been given by botanical writers; but it will now become an important conſideration, ſince this valuable tree has been planted in the Weſt Indies. Of the advantages promiſed by this acquiſition we are indebted for the firſt accounts to Dr Wright in 1787[†]; from whom alſo we learn that its propagation is very eaſy, and its culture requires little care, as more particularly noticed below. Since that time, ſome obſervations by Dr Dancer, relative to its cultivation, have appeared in the Tranſactions[*] of the Society of Arts, &c. Theſe obſervations confirm, without adding any thing eſſential to the conciſe notice of Dr Wright. We are informed, that as the tree "puts out numerous ſide-branches, with a denſe foliage, from the very bottom of the trunk; this furniſhes an opportunity of obtaining plenty of layers, and facilitates the propagation of the tree, as it does not perfect its ſeeds in any quantity under ſix or ſeven years; when it becomes ſo plentifully loaded, that a ſingle tree is ſufficient almoſt for a colony. It ſeems to delight in a looſe moiſt ſoil, and to require a ſouthern aſpect; the trees, thus planted, flouriſhing better than others growing in loam and not ſo well expoſed to the ſun. When healthy, it is (from layers) of a pretty quick growth, reaching in *eight* years the height of fifteen or twenty feet, is very ſpreading, and furniſhed with numerous branches of a fit ſize for decortication, The ſeeds, however, are a long time in coming up, and the plants make ſmall progreſs for the firſt year or two." It is added, that "the birds appear to be very fond of the berries, and will probably propagate this tree in the ſame way they do many others every where over the iſland; ſo that in a ſhort time it will grow ſpontaneouſly, or without cultivation." The age for decortication, ſaid above to be eight years, it will be obſerved, is different from that ſpecified below for the trees in Ceylon.

Uſes. Evelyn ſays, he has ſeen bay trees near 30 feet high, and almoſt two feet in diameter; and enumerates the bay amongſt uſeful trees. Hanbury catches at this idea, and tells us in general terms, that "it will grow to 30 feet in height, with a trunk of two feet in diameter;" and accordingly he arranges it among his foreſt trees: he acknowledges, however, at the ſame time, that the wood is of little value. The bay is nevertheleſs a fine aromatic and a beautiful evergreen: It is ſaid to be the true *laurus* or laurel of the ancients, with which they adorned the brows of their ſucceſsful generals. Like the holly, box, and laurel, the bay will bear the ſhade and drip of taller trees; and it is upon the whole a very deſirable, as being a very ornamental, evergreen.

The leaves and berries of this tree have a moderately ſtrong aromatic ſmell, and a warm, bitteriſh, pungent taſte: the berries are ſtronger in both reſpects than the leaves, and afford in diſtillation a larger quantity of eſſential aromatic oil; they yield alſo an almoſt inſipid oil to the preſs, in conſequence of which they prove unctuous in the mouth. They are warm carminatives, and ſometimes exhibited in this intention againſt flatulent colics, and likewiſe in hyſterical diſorders. Their principal uſe in the preſent practice is in glyſters, and ſome external applications. The deciduous bay, in a moiſt rich ſoil, in which it principally delights, will grow to be about 16 feet high; but in ſome ſoils, that are poſſeſſed of the oppoſite qualities, it will hardly arrive at half that height. The flowers are ſucceeded in May by large red berries, which never ripen in England; ſo that, notwithſtanding the leaves in ſummer are very pretty, and the colour of the bark makes a variety in winter, it is principally the ſcarcity of this plant which makes it valuable.

The *benzoin* tree will grow to a much larger ſize than the other, and its branches are more numerous. They are ſmooth, and of a fine light-green colour. The leaves on their upper ſurface are ſmooth and of a fine light-green colour, but their under ſurface is venoſe, and of a whitiſh caſt. When bruiſed, they emit a fine fragrance. This tree was formerly miſtaken for that which produces the drug called *benzoin;* which is now known to be obtained from a ſpecies of ſtyrax. See STYRAX.

[†] *Lond. Med. Journal*, Vol. III. part 3.

[*] Vol. VIII. p. 214, &c.

The *ſaſſafras* will grow to nearly the height of the others, though the branches are not ſo numerous. Its bark is ſmooth, and of a red colour, which beautifully diſtinguiſhes it in winter; whilſt the fine ſhining green of its leaves conſtitutes its greateſt beauty in ſummer. In theſe, indeed there is a variety, and a very extraordinary one. Some are large, and of an oval figure; others are ſmaller, and of the ſame ſhape; whilſt others again are ſo divided into three lobes, as to reſemble the leaves of ſome ſorts of the fig-tree. In America, the ſaſſafras generally ſtands ſingle in the woods, and along the fences round the fields. It flowers in May before the leaves come out; and being entirely covered with them, it is diſtinguiſhed at a great diſtance by their beautiful yellow colour.

The root of the ſaſſafras has a fragant ſmell, and a ſweetiſh, aromatic, ſubacrid taſte; the bark taſtes much ſtronger than any other part, and the ſmall twigs ſtronger than the large pieces. It is a warm aperient and corroborant, and frequently employed with good ſucceſs for purifying and ſweetening the blood and juices. For theſe purpoſes, infuſions made from the raſped root or bark may be drank as tea. In ſome conſtitutions indeed, ſuch liquors are, by their fragrance, apt, on firſt taking them, to affect the head; but in ſuch caſes they may be advantageouſly freed from their flavour by boiling, A decoction of ſaſſafras, boiled down to the conſiſtence of an extract, proves ſimply bitteriſh and ſubaſtringent. Hoffman aſſures us, that he has frequently given this extract to the quantity of a ſcruple at a time, with remarkable ſucceſs, for ſtrengthening the tone of the viſcera in cachexies; as alſo in the decline of intermittent fevers, and in hypochondriacal ſpaſms. Saſſafras yields in diſtillation an extremely fragrant oil of a penetrating pungent taſte, ſo ponderous (notwithſtanding the lightneſs of the drug itſelf) as to ſink in water. Rectified ſpirit extracts the whole taſte and ſmell of ſaſſafras; and elevates nothing in evaporation: hence the ſpirituous extract proves the moſt elegant and efficacious preparation, as containing the virtue of the root entire.

The bark of this tree is uſed by the women in Penſylvania and other parts of North America in dying worſted a fine laſting orange-colour, which does not fade in the ſun. They uſe urine inſtead of alum in dying; and boil the dye in a braſs boiler, becauſe in an iron veſſel it does not yield ſo fine a colour. The wood is made uſe of for poſts belonging to the incloſures, for it is ſaid to laſt a long time in the ground: but it is likewiſe ſaid, that there is hardly any kind of wood which is more attacked by worms than this when it is expoſed to the air without cover; and that in a ſhort time it is quite worm-eaten through and through. On cutting ſome part of the ſaſſafras tree, or its ſhoots and holding it to the noſe, it has a ſtrong but pleaſant ſmell. Some people peel the root, and boil the peel with the beer which they are brewing, becauſe they believe it wholeſome. For the ſame reaſon, the peel is put into brandy either whilſt it is diſtilling or after it is made. Profeſſor Kalm informs us, that a decoction of the root of ſaſſafras in water, drank every morning, is uſed with ſucceſs in the dropſy.—When part of a wood is deſtined for cultivation, the ſaſſafras trees are commonly left upon it, becauſe they have a very thick foliage, and afford a cool ſhade to the cattle during the great heats. Some people get their bed-poſts made of ſaſſafras wood, in order to expel the bugs; for its ſtrong ſcent, it is ſaid, prevents thoſe vermin from ſettling in them. For two or three years together this has the deſired effect, or about as long as the wood keeps its ſtrong aromatic ſmell; but after that time it has been obſerved to loſe its effect. In Penſylvania ſome people put chips of ſaſſafras into their cheſts, where they keep all ſorts of woollen ſtuffs, in order to expel the moths (or larvæ or caterpillars of moths or tinies) which commonly ſettle in them in ſummer. The root keeps its ſmell for a long while: Profeſſor Kalm ſaw one which had lain five or ſix years in the drawer of a table, and ſtill preſerved the ſtrength of its ſcent. The people alſo gather its flowers, and uſe it as tea.

Kalm's Travels in America.

The *perſea*, or *alligator pear* tree, is cultivated univerſally in the Weſt Indies by all ranks of people. The fruit is pear-ſhaped, and from one to two pounds in weight. On removing a green ſkin or covering, we come to a yellow butyraceous ſubſtance; and in the heart find a large round ſeed or ſtone, which is unequal in the ſurface, and exceedingly hard and woody. This fruit is ripe in Auguſt and September, and conſtitutes one of the moſt agreeable articles of diet for ſix or eight weeks to the negroes. Theſe pears, with a little ſalt and a plantain or two, afford a hearty meal. They are alſo ſerved up at the tables of white people as choice fruit. When the pear is ripe, the yellow or eatable ſubſtance is firmer than butter, and taſtes ſomewhat like butter or marrow: hence it is called by ſome the *vegetable marrow.* But however excellent this fruit is when ripe, it is very dangerous when pulled and eaten before maturity. Dr Wright ſays, he has repeatedly known it to produce fever and dyſentery, which were removed with difficulty.—The leaves of this tree and thoſe of the bead-vine or wild liquorice are made into pectoral decoctions by the common people.—The large ſtone is uſed for marking linen. The cloth is tied or held over the ſtone, and the letters are pricked out by a needle through the cloth and into the ſeed. The ſtain is a reddiſh brown, which never waſhes out.—The buds of the alligator tree are ſaid to be uſed with ſucceſs in ptiſans againſt the venereal diſeaſe. An infuſion of them in water, drank in the morning faſting, is ſtrongly recommended for diſlodging coagulated blood in the ſtomach produced by a fall or a ſevere ſtroke on that important entrail. "The wild boars in the Eaſt Indies (ſays Labat) eat greedily of the mammees and avocado pears, which give their fleſh a luſcious and moſt agreeable ſavour."

Caſſia. The bark of this ſpecies is known in the ſhops by the name of *caſſia lignea.* This bark, which is imported from different parts of the Eaſt Indies and from China, has a very near reſemblance to the cinnamon; though diſtinguiſhable from it by being of a thicker and coarſer appearance, and by its breaking ſhort and ſmooth, while the cinnamon breaks fibrous and ſhivery.—It reſembles cinnamon ſtill more exactly in its aromatic flavour than in its external appearance; and ſeems only to differ from it in being ſomewhat weaker, in abounding more with a viſcous mucilaginous matter, and in being leſs aſtringent. Accordingly, it has not only a place in the Edinburgh pharmacopœia, but is alſo the baſis of a diſtilled water. It is perhaps ſurpriſing that the London college have given it no place in their liſts. But although it does not enter their pharmacopœia, yet we may venture to aſſert, that it will not be neglected by the apothecaries. At preſent it is very common with many of them to ſubſtitute the caſſia in every caſe for the more expenſive article cinnamon: and indeed almoſt the whole of what is at preſent ſold under the title either of ſimple or ſpirituous cinnamon-water is entirely prepared from caſſia; and not even entirely from the bark, but from a mixture of the bark and buds.

Cinnamon is the under-bark of the *cinnamomum*. The beſt ſeaſon for ſeparating it from the outer-bark, which is grey and rugged, is the ſpring, when the ſap flows in the greateſt abundance. It is cut into thin ſlices, and expoſed to the ſun, and curls up in drying.—The old trees produce a coarſe kind of cinnamon; the ſpice is in perfection only when the trees are not older than three or four years. When the trunk has been ſtripped of its bark, it receives no further nouriſhment; but the root is ſtill alive, and continues to throw out freſh ſhoots. The fruit of the tree is ſhaped like an acorn, but is not ſo large. Its ſeed, when boiled in water, yields an oil which ſwims at top, and takes fire. If left to cool, it hardens into a white ſubſtance, of which candles are made, which have an agreeable ſmell, and are reſerved for the uſe of the king of Ceylon. The cinnamon is not reckoned excellent unleſs it be fine, ſmooth, brittle, thin, of a yellow colour inclining to red; fragrant, aromatic, and of a poignant, yet agreeable taſte. The connoiſſeurs give the preference to that the pieces of which are long, but ſlender. That which comes to us is generally mixed with the Caſſia bark; but this laſt is eaſily diſtinguiſhed. Cinnamon ſplinters in breaking, and has a roughneſs along with its aromatic flavour; while the Caſſia breaks over ſmooth, and has a mucilaginous taſte. Cinnamon is a very elegant and uſeful aromatic, more grateful both to the palate and ſtomach than moſt other ſubſtances of this claſs. By its aſtringent quality it likewiſe corroborates the viſcera, and proves of great ſervice in ſeveral kinds of alvine fluxes, and immoderate diſcharges from the uterus.

The cinnamon plant, with other valuable ones, was taken in a French ſhip by Admiral Rodney in the laſt war, and preſented by him to the aſſembly of Jamaica. One of the trees was planted in the botanic garden in St Thomas in the Eaſt; the other by Hinton Eaſt, Eſq; in his noble garden at the foot of the Blue Mountains. From theſe parent trees ſome hundreds of young trees are already produced from layers and cuttings, and diſperſed in different parts of the country, in all which it thrives luxuriantly with little trouble: we may therefore hope it will ſoon be a valuable addition to commerce. Upon comparing the parts of the tree with the deſcription and figure given by Burman and other botaniſts, it appears to be the real Ceylon cinnamon, and of the beſt kind, called by the natives *Raſſe Coronde*: but the ſpecimens of bark taken put it out of all doubt, being, in the opinion of the beſt judges, of an equal, if not ſuperior, quality to any imported from India. The ſmalleſt bit of the bark, Dr Wright aſſures us, is quite a cordial. The cinnamon we have from Holland, he obſerves, is often inert, and gives room to ſuſpect that it has been ſubjected to a ſlight proceſs in diſtillation.

In regard to the trees growing in Jamaica, Dr Dancer informs us in his paper already quoted, that "The beſt cinnamon bark, according to the different trials I have made, is taken from the ſmall branches, of about an inch diameter, the larger limbs not being ſo eaſily decorticated, and not yielding ſo good or ſo ſtrong a cinnamon. The ſmaller twigs, or thoſe that have not acquired a cineritious bark, are too full of ſap and mucilage, and have little *aroma*. It is the *liber*, or inner bark, that conſtitutes the cinnamon; from which the two external barks muſt be carefully and entirely ſeparated, or they vitiate the flavour of the cinnamon; to do which with dexterity, and to raiſe the bark from the wood, requires ſome practice. The bark being ſeparated, the ſmaller pieces are to be placed within the larger; which, by expoſure to the ſun or the air, preſently coil up, and require no further preparation. A dry ſeaſon is the proper one for taking the bark; as it is found to be weakened after long or heavy rains. Cinnamon, though more retentive of its virtues than any of the other ſpices, yet requires to be protected, when taken from the air and moiſture, by cloſe packing in cedar cheſts.—The leaves of this tree, whether recent or dried, are ſo ſtrongly impregnated with an *aroma*, as to afford a good ſuccedaneum for the bark both in cookery and medicine. Diſtilled, they give an excellent ſimple and ſpirituous water, and an eſſential oil. Powdered, they are a good aromatic ſpecies, or mareſchal perfume."

Camphor, though ſolid, is the eſſential oil of the *laurus camphora*; and is obtained from it by diſtillation in the Eaſt Indies. (See the article CAMPHORA).—This tree is another of the captured plants given to the inhabitants of Jamaica; and, if cultivated with care, will alſo be a uſeful acquiſition.

The Abbe Groſier informs us, that in China ſome of theſe trees are found above 100 cubits in height, and ſo thick that 20 perſons cannot incloſe them. The tree is there called *tchang*; and it is ſaid that the trunk, when old, emits ſparks of fire, but of ſo ſubtle a nature as not even to injure the hair of thoſe who are near it. Common camphor coſts only a penny the ounce at Pe-king; but it is inferior to that of Borneo, in the judgment even of the Chineſe.

The manner in which ſome authors have ſpoken of Camphire (the Abbe obſerves), gives us reaſon to conclude that they have been entirely ignorant of the proceſs employed to obtain this ſalutary gum. The camphor does not drop to the earth, like the gums of certain reſinous trees, which are preſerved by diſcharging that part of their ſubſtance which is too oily;

neither does it diſtil from the top to the bottom of the tree through an inciſion made in it. The Chineſe would practiſe this method could it be employed with ſucceſs; for it is very common in China to make ſuch kind of inciſions in reſinous trees. The method uſed by the Chineſe for obtaining camphire is as follows.—They take ſome branches freſh from the *tchang*, chop them very ſmall, and lay them to ſteep in ſpring-water for three days and three nights. After they have been ſoaked in this manner, they are put into a kettle, where they are boiled for a certain time, during which they keep continually ſtirring them with a ſtick made of willow. When they perceive that the ſap of theſe ſmall chips adheres ſufficiently to the ſtick in the form of white froſt, they ſtrain the whole, taking care to throw away the dregs and refuſe. This juice is afterwards poured gently into a new earthen baſon well varniſhed, in which it is ſuffered to remain one night. Next morning it is found coagulated, and formed into a ſolid maſs. To purify this firſt preparation, they procure ſome earth from an old earthen wall, which, when pounded and reduced to a very fine powder, they put into the bottom of a baſon made of red copper; over this layer of earth they ſpread a layer of camphire, and continue thus until they have laid four ſtrata. The laſt, which is of very fine earth, they cover up with the leaves of the plant *po-ho*, or pennyroyal; and over the whole they place another baſon, joining it very cloſely to the former by means of a kind of red earth that cements their brims together. The baſon thus prepared is put over a fire, which muſt be managed ſo as to keep up an equal heat: experience teaches them to obſerve the proper degree. But above all, they muſt be very attentive leſt the plaſter of fat earth which keeps the baſons together ſhould crack or fall off; otherwiſe the ſpirituous parts would evaporate and ruin the whole proceſs. When the baſons have been expoſed to the neceſſary heat, they are taken off and left to cool; after which they are ſeparated, and the ſublimated camphire is found adhering to the cover. If this operation be repeated two or three times, the camphor is found purer and in larger pieces. Whenever it is neceſſary to uſe any quantity of this ſubſtance, it is put between two earthen veſſels, the edges of which are ſurrounded with ſeveral bands of wet paper. Theſe veſſels are kept for about an hour over an equal and moderate fire; and when they are cool, the camphire is found in its utmoſt perfection and ready for uſe. This method of procuring camphor, even from the heart of the tree, may be practiſed in all ſeaſons of the year; which would not be the caſe (our author obſerves), were it extracted like other reſinous ſubſtances that only flow during a certain ſhort ſpace of time. Beſides, by lopping the branches of the camphire-tree, leſs hurt is done to it than by making inciſions, which are always hazardous.

LAUS, or Laos (anc. geog.), a river of Italy, ſeparating Lucania from the Bruttii, and running from eaſt to weſt into the Tuſcan ſea; with a cognominal bay, and a town, the laſt of Lucania, a little above the ſea; a colony from Sybaris, according to Strabo, Pliny, Stephanus. Both town and river are now called *Laino*, in the Calabria Citra; and the bay, called *Golfa della Scalea*, or *di Policaſtro*, two adjoining towns, is a part of the Tuſcan ſea, extending between the promontory Palinurus and the mouth of the Laus.

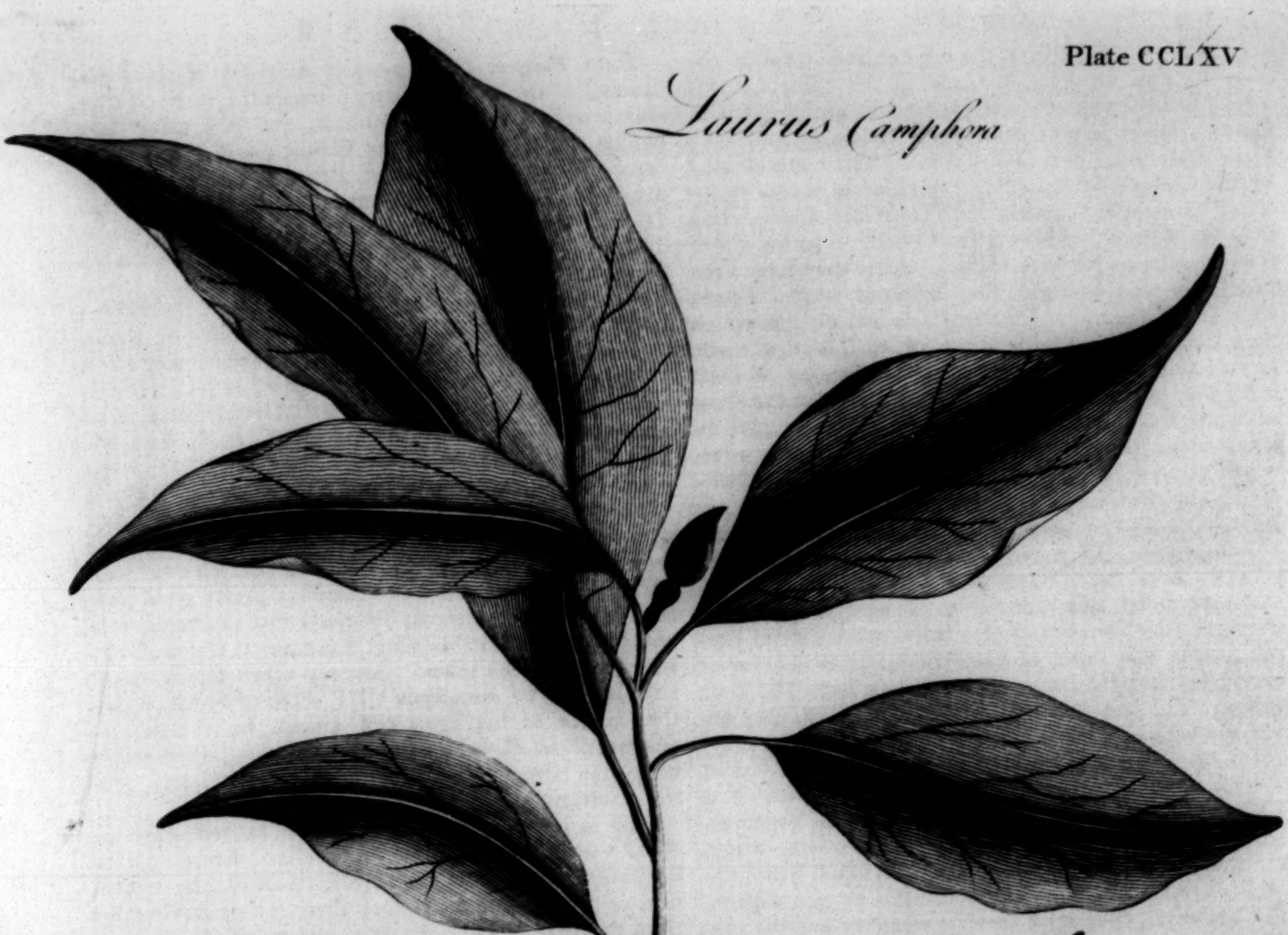
Laus Pompeia (anc. geog.), a town of Inſubria, ſituated to the eaſt of Milan, between the rivers Addua and Lamber. A town built by the Boii after their paſſing the Alps: its ancient Gaulic name is unknown. Strabo Pompeius, father of Pompey, leading thither a colony, gave it a new name, and conferred the *Jus Latii* on the ancient inhabitants who remained there. The modern Lodi is built from its ruins, at ſome diſtance off. E. Long. 10. 15. N. Lat. 45. 22.

LAUSANNE, a large, ancient, and handſome town of Switzerland, capital of the country of Vaud, and in the canton of Berne, with a famous college and biſhop's ſee. The town-houſe and the other public buildings are magnificent. It is ſeated between three hills near the lake of Geneva, in E. Long. 6. 35. N. Lat. 46. 30.—The town ſtands on an aſcent ſo ſteep, that in ſome places the horſes cannot draw up a carriage without great difficulty, and foot-paſſengers aſcend to the upper part of the town by ſteps. Here is an academy for the ſtudents of the country; the profeſſors are appointed by government; and there is a pretty good public library. The church, formerly the cathedral, is a magnificent Gothic building, ſtanding on the moſt elevated part of the town. Among other ſepulchres it contains that of Amadæus VIII. duke of Savoy, ſtyled the *Solomon* of his age; beſt known by the title of *Antipope Felix V.* who exhibited the ſingular example of a man twice abdicating the ſovereignty, and retiring from regal pomp to a private ſtation.

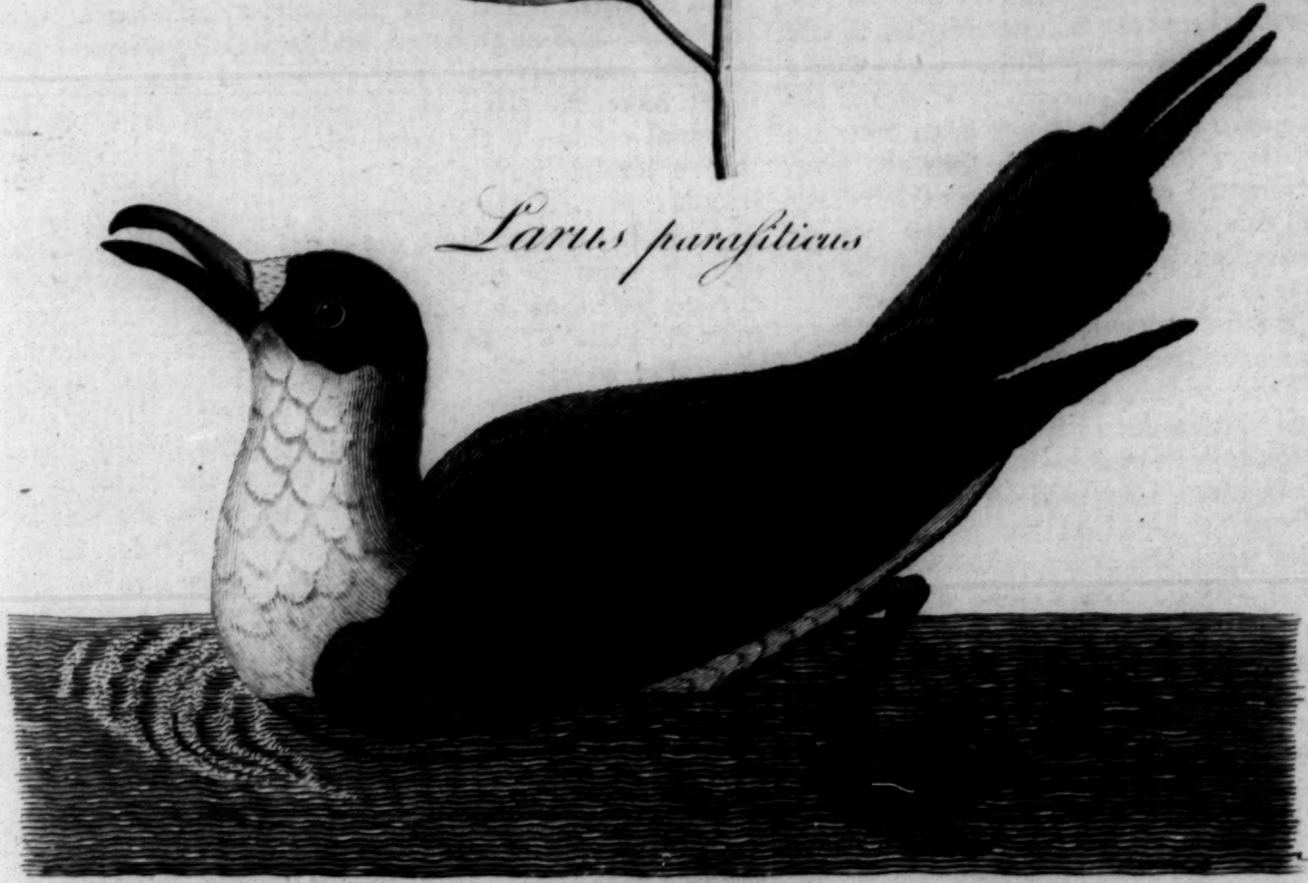
The ſame year that the country named *Pays de Vaud* was conquered from the houſe of Savoy, the inhabitants of Lauſanne put themſelves under the protection of the Canton of Berne, their biſhop having retired from the town. At that time its privileges were confirmed and augmented, and it is ſtill governed by its own magiſtrates. The citizens of the principal ſtreet have the privilege of pronouncing ſentence in criminal caſes. If the criminal is found, and acknowledges himſelf guilty, the burghers of the ſtreet aſſemble: one of the magiſtrates pleads in his behalf, and another againſt him; the court of juſtice give their opinion upon the point of law; and the majority of citizens poſſeſſing houſes in the principal ſtreet, determine the penalty. In capital caſes there is no pardon, according to the letter of the law, unleſs it can be obtained within 24 hours from the ſovereign council of Berne, though it generally happens that eight days are allowed for this purpoſe. When the criminal is ſeized within the juriſdiction of the town, the fact is tried, and the burghers pronounce ſentence, from which there is no appeal; but if he happens to be taken in the diſtrict of the bailiff, there is an appeal to the government of Berne.

LAVORI (TERRA DI), a province of Italy, in the kingdom of Naples, bounded on the weſt by the Campagna of Rome, and by Farther Abruzzo; on the north by the Citerior Abruzzo, and by the county of Moliſſa; on the eaſt by the Ultra Principata; and on the ſouth by the Principata Citra. It is about 63 miles in length and 35 in breadth; and is fertile in corn, excellent vines, and other fruits. There are alſo ſeveral mineral ſprings and mines of ſulphur; Naples is the capital town.

Plate CCLXV



Laurus Camphora



Larus parasiticus

Scot Philad^a

BRITISH MUSEUM

L A W.

Part I. Of the NATURE of LAWS in general.

Laws
neral.
1
ition;
ral,

LAW, in its moſt general and comprehenſive ſenſe, ſignifies a rule of action ; and is applied indiſcriminately to all kinds of action, whether animate or inanimate, rational or irrational. Thus we ſay, the laws of motion, of gravitation, of optics, of mechanics, as well as the law of nature and of nations. And it is that rule of action which is preſcribed by ſome ſuperior, and which the inferior is bound to obey.

Thus when the Supreme Being formed the univerſe, and created matter out of nothing, he impreſſed certain principles upon that matter, from which it can never depart, and without which it would ceaſe to be. When he put that matter into motion, he eſtabliſhed certain laws of motion, to which all moveable bodies muſt conform. And, to deſcend from the greateſt operations to the ſmalleſt, when a workman forms a clock, or other piece of mechaniſm, he eſtabliſhes at his own pleaſure certain arbitrary laws for its direction ; as, that the hand ſhall deſcribe a given ſpace in a given time ; to which law as long as the work conforms, ſo long it continues in perfection, and anſwers the end of its formation.

If we farther advance, from mere inactive matter to vegetable and animal life, we ſhall find them ſtill governed by laws ; more numerous indeed, but equally fixed and invariable. The whole progreſs of plants, from the ſeed to the root, and from thence to the ſeed again ; the method of animal nutrition, digeſtion, ſecretion, and all other branches of vital economy ;—are not left to chance, or the will of the creature itſelf, but are performed in a wondrous involuntary manner, and guided by unerring rules laid down by the great Creator.

2
icular.

This then is the general ſignification of law, a rule of action dictated by ſome ſuperior being : and, in thoſe creatures that have neither the power to think nor to will, ſuch laws muſt be invariably obeyed, ſo long as the creature itſelf ſubſiſts ; for its exiſtence depends on that obedience. But laws, in their more confined ſenſe, and in which it is our preſent buſineſs to conſider them, denote the rules, not of action in general, but of *human* action or conduct : that is, the precepts by which man, the nobleſt of all ſublunary beings, a creature endowed with both reaſon and freewill, is commanded to make uſe of thoſe faculties in the general regulation of his behaviour.

Of Laws
in general.

Man, conſidered as a creature, muſt neceſſarily be ſubject to the laws of his Creator, for he is entirely a dependent being. A being, independent of any other; has no rule to purſue but ſuch as he preſcribes to himſelf : but a ſtate of dependance will inevitably oblige the inferior to take the will of him on whom he depends as the rule of his conduct ; not indeed in every particular, but in all thoſe points wherein his dependance conſiſts. This principle therefore has more or leſs extent and effect, in proportion as the ſuperiority of the one and the dependence of the other is greater or leſs, abſolute or limited. And conſequently, as man depends abſolutely upon his Maker for every thing, it is neceſſary that he ſhould in all points conform to his Maker's will.

3
Law of
nature.

This will of his Maker is called the *law of nature.* For as God, when he created matter, and endued it with a principle of mobility, eſtabliſhed certain rules for the perpetual direction of that motion ; ſo, when he created man, and endued him with freewill to conduct himſelf in all parts of life, he laid down certain immutable laws of human nature, whereby that freewill is in ſome degree regulated and reſtrained, and gave him alſo the faculty of reaſon to diſcover the purport of thoſe laws.

Conſidering the Creator only as a being of infinite power, he was able unqueſtionably to have preſcribed whatever laws he pleaſed to his creature man, however unjuſt or ſevere. But as he is alſo a Being of infinite wiſdom, he has laid down only ſuch laws as were founded in thoſe relations of juſtice that exiſted in the nature of things antecedent to any poſitive precept. Theſe are the eternal immutable laws of good and evil, to which the Creator himſelf in all his diſpenſations conforms ; and which he has enabled human reaſon to diſcover, ſo far as they are neceſſary for the conduct of human actions. Such, among others, are theſe principles : That we ſhould live honeſtly, ſhould hurt nobody, and ſhould render to every one his due ; to which three general precepts Juſtinian has reduced the whole doctrine of law.

But if the diſcovery of theſe firſt principles of the law of nature depended only upon the due exertion of right reaſon, and could not otherwiſe be obtained than by a chain of metaphyſical diſquiſitions, mankind would have wanted ſome inducement to have quickened their inquiries, and the greater part of the world would have reſted content in mental indolence, and ignorance its inſeparable companion. As therefore the Creator is a being, not only of infinite power and wiſdom, but alſo of infinite goodneſs, he has been pleaſed ſo to contrive the conſtitution and frame of humanity, that we ſhould want no other prompter to inquire after and purſue the rule of right, but only our own ſelf-love, that univerſal principle of action. For he has ſo intimately connected, ſo inſeparably interwoven, the laws of eternal juſtice with the happineſs of each individual, that the latter cannot be attained but by obſerving the former; and if the former be punctually obeyed, it cannot but induce the latter. In conſequence of which mutual connection of juſtice and human felicity, he has not perplexed the law of nature with a multitude of abſtracted rules and precepts, referring merely to the fitneſs or unfitneſs of things, as ſome have vainly ſurmiſed ; but has graciouſly reduced the rule of obedience to this one paternal precept, "that man ſhould purſue his own happineſs." This is the foundation of what we call *ethics*, or *natural law* *. For the ſeveral articles into which it is branched in our ſyſtems, amount to no more than demonſtrating, that this or that action tends to man's real happineſs; and therefore very juſtly concluding, that the performance of it is a part of the law of nature; or, on the other hand, that this or that action is deſtructive of man's real happineſs, and therefore that the law of nature forbids it.

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* See *Morality.*

This law of nature, being coëval with mankind, and dictated by God himſelf, is of courſe ſuperior in obligation to any other. It is binding all over the globe, in all countries, and at all times: no human laws are of any validity, if contrary to this; and ſuch of them as are valid derive all their force, and all their authority, mediately or immediately, from this original.

But in order to apply this to the particular exigencies of each individual, it is ſtill neceſſary to have recourſe to reaſon: whoſe office it is to diſcover, as was before obſerved, what the law of nature directs in every circumſtance of life; by conſidering, what method will tend the moſt effectually to our own ſubſtantial happineſs. And if our reaſon were always, as in our firſt anceſtor before his tranſgreſſion, clear and perfect, unruffled by paſſions, unclouded by prejudice, unimpaired by diſeaſe or intemperance, the taſk would be pleaſant and eaſy; we ſhould need no other guide but this. But every man now finds the contrary in his own experience; that his reaſon is corrupt, and his underſtanding full of ignorance and error.

4
Law of revelation.

This has given manifold occaſion for the benign interpoſition of Divine Providence; which, in compaſſion to the frailty, the imperfection, and the blindneſs of human reaſon, hath been pleaſed, at ſundry times and in divers manners, to diſcover and enforce its laws by an immediate and direct revelation. The doctrines thus delivered, we call the *revealed* or *divine law*, and they are to be found only in the Holy Scriptures. Theſe precepts, when revealed, are found upon compariſon to be really a part of the original law of nature, as they tend in all their conſequences to man's felicity. But we are not from thence to conclude, that the knowledge of theſe truths was attainable by reaſon in its preſent corrupted ſtate; ſince we find, that, until they were revealed, they were hid from the wiſdom of ages. As then the moral precepts of this law are indeed of the ſame original with thoſe of the law of nature, ſo their intrinſic obligation is of equal ſtrength and perpetuity. Yet undoubtedly the revealed law is of infinitely more authenticity than that moral ſyſtem which is framed by ethical writers, and denominated the *natural law:* becauſe one is the law of nature, expreſsly declared ſo to be by God himſelf; the other is only what, by the aſſiſtance of human reaſon, we imagine to be that law. If we could be as certain of the latter as we are of the former, both would have an equal authority: but till then they can never be put in any competition together.

Upon theſe two foundations, the law of nature and the law of revelation, depend all human laws; that is to ſay, no human laws ſhould be ſuffered to contradict theſe. There are, it is true, a great number of indifferent points, in which both the divine law and the natural leave a man at his own liberty; but which are found neceſſary, for the benefit of ſociety, to be reſtrained within certain limits. And herein it is that human laws have their greateſt force and efficacy: for, with regard to ſuch points as are not indifferent, human laws are only declaratory of, and act in ſubordination to, the former. To inſtance in the caſe of murder: this is expreſsly forbidden by the divine, and demonſtrably by the natural, law; and from theſe prohibitions ariſes the true unlawfulneſs of this crime. Thoſe human laws that annex a puniſhment to it, do not at all increaſe its moral guilt, or ſuperadd any freſh obligation in *foro conſcientiæ* to abſtain from its perpetration. Nay, if any human law ſhould allow or enjoin us to commit it, we are bound to tranſgreſs that human law, or elſe we muſt offend both the natural and the divine. But with regard to matters that are in themſelves indifferent, and are not commanded or forbidden by thoſe ſuperior laws; ſuch, for inſtance, as exporting of wool into foreign countries; here the inferior legiſlature has ſcope and opportunity to interpoſe, and to make that action unlawful which before was not ſo.

5
Law of nations.

If man were to live in a ſtate of nature, unconnected with other individuals, there would be no occaſion for any other laws than the law of nature and the law of God. Neither could any other law poſſibly exiſt: for a law always ſuppoſes ſome ſuperior who is to make it; and in a ſtate of nature we are all equal, without any other ſuperior but him who is the Author of our being. But man was formed for ſociety; and, as is demonſtrated by the writers on this ſubject, is neither capable of living alone, nor indeed has the courage to do it. However, as it is impoſſible for the whole race of mankind to be united in one great ſociety, they muſt neceſſarily divide into many; and form ſeparate ſtates, commonwealths, and nations, entirely independent of each other, and yet liable to a mutual intercourſe. Hence ariſes a third kind of law to regulate this mutual intercourſe, called *the law of nations:* which, as none of theſe ſtates will acknowledge a ſuperiority in the other, cannot be dictated by either; but depends entirely upon the rules of natural law, or upon mutual compacts, treaties, leagues, and agreements, between theſe ſeveral communities: in the conſtruction alſo of which compacts we have no other rule to reſort to but the law of nature; being the only one to which both communities are equally ſubject: and therefore the civil law very juſtly obſerves, that *quod naturalis ratio inter omnes homines conſtituit, vocatur jus gentium.*

6
Municipal or civil law.

To the conſideration, then, of the law of nature, the revealed law, and the law of nations, ſucceeds that of the municipal or civil law; that is, the rule by which particular diſtricts, communities, or nations, are governed; being thus defined by Juſtinian, "*jus civile eſt quod quiſque ſibi populus conſtituit.*" We call it *municipal* law, in compliance with common ſpeech; for though, ſtrictly, that expreſſion denotes the particular cuſtoms of one ſingle *municipium* or free town, yet it may with ſufficient propriety be applied to any one ſtate or nation which is governed by the ſame laws and cuſtoms.

7
Defined.

Municipal law, thus underſtoood, is properly defined to be "a rule of civil conduct preſcribed by the ſupreme power in a ſtate, commanding what is right, and prohibiting what is wrong." Let us endeavour to explain its ſeveral properties, as they ariſe out of this definition.

8
Its firſt property.

And, firſt, it is a *rule:* not a tranſient ſudden order from a ſuperior to or concerning a particular perſon; but ſomething permanent, uniform and univerſal. Therefore a particular act of the legiſlature to confiſcate the goods of Titius, or to attaint him of high treaſon, does not enter into the idea of a municipal law: for the operation of this act is ſpent upon Titius only, and has no relation to the community in general; it is rather a ſentence than a law. But an act to declare that the crime of which Titius is accuſed ſhall be deemed high treaſon; this has permanency, uniformity, and univerſality, and therefore is properly a *rule*. It is alſo called a *rule*, to diſtinguiſh it from *advice* or *counſel*, which we are at liberty to follow or not as we ſee proper, and to judge upon the reaſonableneſs or unreaſonableneſs of the thing adviſed: whereas our obedience to the law depends not upon *our approbation*, but upon the *Maker's will*. Counſel is only matter of perſuaſion, law is matter of injunction; counſel acts only upon the willing, law upon the unwilling alſo.

It is alſo called a *rule*, to diſtinguiſh it from a *compact* or *agreement*; for a compact is a promiſe proceeding from us, law is a command directed to us. The language of a compact is, "I will, or will not, do this;" that of a law is, "Thou ſhalt, or ſhalt not, do it." It is true there is an obligation which a compact carries with it, equal in point of conſcience to that of a law; but then the original of the obligation is different. In compacts, we ourſelves determine and promiſe what ſhall be done, before we are obliged to do it; in laws, we are obliged to act without ourſelves determining or promiſing any thing at all. Upon theſe accounts law is defined to be "a rule."

9 Second property.

Municipal law is alſo "a rule of *civil conduct*." This diſtinguiſhes municipal law from the natural or revealed: the former of which is the rule of moral conduct; and the latter not only the rule of moral conduct, but alſo of faith. Theſe regard man as a creature; and point out his duty to God, to himſelf, and to his neighbour, conſidered in the light of an individual. But municipal or civil law regards him alſo as a citizen, and bound to other duties towards his neighbour, than thoſe of mere nature and religion: duties, which he has engaged in by enjoying the benefits of the common union; and which amount to no more, than that he do contribute, on his part, to the ſubſiſtence and peace of the ſociety.

10 Third property.

It is likewiſe "a rule *preſcribed*." Becauſe a bare reſolution, confined in the breaſt of the legiſlator, without manifeſting itſelf by ſome external ſign, can never be properly a law. It is requiſite that this reſolution be notified to the people who are to obey it. But the manner in which this notification is to be made, is matter of very great indifference. It may be notified by univerſal tradition and long practice, which ſuppoſes a previous publication, and is the caſe of the common law of England and of Scotland. It may be notified *viva voce*, by officers appointed for that purpoſe; as is done with regard to proclamations, and ſuch acts of parliament as are appointed to be publicly read in churches and other aſſemblies. It may, laſtly, be notified by writing, printing, or the like; which is the general courſe taken with all the acts of parliament. Yet, whatever way is made uſe of, it is incumbent on the promulgators to do it in the moſt public and perſpicuous manner; not like Caligula, who (according to Dio Caſſius) wrote his laws in a very ſmall character, and hung them up upon high pillars, the more effectually to enſnare the people. There is ſtill a more unreaſonable method than this, which is called making of laws *ex poſt facto*; when after an action (indifferent in itſelf) is committed, the legiſlator then for the firſt time declares it to have been a crime, and inflicts a puniſhment upon the perſon who has committed it. Here it is impoſſible that the party could foreſee, that an action, innocent when it was done, ſhould be afterwards converted to guilt by a ſubſequent law: he had therefore no cauſe to abſtain from it; and all puniſhment for not abſtaining muſt of conſequence be cruel and unjuſt. All laws ſhould be therefore made to commence *in futuro*, and be notified before their commencement; which is implied in the term "preſcribed." But when this rule is in the uſual manner notified or preſcribed, it is then the ſubject's buſineſs to be thoroughly acquainted therewith; for if ignorance, of what he might know, were admitted as a legitimate excuſe, the laws would be of no effect, but might always be eluded with impunity.

11 Fourth property.

But further: Municipal law is "a rule of civil conduct preſcribed *by the ſupreme power in a ſtate*." For legiſlature, as was before obſerved, is the greateſt act of ſuperiority that can be exerciſed by one being over another. Wherefore it is requiſite to the very eſſence of a law, that it be made by the ſupreme power. Sovereignty and legiſlature are indeed convertible terms; one cannot ſubſiſt without the other.

This will naturally lead us into a ſhort inquiry concerning the nature of ſociety and civil government; and the natural inherent right that belongs to the ſovereignty of a ſtate, wherever that ſovereignty be lodged, of making and enforcing laws.

12 Civil ſociety.

The only true and natural foundations of ſociety are the wants and fears of individuals. Not that we can believe, with ſome theoretical writers, that there ever was a time when there was no ſuch thing as ſociety; and that, from the impulſe of reaſon, and through a ſenſe of their wants and weakneſſes, individuals met together in a large plain, entered into an original contract, and choſe the talleſt man preſent to be their governor. This notion, of an actually exiſting unconnected ſtate of nature, is too wild to be ſeriouſly admitted: and beſides, it is plainly contradictory to the revealed accounts of the primitive origin of mankind, and their preſervation 2000 years afterwards; both which were effected by the means of ſingle families. Theſe formed the firſt ſociety among themſelves, which every day extended its limits; and when it grew too large to ſubſiſt with convenience in that paſtoral ſtate wherein the patriarchs appear to have lived, it neceſſarily ſubdivided itſelf by various migrations into more. Afterwards, as agriculture increaſed, which employs and can maintain a much greater number of hands, migrations became leſs frequent; and various tribes, which had formerly ſeparated, reunited again; ſometimes by compulſion and conqueſt, ſometimes by accident, and ſometimes perhaps by compact. But though ſociety had not its formal beginning from any convention of individuals, actuated by their wants and their fears; yet it is the ſenſe of their weakneſs and imperfection that keeps mankind together; that demonſtrates the neceſſity of this union; and that therefore is the ſolid and natural foundation, as well as the cement, of ſociety. And this is what we mean by the original contract of ſociety; which, though perhaps in no inſtance it has ever been formally expreſſed at the firſt inſtitution of a ſtate, yet in nature and reaſon muſt always be underſtood and implied in the very act of aſſociating together: namely, that the whole ſhould protect all its parts, and that every part ſhould pay obedience to the will of the whole; or, in other words, that the community ſhould guard the rights of each individual member, and that (in return for this protection) each individual ſhould ſubmit to the laws of the community; without which ſubmiſſion of all, it was impoſſible that protection could be certainly extended to any.

13 Government.

For when ſociety is once formed, government reſults of courſe, as neceſſary to preſerve and to keep that ſociety in order. Unleſs ſome ſuperior be conſtituted, whoſe commands and deciſions all the members are bound to obey, they would ſtill remain as in a ſtate of nature, without any judge upon earth to define their ſeveral rights, and redreſs their ſeveral wrongs. But as all the members of ſociety are naturally equal, it may be aſked, In whoſe hands are the reins of government to be entruſted? To this the general anſwer is eaſy; but the application of it to particular caſes has occaſioned one half of thoſe miſchiefs which are apt to proceed from miſguided political zeal. In general, all mankind will agree, that government ſhould be repoſed in ſuch perſons, in whom thoſe qualities are moſt likely to be found, the perfection of which is among the attributes of him who is emphatically ſtyled the *Supreme Being*; the three grand requiſites, namely, of wiſdom, of goodneſs, and of power: wiſdom, to diſcern the real intereſt of the community; goodneſs, to endeavour always to purſue that real intereſt; and ſtrength or power to carry this knowledge and intention into action. Theſe are the natural foundations of ſovereignty, and theſe are the requiſites that ought to be found in every well conſtituted frame of government.

How the ſeveral forms of government we now ſee in the world at firſt actually began, is matter of great uncertainty, and has occaſioned infinite diſputes. It is not our buſineſs or intention to enter into any of them. However they began, or by what right ſoever they ſubſiſt, there is and muſt be in all of them a ſupreme, irreſiſtible, abſolute, uncontrolled authority, in which the *jura ſummi imperii*, or the rights of ſovereignty, reſide. And this authority is placed in thoſe hands, wherein (according to the opinion of the founders of ſuch reſpective ſtates, either expreſsly given or collected from their tacit approbation) the qualities requiſite for ſupremacy, wiſdom, goodneſs, and power, are the moſt likely to be found.

14 Different forms thereof.

The political writers of antiquity will not allow more than three regular forms of government: the firſt, when the ſovereign power is lodged in an aggregate aſſembly conſiſting of all the members of a community which is called a *democracy*; the ſecond, when it is lodged in a council compoſed of ſelect members, and then it is ſtyled an *ariſtocracy*; the laſt, when it is entruſted in the hands of a ſingle perſon, and then it takes the name of a *monarchy*. All other ſpecies of government, they ſay, are either corruptions of, or reducible to, theſe three.

By the ſovereign power, as was before obſerved, is meant the making of laws; for wherever that power reſides, all others muſt conform to and be directed by it, whatever appearance the outward form and adminiſtration of the government may put on. For it is at any time in the option of the legiſlature to alter that form and adminiſtration by a new edict or rule, and to put the execution of the laws into whatever hands it pleaſes: and all the other powers of the ſtate muſt obey the legiſlative power in the execution of their ſeveral functions, or elſe the conſtitution is at an end.

In a democracy, where the right of making laws reſides in the people at large, public virtue or goodneſs of intention is more likely to be found than either of the other qualities of government. Popular aſſemblies are frequently fooliſh in their contrivance, and weak in their execution; but generally mean to do the thing that is right and juſt, and have always a degree of patriotiſm or public ſpirit. In ariſtocracies there is more wiſdom to be found than in the other forms of government; being compoſed, or intended to be compoſed, of the moſt experienced citizens: but there is leſs honeſty than in a republic, and leſs ſtrength than in a monarchy. A monarchy is indeed the moſt powerful of any, all the ſinews of government being knit and united together in the hand of the prince; but then there is imminent danger of his employing that ſtrength to improvident or oppreſſive purpoſes.

Thus theſe three ſpecies of government have all of them their ſeveral perfections and imperfections. Democracies are uſually the beſt calculated to direct the end of a law; ariſtocracies, to invent the means by which that end ſhall be obtained; and monarchies, to carry thoſe means into execution. And the ancients, as was obſerved, had in general no idea of any other permanent form of government but theſe three: for though Cicero declares himſelf of opinion, "*eſſe optime conſtitutam rempublicam, quæ ex tribus generibus illis, regali, optimo, et populari, ſit modice confuſa*;" yet Tacitus treats this notion of a mixed government, formed out of them all, and partaking of the advantages of each, as a viſionary whim, and one that, if effected, could never be laſting or ſecure.

15 Britiſh conſtitution.

But, happily for mankind, the Britiſh conſtitution has long remained, and we truſt will long continue, a ſtanding exception to the truth of this obſervation. For, as with them the executive power of the laws is lodged in a ſingle perſon, they have all the advantages of ſtrength and diſpatch that are to be found in the moſt abſolute monarchy: and, as the legiſlature of that kingdom is entruſted to three diſtinct powers, entirely independent of each other; firſt, the king; ſecondly, the lords ſpiritual and temporal, which is an ariſtocratical aſſembly of perſons ſelected for their piety, their birth, their wiſdom, their valour, or their property; and, thirdly, the houſe of commons, freely choſen by the people from among themſelves, which makes it a kind of democracy; as this aggregate body, actuated by different ſprings and attentive to different intereſts, compoſes the Britiſh parliament, and has the ſupreme diſpoſal of every thing, there can no inconvenience be attempted by either of the three branches, but may be withſtood by one of the other two, each branch being armed with a negative power ſufficient to repel any innovation which it ſhall think inexpedient or dangerous.

“Here, then, is lodged the ſovereignty of the Britiſh conſtitution; and lodged as beneficially as is poſſible for ſociety. For in no other ſhape could we be ſo certain of finding the three great qualities of government ſo well and ſo happily united. If the ſupreme power were lodged in any one of the three branches ſeparately, we muſt be expoſed to the inconveniences of either abſolute monarchy, ariſtocracy, or democracy; and ſo want two of the three principal ingredients of good polity, either virtue, wiſdom, or power. If it were lodged in any two of the branches; for inſtance, in the king and houſe of lords; our laws might be providently made and well executed, but they might not always have the good of the people in view: if lodged in the king and commons, we ſhould want that circumſpection and mediatory caution, which the wiſdom of the peers is to afford: if the ſupreme rights of legiſlature were lodged in the two houſes only, and the king had no negative upon their proceedings, they might be tempted to encroach upon the royal prerogative, or perhaps to aboliſh the kingly office, and thereby weaken (if not totally deſtroy) the ſtrength of the executive power. But the conſtitutional government of this iſland is ſo admirably tempered and compounded, that nothing can endanger or hurt it, but deſtroying the equilibrium of power between one branch of the legiſlature and the reſt. For if ever it ſhould happen, that the independence of any one of the three ſhould be loſt, or that it ſhould become ſubſervient to the views of either of the other two, there would ſoon be an end of our conſtitution. The legiſlature would be changed from that which was originally ſet up by the general conſent and fundamental act of the ſociety: and ſuch a change, however effected, is, according to Mr Locke (who perhaps carries his theory too far), at once an entire diſſolution of the bands of government; and the people are thereby reduced to a ſtate of anarchy, with liberty to conſtitute to themſelves a new legiſlative power.”

16 Having thus curſorily conſidered the three uſual ſpecies of government, and our own ſingular conſtitution ſelected and compounded from them all, we proceed to obſerve, that, as the power of making laws conſtitutes the ſupreme authority, ſo wherever the ſupreme authority in any ſtate reſides, it is the right of that authority to make laws; that is, in the words of our definition, *to preſcribe the rule of civil action.* And this may be diſcovered from the very end and inſtitution of civil ſtates. For a ſtate is a collective body, compoſed of a multitude of individuals, united for their ſafety and convenience, and intending to act together as one man. If it therefore is to act as one man, it ought to act by one uniform will. But, inaſmuch as political communities are made up of many natural perſons, each of whom has his particular will and inclination, theſe ſeveral wills cannot by any natural union be joined together, or tempered and diſpoſed into a laſting harmony, ſo as to conſtitute and produce that one uniform will of the whole. It can therefore be no otherwiſe produced than by a political union; by the conſent of all perſons to ſubmit their own private wills to the will of one man, or of one or more aſſemblies of men, to whom the ſupreme authority is entruſted; and this will of that one man, or aſſemblage of men, is in different ſtates, according to their different conſtitutions, underſtood to be law.

Thus far as to the right of the ſupreme power to make laws: but farther, it is its duty likewiſe. For ſince the reſpective members are bound to conform themſelves to the will of the ſtate, it is expedient that they receive directions from the ſtate declaratory of that its will. But as it is impoſſible, in ſo great a multitude, to give injunctions to every particular man, relative to each particular action, therefore the ſtate eſtabliſhes general rules, for the perpetual information and direction of all perſons in all points, whether of poſitive or negative duty: and this, in order that every man may know what to look upon as his own, what as another's; what abſolute and what relative duties are required at his hands; what is to be eſteemed honeſt, diſhoneſt, or indifferent; what degree every man retains of his natural liberty, and what he has given up as the price of the benefits of ſociety; and after what manner each perſon is to moderate the uſe and exerciſe of thoſe rights which the ſtate aſſigns him, in order to promote and ſecure the public tranquillity.

17 Second branch of the definition, illuſtrated.

From what has been advanced, the truth of the former branch of our definition is (we truſt) ſufficiently evident; that “municipal law is a rule of civil conduct, preſcribed *by the ſupreme power in a ſtate.*” We proceed now to the latter branch of it; that it is a rule ſo preſcribed, “commanding what is right, and prohibiting what is wrong.”

Now, in order to do this completely, it is firſt of all neceſſary that the boundaries of right and wrong be eſtabliſhed and aſcertained by law. And when this is once done, it will follow of courſe, that it is likewiſe the buſineſs of the law, conſidered as a rule of civil conduct, to enforce theſe rights, and to reſtrain or redreſs theſe wrongs. It remains therefore only to conſider, in what manner the law is ſaid to aſcertain the boundaries of right and wrong; and the methods which it takes to command the one and prohibit the other.

For this purpoſe, every law may be ſaid to conſiſt of ſeveral parts; one, declaratory; whereby the rights to be obſerved, and the wrongs to be eſchewed, are clearly defined and laid down: another, directory; whereby the ſubject is inſtructed and enjoined to obſerve thoſe rights, and to abſtain from the commiſſion of thoſe wrongs: a third, remedial; whereby a method is pointed out to recover a man's private rights, or redreſs his private wrongs: to which may be added a fourth, uſually termed the *ſanction* or *vindicatory* branch of the law; whereby it is ſignified what evil or penalty ſhall be incurred by ſuch as commit any public wrongs, and tranſgreſs or neglect their duty.

18 Declaratory part of the law.

With regard to the firſt of theſe, the *declaratory* part of the municipal law; this depends not ſo much upon the law of revelation or of nature, as upon the wiſdom and will of the legiſlator. This doctrine, which before was ſlightly touched, deſerves a more particular explication. Thoſe rights, then, which God and nature have eſtabliſhed, and are therefore called *natural rights,* ſuch as are life and liberty, need not the aid of human laws to be more effectually inveſted in every man than they are; neither do they receive any additional ſtrength when declared by the municipal laws to be inviolable. On the contrary, no human legiſlature has power to abridge or deſtroy them, unleſs the owner ſhall himſelf commit ſome act that amounts to a forfeiture. Neither do divine or natural *duties* (ſuch as, for inſtance, the worſhip of God, the maintenance of children, and the like) receive any ſtrong ſanction from being alſo declared to be duties by the law of the land. The caſe is the ſame as to crimes and miſdemeanours, that are forbidden by the ſuperior laws, and therefore ſtyled *mala in ſe*, ſuch as murder, theft, and perjury; which contract no additional turpitude from being declared unlawful by the inferior legiſlature. For that legiſlature in all theſe caſes acts only, as was before obſerved, in ſubordination to the great Lawgiver, tranſcribing and publiſhing his precepts. So that, upon the whole, the declaratory part of the municipal law has no force or operation at all, with regard to actions that are naturally and intrinſically right or wrong.

But with regard to things in themſelves indifferent, the caſe is entirely altered. Theſe become either right or wrong, juſt or unjuſt, duties or miſdemeanors, according as the municipal legiſlator ſees proper, for promoting the welfare of the ſociety, and more effectually carrying on the purpoſes of civil life. Thus our own common law has declared, that the goods of the wife do inſtantly upon marriage become the property and right of the huſband; and our ſtatute law has declared all monopolies a public offence: yet that right, and this offence, have no foundation in nature; but are merely created by the law, for the purpoſes of civil ſociety. And ſometimes, where the thing itſelf has its riſe from the law of nature, the particular circumſtances and mode of doing it become right or wrong, as the laws of the land ſhall direct. Thus, for inſtance, in civil duties; obedience to ſuperiors is the doctrine of revealed as well as natural religion: but who thoſe ſuperiors ſhall be, and in what circumſtances, or to what degrees they ſhall be obeyed, is the province of human laws to determine. And ſo, as to injuries or crimes, it muſt be left to our own legiſlature to decide, in what caſes the ſeizing another's cattle ſhall amount to the crime of robbery; and where it ſhall be a juſtifiable action, as when a landlord takes them by way of diſtreſs for rent.

19 Directory part. Thus much for the declaratory part of the municipal law: and the *directory* ſtands much upon the ſame footing; for this virtually includes the former, the declaration being uſually collected from the direction. The law that ſays, "Thou ſhalt not ſteal," implies a declaration that ſtealing is a crime. And we have ſeen, that, in things naturally indifferent, the very eſſence of right and wrong depends upon the direction of the laws to do or to omit them.

20 Remedial part. The *remedial* part of a law is ſo neceſſary a conſequence of the former two, that laws muſt be very vague and imperfect without it. For in vain would rights be declared, in vain directed to be obſerved, if there were no method of recovering and aſſerting thoſe rights when wrongfully with-held or invaded. This is what we mean properly, when we ſpeak of the protection of the law. When, for inſtance, the declaratory part of the law has ſaid, "that the field or inheritance which belonged to Titius's father is veſted by his death in Titius," and the directory part has "forbidden any one to enter on another's property without the leave of the owner;" if Gaius after this will preſume to take poſſeſſion of the land, the remedial part of the law will then interpoſe its office; will make Gaius reſtore the poſſeſſion to Titius, and alſo pay him damages for the invaſion.

With regard to the ſanction of laws, or the evil that may attend the breach of public duties; it is obſerved, that human legiſlators have for the moſt part choſen to make the ſanction of their laws rather vindicatory than remuneratory, or to conſiſt rather in puniſhments than in actual particular rewards: Becauſe, in the firſt place, the quiet enjoyment and protection of all our civil rights and liberties, which are the ſure and general conſequence of obedience to the municipal law, are in themſelves the beſt and moſt valuable of all rewards: becauſe alſo, were the exerciſe of every virtue to be inforced by the propoſal of particular rewards, it were impoſſible for any ſtate to furniſh ſtock enough for ſo profuſe a bounty: and farther, becauſe the dread of evil is a much more forcible principle of human actions than the proſpect of good. For which reaſons, though a prudent beſtowing of rewards is ſometimes of exquiſite uſe, yet we find that thoſe civil laws, which enforce and enjoin our duty, do ſeldom, if ever, propoſe any privilege or gift to ſuch as obey the law; but do conſtantly come armed with a penalty denounced againſt tranſgreſſors, either expreſsly defining the nature and quantity of the puniſhment, or elſe leaving it to the diſcretion of the judges, and thoſe who are intruſted with the care of putting the laws in execution.

21 Vindicatory parts. Of all the parts of a law the moſt effectual is the *vindicatory*. For it is but loſt labour to ſay, "Do this, or avoid that," unleſs we alſo declare, "This ſhall be the conſequence of your non-compliance." We muſt therefore obſerve, that the main ſtrength and force of a law conſiſts in the penalty annexed to it. Herein is to be found the principal obligation of human laws.

Legiſlators and their laws are ſaid to *compel* and *oblige*: not that, by any natural violence, they ſo conſtrain a man as to render it impoſſible for him to act otherwiſe than as they direct, which is the ſtrict ſenſe of obligation; but becauſe, by declaring and exhibiting a penalty againſt offenders, they bring it to paſs that no man can eaſily chooſe to tranſgreſs the law; ſince, by reaſon of the impending correction, compliance is in a high degree preferable to diſobedience. And, even where rewards are propoſed as well as puniſhments threatened, the obligation of the law ſeems chiefly to conſiſt in the penalty: for rewards, in their nature, can only perſuade and allure; nothing is compulſory but puniſhment.

It is true, it hath been holden, and very juſtly, by the principal of our ethical writers, that human laws are binding upon men's conſciences. But if that were the only or moſt forcible obligation, the good only would regard the laws, and the bad would ſet them at defiance. And, true as this principle is, it muſt ſtill be underſtood with ſome reſtriction. It holds, we apprehend, as to *rights*; and that, when the law has determined the field to belong to Titius, it is a matter of conſcience no longer to with-hold or to invade it. So alſo in regard to *natural duties*, and ſuch offences as are *mala-*

mala in ſe: here we are bound in conſcience, becauſe we are bound by ſuperior laws, before thoſe human laws were in being, to perform the one, and abſtain from the other. But in relation to thoſe laws which enjoin only poſitive duties, and forbid only ſuch things as are not *mala in ſe*, but *mala prohibita* merely, without any intermixture of moral guilt, annexing a penalty to non-compliance; here ſeems to be conſcience no farther concerned, than by directing a ſubmiſſion to the penalty, in caſe of our breach of thoſe laws: for otherwiſe the multitude of penal laws in a ſtate would not only be looked upon as an impolitic, but would alſo be a very wicked, thing; if every ſuch law were a ſnare for the conſcience of the ſubject. But in theſe caſes the alternative is offered to every man; "either abſtain from this, or ſubmit to ſuch a penalty:" and his conſcience will be clear, which ever ſide of the alternative he thinks proper to embrace. Thus, by the ſtatutes for preſerving the game in Britain, a penalty is denounced againſt every unqualified perſon that kills a hare, and againſt every perſon who poſſeſſes a partridge in Auguſt. And ſo too, by other ſtatutes, pecuniary penalties are inflicted for exerciſing trades without ſerving an apprenticeſhip thereto, for erecting cottages without annexing four acres of land to each, for not burying the dead in woollen, for not performing ſtatute-work on the public roads, and for innumerable other poſitive miſdemeanors. Now theſe prohibitory laws do not make the tranſgreſſion a moral offence, or ſin: the only obligation in conſcience is to ſubmit to the penalty, if levied. It muſt, however, be obſerved, that we are here ſpeaking of laws that are ſimply and purely penal, where the thing forbidden or enjoined is wholly a matter of indifference, and where the penalty inflicted is an adequate compenſation for the civil inconvenience ſuppoſed to ariſe from the offence. But where diſobedience to the law involves in it alſo any degree of public miſchief or private injury, there it falls within our former diſtinction, and is alſo an offence againſt conſcience.

We have now gone through the definition laid down of a municipal law; and have ſhown that it is "a rule—of civil conduct—preſcribed—by the ſupreme power in a ſtate—commanding what is right, and prohibiting what is wrong:" in the explication of which we have endeavoured to interweave a few uſeful principles, concerning the nature of civil government, and the obligation of human laws. Before we conclude this part, it may not be amiſs to add a few obſervations concerning the interpretations of laws.

22
Of the interpretation of laws.

When any doubt aroſe upon the conſtruction of the Roman laws, the uſage was to ſtate the caſe to the emperor in writing, and take his opinion upon it. This was certainly a bad method of interpretation. To interrogate the legiſlature to decide particular diſputes, is not only endleſs, but affords great room for partiality and oppreſſion. The anſwers of the emperor were called his reſcripts, and theſe had in ſucceeding caſes the force of perpetual laws; though they ought to be carefully diſtinguiſhed, by every rational civilian, from thoſe general conſtitutions which had only the nature of things for their guide. The emperor Macrinus, as his hiſtorian Capitolinus informs us, had once reſolved to aboliſh theſe reſcripts, and retain only the general edicts: he could not bear that the haſty and crude anſwers of ſuch princes as Commodus and Caracalla ſhould be reverenced as laws. But Juſtinian thought otherwiſe, and he has preſerved them all. In like manner the canon laws, or decretal epiſtles of the popes, are all of them reſcripts in the ſtricteſt ſenſe. Contrary to all true forms of reaſoning, they argue from particulars to generals.

The faireſt and moſt rational method to interpret the will of the legiſlator, is by exploring his intentions at the time when the law was made, by ſigns the moſt natural and probable. And theſe ſigns are either the words, the context, the ſubject-matter, the effects and conſequence, or the ſpirit and reaſon of the law. Let us take a ſhort view of them all.

23 1. *Words* are generally to be underſtood in their uſual and moſt known ſignification; not ſo much regarding the propriety of grammar, as their general and popular uſe. Thus the law mentioned by Puffendorf, which forbad a layman to lay hands on a prieſt, was adjudged to extend to him who had hurt a prieſt with a weapon. Again: Terms of art, or technical terms, muſt be taken according to the acceptation of the learned in each art, trade, and ſcience. So in the act of ſettlement, where the crown of England is limited "to the princeſs of Sophia, and the heirs of her body, being Proteſtants, it becomes neceſſary to call in the aſſiſtance of lawyers, to aſcertain the preciſe idea of the words "heirs of her body;" which in a legal ſenſe compriſe only certain of her lineal deſcendants. Laſtly, where words are clearly repugnant in two laws, the latter law takes place of the elder; *leges poſteriores priores contrarias abrogant*, is a maxim of univerſal law, as well as of our own conſtitutions. And accordingly it was laid down by a law of the twelve tables at Rome, *Quod populus poſtremum juſſit, id jus ratum eſto.*

24 2. If words happen to be ſtill dubious, we may eſtabliſh their meaning from the *context*; with which it may be of ſingular uſe to compare a word or a ſentence, whenever they are ambiguous, equivocal, or intricate. Thus the proëme, or preamble, is often called in to help the conſtruction of an act of parilament. Of the ſame nature and uſe is the compariſon of a law with other laws that are made by the ſame legiſlator, that have ſome affinity with the ſubject, or that expreſsly relate to the ſame point. Thus, when the law of England declares murder to be felony without benefit of clergy, we muſt reſort to the ſame law of England to learn what the benefit of clergy is: and, when the common law cenſures ſimoniacal contracts, it affords great light to the ſubject to conſider what the canon law has adjudged to be ſimony.

25 3. As to the *ſubject-matter*, words are always to be underſtood as having a regard thereto; for that is always ſuppoſed to be in the eye of the legiſlator, and all his expreſſions directed to that end. Thus, when a law of Edward III. forbids all eccleſiaſtical perſons to purchaſe proviſions at Rome, it might ſeem to prohibit the buying of grain and other victual; but when we conſider that the ſtatute was made to repreſs the uſurpations of the papal ſee, and that the nominations to benefices by the Pope were called *proviſions*, we ſhall ſee that the reſtraint is intended to be laid upon ſuch proviſions only.

26 4. As to the effects and *conſequence*, the rule is,

That where words bear either none, or a very abſurd ſignification, if literally underſtood, we muſt a little deviate from the received ſenſe of them. Therefore the Bolognian law, mentioned by Puffendorf, which enacted "that whoever drew blood in the ſtreets ſhould be puniſhed with the utmoſt ſeverity," was held after long debate not to extend to the ſurgeon who opened the vein of a perſon that fell down in the ſtreet with a fit.

27 5. But, laſtly, the moſt univerſal and effectual way of diſcovering the true meaning of a law, when the words are dubious, is by conſidering the *reaſon* and *ſpirit* of it, or the cauſe which moved the legiſlator to enact it. For when this reaſon ceaſes, the law itſelf ought likewiſe to ceaſe with it. An inſtance of this is given in a caſe put by Cicero, or whoever was the author of the rhetorical treatiſe inſcribed to Herennius. There was a law, That thoſe who in a ſtorm forſook the ſhip ſhould forfeit all property therein, and the ſhip and lading ſhould belong entirely to thoſe who ſtaid in it. In a dangerous tempeſt, all the mariners forſook the ſhip, except only one ſick paſſenger, who by reaſon of his diſeaſe was unable to get out and eſcape. By chance the ſhip came ſafe to port. The ſick man kept poſſeſſion, and claimed the benefit of the law. Now here all the learned agree, that the ſick man is not within the reaſon of the law; for the reaſon of making it was, to give encouragement to ſuch as ſhould venture their lives to ſave the veſſel: but this is a merit which he could never pretend to, who neither ſtaid in the ſhip upon that account, nor contributed any thing to its preſervation.

[28] 34 Equity. From this method of interpreting laws by the reaſon of them, ariſes what we call *equity*: which is thus defined by Grotius, "the correction of that, wherein the law (by reaſon of its univerſality) is deficient." For ſince in laws all caſes cannot be foreſeen or expreſſed, it is neceſſary, that, when the general decrees of the law come to be applied to particular caſes, there ſhould be ſomewhere a power veſted of defining thoſe circumſtances, which (had they been foreſeen) the legiſlator himſelf would have expreſſed. And theſe are the caſes which, according to Grotius, "*lex non exacte definit, ſed arbitrio boni viri permittit.*"

Equity thus depending, eſſentially, upon the particular circumſtances of each individual caſe, there can be no eſtabliſhed rules and fixed precepts of equity laid down, without deſtroying its very eſſence, and reducing it to a poſitive law. And, on the other hand, the liberty of conſidering all caſes in an equitable light muſt not be indulged too far; leſt thereby we deſtroy all law, and leave the deciſion of every queſtion entirely in the breaſt of the judge. And law, without equity, though hard and diſagreeable, is much more deſirable for the public good, than equity without law; which would make every judge a legiſlator, and introduce almoſt infinite confuſion: as there would then be almoſt as many different rules of action laid down in our courts, as there are differences of capacity and ſentiment in the human mind.

35 Plan of the two following parts. HAVING thus conſidered the nature of laws in general, we ſhall proceed to give a view of the particular law; 1. Of England; 2. Of Scotland. The Engliſh law, however, being too extenſive to admit of detail in a body, we can only here give ſuch a ſketch of it as may be ſufficient to ſhow the connection of its parts; but the principal of theſe parts themſelves are explained at large, under their proper names, in the general alphabet.—A contrary method is followed with regard to the law of Scotland. This being leſs extenſive, is given in a body, with all its parts not only in regular connection, but ſufficiently explained; theſe parts, again, not being explained in the order of the alphabet, but marked with numerical references to their explanations in the ſyſtem.

Part II. THE LAW OF ENGLAND.

INTRODUCTION.

THE municipal law of England, or the rule of civil conduct preſcribed to the inhabitants of that kingdom, may with ſufficient propriety be divided into two kinds: the *lex non ſcripta*, the unwritten or common law; and the *lex ſcripta*, the written or ſtatute law.

36 Common law. The *lex non ſcripta*, or unwritten law, includes not only general cuſtoms, or the common law properly ſo called; but alſo the particular cuſtoms of certain parts of the kingdom, and likewiſe theſe particular laws that are by cuſtom obſerved only in certain courts and juriſdictions.

In calling theſe parts of the law *leges non ſcriptæ*, we would not be underſtood as if all thoſe laws were at preſent merely oral, or communicated from the former ages to the preſent ſolely by word of mouth. It is true indeed, that in the profound ignorance of letters which formerly overſpread the whole weſtern world, all laws were entirely traditional; for this plain reaſon, that the nations among which they prevailed had but little idea of writing. Thus the Britiſh as well as the Gallic druids committed all their laws as well as learning to memory; and it is ſaid of the primitive Saxons here, as well as their brethren on the continent, that *leges ſola memoria et uſu retinebant*. But, with us at preſent, the monuments and evidences of our legal cuſtoms are contained in the records of the ſeveral courts of juſtice, in books of reports and judicial deciſions, and in the treatiſes of learned ſages of the profeſſion, preſerved and handed down to us from the times of higheſt antiquity. However, we therefore ſtyle theſe parts of our law *leges non ſcriptæ*, becauſe their original inſtitution and authority are not ſet down in writing, as acts of parliament are; but they receive their binding power, and the force of laws, by long and immemorial uſage, and by their univerſal reception throughout the kingdom; in like manner as Aulus Gellius defines the *jus non ſcriptum* to be that which is *tacito et illiterato hominum conſenſu et moribus expreſſum*.

Our ancient lawyers, and particularly Forteſcue, inſiſt with abundance of warmth, that theſe cuſtoms are as old as the primitive Britons, and continued down through the ſeveral mutations of government and inhabitants, to the preſent time, unchanged and unadulterated. This may be the caſe as to ſome. But in general, as Mr Selden in his notes obſerves, this aſſertion muſt be underſtood with many grains of allowance; and ought only to ſignify, as the truth ſeems to be, that there never was any formal exchange of one ſyſtem of laws for another: though doubtleſs, by the intermixture of adventitious nations, the Romans, the Picts, the Saxons, the Danes, and the Normans, they muſt have inſenſibly introduced and incorporated many of their own cuſtoms with thoſe that were before eſtabliſhed; thereby, in all probability, improving the texture and wiſdom of the whole, by the accumulated wiſdom of divers particular countries. Our laws, ſaith lord Bacon, are mixed as our language; and as our language is ſo much the richer, the laws are the more complete.

And indeed our antiquarians and firſt hiſtorians do all poſitively aſſure us, that our body of laws is of this compounded nature. For they tell us, that in the time of Alfred the local cuſtoms of the ſeveral provinces of the kingdom were grown ſo various, that he found it expedient to compile his dome book, or *liber judicialis*, for the general uſe of the whole kingdom. This book is ſaid to have been extant ſo late as the reign of Edward IV. but is now unfortunately loſt. It contained, we may probably ſuppoſe, the principal maxims of the common law, the penalties for miſdemeanors, and the forms of judicial proceedings. Thus much may at leaſt be collected from that injunction to obſerve it, which we find in the laws of king Edward the elder, the ſon of Alfred. *Omnibus qui reipublicæ præſunt etiam atque etiam mando, ut omnibus æquos ſe præbeant judices, perinde ac in judiciali libro ſcriptum habetur: nec quiquam formident quin jus commune audacter liberèque dicant.*

But the irruption and eſtabliſhment of the Danes in England, which followed ſoon after, introduced new cuſtoms, and cauſed this code of Alfred in many provinces to fall into diſuſe, or at leaſt to be mixed and debaſed with other laws of a coarſer alloy. So that, about the beginning of the 11th century there were three principal ſyſtems of laws prevailing in different diſtricts. 1. The *Mercen Lage*, or Mercian laws, which were obſerved in many of the inland counties, and thoſe bordering on the principality of Wales, the retreat of the ancient Britons; and therefore very probably intermixed with the Britiſh or Druidical cuſtoms. 2. The *Weſt Saxon Lage*, or laws of the Weſt Saxons, which obtained in the counties to the ſouth and weſt of the iſland, from Kent to Devonſhire. Theſe were probably much the ſame with the laws of Alfred abovementioned, being the municipal law of the far moſt conſiderable part of his dominions, and particularly including Berkſhire, the ſeat of his peculiar reſidence. 3. The *Dane Lage*, or Daniſh law, the very name of which ſpeaks its original and compoſition. This was principally maintained in the reſt of the midland counties, and alſo on the eaſtern coaſt, the part moſt expoſed to the viſits of that piratical people. As for the very northern provinces, they were at that time under a diſtinct government.

Out of theſe three laws, Roger Hoveden and Ranulphus Ceſtrenſis inform us, king Edward the confeſſor extracted one uniform law, or digeſt of laws, to be obſerved throughout the whole kingdom; though Hoveden and the author of an old manuſcript chronicle aſſure us likewiſe, that this work was projected and begun by his grandfather king Edgar. And indeed a general digeſt of the ſame nature has been conſtantly found expedient, and therefore put in practice by other great nations, which were formed from an aſſemblage of little provinces, governed by peculiar cuſtoms. As in Portugal, under king Edward, about the beginning of the 15th century. In Spain, under Alonzo X. who about the year 1250 executed the plan of his father St Ferdinand, and collected all the provincial cuſtoms into one uniform law, in the celebrated code entitled *las partidas*. And in Sweden, about the ſame era, a univerſal body of common law was compiled out of the particular cuſtoms eſtabliſhed by the laghman of every province, and entitled the *land's lagh*, being analogous to the common law of England.

Both theſe undertakings, of king Edgar and Edward the Confeſſor, ſeem to have been no more than a new edition, or freſh promulgation, of Alfred's code or dome-book, with ſuch additions and improvements as the experience of a century and an half had ſuggeſted. For Alfred is generally ſtyled by the ſame hiſtorians the *legum Anglicanarum conditor*, as Edward the confeſſor is the *reſtitutor*. Theſe, however, are the laws which Engliſh hiſtories ſo often mention under the name of the *laws of Edward the Confeſſor*; which our anceſtors ſtruggled ſo hardly to maintain, under the firſt princes of the Norman line; and which ſubſequent princes ſo frequently promiſed to keep and to reſtore, as the moſt popular act they could do, when preſſed by foreign emergencies or domeſtic diſcontents. Theſe are the laws, that ſo vigorouſly withſtood the repeated attacks of the civil law; which eſtabliſhed in the 12th century a new Roman empire over the moſt of the ſtates on the continent: ſtates that have loſt, and perhaps upon that account, their political liberties; while the free conſtitution of England, perhaps upon the ſame account, has been rather improved than debaſed. Theſe, in ſhort, are the laws which gave riſe and origin to that collection of maxims and cuſtoms which is now known by the name of the *common law*. 38 Common law. A name either given to it, in contradiſtinction to other laws, as the ſtatute law, the civil law, the law merchant, and the like; or, more probably, as a law common to all the realm, the *jus commune* or *folcright*, mentioned by king Edward the Elder, after the abolition of the ſeveral provincial cuſtoms and particular laws before mentioned.

But though this is the moſt likely foundation of this collection of maxims and cuſtoms; yet the maxims and cuſtoms, ſo collected, are of higher antiquity than memory or hiſtory can reach: nothing being more difficult than to aſcertain the preciſe beginning and firſt ſpring of an ancient and long-eſtabliſhed cuſtom. Whence it is, that in our law the goodneſs of a cuſtom depends upon its having been uſed time out of mind; or, in the ſolemnity of our legal phraſe, time whereof the memory of man runneth not to the contrary. This it is that gives it its weight and authority; and of this nature are the maxims and cuſtoms which compoſe the common law, or *lex non ſcripta*, of England.

This unwritten, or common law, is properly diſtinguiſhable into three kinds: 1. General cuſtoms; which are the univerſal rule of the whole kingdom, and form the common law in its ſtricter and more uſual ſignification. 2. Particular cuſtoms; which for the moſt part affect only the inhabitants of particular diſtricts. 3. Certain particular laws; which by cuſtom are adopted and uſed by ſome particular courts, of pretty general and extenſive juriſdiction.

39 Firſt branch of the unwritten law: General cuſtoms.

I. As to general cuſtoms, or the common law properly ſo called; this is that law, by which proceedings and determinations in the king's ordinary courts of juſtice are guided and directed. This, for the moſt part, ſettles the courſe in which lands deſcend by inheritance; the manner and form of acquiring and transferring property; the ſolemnities and obligation of contracts; the rules of expounding wills, deeds, and acts of parliament; the reſpective remedies of civil injuries; the ſeveral ſpecies of temporal offences, with the manner and degree of puniſhment, and an infinite number of minuter particulars, which diffuſe themſelves as extenſively as the ordinary diſtribution of common juſtice requires. Thus, for example, that there ſhall be four ſuperior courts of record, the chancery, the king's bench, the common pleas, and the exchequer;—that the eldeſt ſon alone is heir to his anceſtor;—that property may be acquired and transferred by writing;—that a deed is of no validity unleſs ſealed and delivered;—that wills ſhall be conſtrued more favourably, and deeds more ſtrictly;—that money lent upon bond is recoverable by action of debt;—that breaking the public peace is an offence and puniſhable by fine and impriſonment:—all theſe are doctrines that are not ſet down in any written ſtatute or ordinance; but depend merely upon immemorial uſage, that is, upon common law, for their ſupport.

Some have divided the common law into two principal grounds or foundations: 1. Eſtabliſhed cuſtoms; ſuch as that, where there are three brothers, the eldeſt brother ſhall be heir to the ſecond, in excluſion of the youngeſt, and, 2. Eſtabliſhed rules and maxims; as, "that the king can do no wrong, that no man ſhall be bound to accuſe himſelf," and the like. But theſe ſeem to be one and the ſame thing. For the authority of theſe maxims reſts entirely upon general reception and uſage; and the only method of proving that this or that maxim is a rule of the common law, is by ſhowing that it hath been always the cuſtom to obſerve it.

But here a very natural, and very material, queſtion ariſes: How are theſe cuſtoms or maxims to be known, and by whom is their validity to be determined? The anſwer is, By the judges in the ſeveral courts of juſtice. They are the depoſitory of the laws; the living oracles who muſt decide in all caſes of doubt, and who are bound by an oath to decide according to the law of the land. Their knowledge of that law is derived from experience and ſtudy; from the *viginti annorum lucubrationes*, which Forteſcue mentions; and from being long perſonally accuſtomed to the judicial deciſions of their predeceſſors. And indeed theſe judicial deciſions are the principal and moſt authoritative evidence, that can be given, of the exiſtence of ſuch a cuſtom as ſhall form a part of the common law. The judgment itſelf, and all the proceedings previous thereto, are carefully regiſtered and preſerved under the name of *records*, in public repoſitories ſet apart for that particular purpoſe; and to them frequent recourſe is had, when any critical queſtion ariſes, in the determination of which former precedents may give light or aſſiſtance. And therefore, even ſo early as the conqueſt, we find the *præteritorum memoria eventorum* reckoned up as one of the chief qualifications of thoſe who were held to be *legibus patriæ optime inſtituti*. For it is an eſtabliſhed rule, To abide by former precedents, where the ſame points come again in litigation: as well to keep the ſcale of juſtice even and ſteady, and not liable to waver with every new judge's opinion; as alſo becauſe the law in that caſe being ſolemnly declared and determined, what before was uncertain, and perhaps indifferent, is now become a permanent rule, which it is not in the breaſt of any ſubſequent judge to alter or vary from according to his private ſentiments: he being ſworn to determine, not according to his own private judgement, but according to the known laws and cuſtoms of the land; not delegated to pronounce a new law, but to maintain and expound the old one. Yet this rule admits of exception, where the former determination is moſt evidently contrary to reaſon; much more if it be contrary to the divine law. But, even in ſuch caſes, the ſubſequent judges do not pretend to make a new law, but to vindicate the old one from miſrepreſentation. For if it be found that the former deciſion is manifeſtly abſurd or unjuſt, it is declared, not that ſuch a ſentence was bad law, but that it was not law; that is, that it is not the eſtabliſhed cuſtom of the realm, as has been erroneouſly determined. And hence it is that our lawyers are with juſtice ſo copious in their encomiums on the reaſon of the common law; that they tell us, that the law is the perfection of reaſon, that it always intends to conform thereto, and that what is not reaſon is not law. Not that the particular reaſon of every rule in the law can at this diſtance of time be always preciſely aſſigned; but it is ſufficient that there be nothing in the rule flatly contradictory to reaſon, and then the law will preſume it to be well founded. And it hath been an ancient obſervation in the laws of England, that whenever a ſtanding rule of law, of which the reaſon perhaps could not be remembered or diſcerned, hath been wantonly broke in upon by ſtatutes or new reſolutions, the wiſdom of the rule hath in the end appeared from the inconveniences that have followed the innovation.

The doctrine of the law then is this: That precedents and rules muſt be followed, unleſs flatly abſurd or unjuſt: for though their reaſon be not obvious at firſt view, yet we owe ſuch a deference to former times, as not to ſuppoſe they acted wholly without conſideration. To illuſtrate this doctrine by examples. It has been determined, time out of mind, that a brother of the half blood ſhall never ſucceed as heir to the eſtate of his half brother, but it ſhall rather eſcheat to the king or other ſuperior lord. Now this is a poſitive law, fixed and eſtabliſhed by cuſtom; which cuſtom is evinced by judicial deciſions; and therefore can never be departed from by any modern judge without a breach of his oath and the law. For herein there is nothing repugnant to natural juſtice; though the artificial reaſon of it, drawn from the feodal law may not be quite obvious to every body. And therefore, on account of a ſuppoſed hardſhip upon the half brother, a modern judge might wiſh it had been otherwiſe ſettled; yet it is not in his power to alter it. But if any court were now to determine, that an elder brother of the half blood might enter upon and ſeize any lands that were purchaſed by his younger brother, no ſubſequent judges would ſcruple to declare that ſuch prior determination was unjuſt, was unreaſonable, and therefore was not law. So that the law, and the opinion of the judge, are not always convertible terms, or one and the ſame thing; ſince it ſometimes may happen that the judge may miſtake the law. Upon the whole, however, we may take it as a general rule, "That the deciſions of courts of juſtice are the evidence of what is common law;" in the ſame manner as in the civil law, what the emperor had once determined was to ſerve for a guide for the future.

The deciſions therefore of courts are held in the higheſt regard, and are not only preſerved as authentic records in the treaſuries of the ſeveral courts, but are handed out to public view in the numerous volumes of reports which furniſh the lawyer's library. Theſe reports are hiſtories of the ſeveral caſes, with a ſhort ſummary of the proceedings, which are preſerved at large in the record; the arguments on both ſides, and the reaſons the court gave for its judgment; taken down in ſhort notes by perſons preſent at the determination. And theſe ſerve as indexes to, and alſo to explain, the records; which always, in matters of conſequence and nicety, the judges direct to be ſearched. The reports are extant in a regular ſeries from the reign of King Edward II. incluſive; and from his time to that of Henry VIII. were taken by the prothonotaries, or chief ſcribes of the court, at the expence of the crown, and publiſhed annually, whence they are known under the denomination of the *year-books*. And it is much to be wiſhed that this beneficial cuſtom had, under proper regulations, been continued to this day; for though King James I. at the inſtance of lord Bacon, appointed two reporters, with a handſome ſtipend for this purpoſe; yet that wiſe inſtitution was ſoon neglected, and from the reign of Henry VIII. to the preſent time this taſk has been executed by many private and cotemporary hands; who ſometimes through haſte and inaccuracy, ſometimes through miſtake and want of ſkill, have publiſhed very crude and imperfect (perhaps contradictory) accounts of one and the ſame determination. Some of the moſt valuable of the ancient reports are thoſe publiſhed by lord chief juſtice Coke; a man of infinite learning in his profeſſion, though not a little infected with the pedantry and quaintneſs of the times he lived in, which appear ſtrongly in all his works. However, his writings are ſo highly eſtimated, that they are generally cited without the author's name (A).

Beſides theſe reporters, there are alſo other authors, to whom great veneration and reſpect are paid by the ſtudents of the common law. Such are Glanvil and Bracton, Britton and Fleta, Littleton and Fitzherbert, with ſome others of ancient date, whoſe treatiſes are cited as authority; and are evidence that caſes have formerly happened in which ſuch and ſuch points were determined, which are now become ſettled and firſt principles. One of the laſt of theſe methodical writers in point of time, whoſe works are of any intrinſic authority in the courts of juſtice, and do not entirely depend on the ſtrength of their quotations from older authors, is the ſame learned judge we have juſt mentioned, Sir Edwark Coke; who hath written four volumes of Inſtitutes, as he is pleaſed to call them, though they have little of the inſtitutional method to warrant ſuch a title. The firſt volume is a very extenſive comment upon a little excellent treatiſe of tenures, compiled by judge Littleton in the reign of Edward IV. This comment is a rich mine of valuable common-law learning, collected and heaped together from the ancient reports and year-books, but greatly defective in method (B). The ſecond volume is a comment upon many old acts of parliament, without any ſyſtematical order; the third a more methodical treatiſe of the pleas of the crown; and the fourth an account of the ſeveral ſpecies of courts (C).

And thus much for the firſt ground and chief corner-ſtone of the laws of England; which is general immemorial cuſtom, or common law, from time to time declared in the deciſions of the courts of juſtice; which deciſions are preſerved among the public records, explained in the reports, and digeſted for general uſe in the authoritive writings of the venerable ſages of the law.

The Roman law, as practiſed in the times of its liberty, paid alſo a great regard to cuſtom; but not ſo much as our law: it only then adopting it when the written law was deficient. Though the reaſons alleged in the digeſt will fully juſtify our practice in making it of equal authority with, when it is not contradicted by, the written law. "for ſince (ſays Julianus) the written law binds us for no other reaſon but becauſe it is approved by the judgment of the people, therefore thoſe laws which the people have approved without writing ought alſo to bind every body. For where is the difference, whether the people declare their aſſent to a law by ſuffrage, or by a uniform courſe of acting accordingly?" Thus did they reaſon while Rome had ſome remains of her freedom; but, when the imperial tyranny came to be fully eſtabliſhed, the civil laws ſpeak a very different language. *Quod principi placuit legis habet vigorem, cum populus ei et in eum omne ſuum imperium et poteſtatem conſerat*, ſays Ulpian. *Imperator ſolus et canditor et interpres legis exiſtimatur*, ſays the code. And again, *Sacrilegii inſtar eſt reſcripto principis obviari.* And indeed it is one of the characteriſtic marks of Britiſh liberty, that the common law depends

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(A) His reports, for inſtance, are ſtyled κατ εξοχην, "the reports;" and in quoting them we uſually ſay, 1 or 2 Rep. not 1 or 2 Coke's Rep. as in citing other authors. The reports of judge Croke are alſo cited in a peculiar manner, by the name of thoſe princes in whoſe reigns the caſes reported in his three volumes were determined; viz. queen Elizabeth, king James, and king Charles I.; as well as by the number of each volume. For ſometimes we call them 1, 2, and 3, Cro.; but more commonly Cro. Eliz. Cro. Jac. and Cro. Car.

(B) It is uſually cited either by the name of Co. Litt. or as 1 Inſt.

(C) Theſe are cited as 2, 3, or 4 Inſt. without any author's name. An honorary diſtinction, which, we obſerved, is paid to the works of no other writer; the generality of reports and other tracts being quoted in the name of the compiler, as 2 Ventris, 4 Leonard, 1 Siderfin, and the like.

depends upon cuſtom; which carries this internal evidence of freedom along with it, that it probably was introduced by the voluntary conſent of the people.

40 Second branch of the unwritten laws: Particular cuſtoms.

II. The ſecond branch of the unwritten laws of England are particular cuſtoms, or laws which affect only the inhabitants of particular diſtricts.

Theſe particular cuſtoms, or ſome of them, are without doubt the remains of that multitude of local cuſtoms before-mentioned, out of which the common law, as it now ſtands, was collected at firſt by king Alfred, and afterwards by king Edgar and Edward the confeſſor: each diſtrict mutually ſacrificing ſome of its own ſpecial uſages, in order that the whole kingdom might enjoy the benefit of one uniform and univerſal ſyſtem of laws. But, for reaſons that have been now long forgotten, particular counties, cities, towns, manors, and lordſhips, were very early indulged with the privilege of abiding by their own cuſtoms, in contradiſtinction to the reſt of the nation at large: which privilege is confirmed to them by ſeveral acts of parliament.

Such is the cuſtom of gavelkind in Kent and ſome other parts of the kingdom (though perhaps it was alſo general till the Norman conqueſt); which ordains, among other things, that not the eldeſt ſon only of the father ſhall ſucceed to his inheritance, but all the ſons alike; and that, though the anceſtor be attainted and hanged, yet the heir ſhall ſucceed to his eſtate, without any eſcheat to the lord.—Such is the cuſtom that prevails in divers ancient boroughs, and therefore called *borough-engliſh*, that the youngeſt ſon ſhall inherit the eſtate, in preference to all his elder brothers.—Such is the cuſtom in other boroughs, that a widow ſhall be entitled, for her dower, to all her huſband's lands; whereas at the common law ſhe ſhall be endowed of one third part only.—Such alſo are the ſpecial and particular cuſtoms of manors, of which every one has more or leſs, and which bind all the copyhold tenants that hold of the ſaid manors.—Such likewiſe is the cuſtom of holding divers inferior courts, with power of trying cauſes, in cities and trading towns; the right of holding which, when no royal grant can be ſhown, depends entirely upon immemorial and eſtabliſhed uſage.—Such, laſtly, are many particular cuſtoms within the city of London, with regard to trade, apprentices, widows, orphans, and a variety of other matters. All theſe are contrary to the general law of the land, and are good only by ſpecial uſage; though the cuſtoms of London are alſo confirmed by act of parliament.

To this head may moſt properly be referred a particular ſyſtem of cuſtoms uſed only among one ſet of the king's ſubjects, called the *cuſtom of merchants*, or *lex mercatoria*: which, however different from the general rules of the common law, is yet ingrafted into it, and made a part of it; being allowed, for the benefit of trade, to be of the utmoſt validity in all commercial tranſactions; for it is a maxim of law, that *cuilibet in ſua arte credendum eſt*.

41 The rules relating to particular cuſtoms regard either the *proof* of their exiſtence; their *legality* when proved; or their uſual method of *allowance*. And firſt we will conſider the rules of *proof*.

As to gavelkind, and borough-engliſh, the law takes particular notice of them; and there is no occaſion to prove, that ſuch cuſtoms actually exiſt, but only that the lands in queſtion are ſubject thereto. All other private cuſtoms muſt be particularly pleaded: and as well the exiſtence of ſuch cuſtoms muſt be ſhown, as that the thing in diſpute is within the cuſtom alleged. The trial in both caſes (both to ſhow the exiſtence of the cuſtom, as, "that in the manor of Dale lands ſhall deſcend only to the heirs male, and never to the heirs female;" and alſo to ſhow "that the lands in queſtion are within that manor") is by a jury of 12 men, and not by the judges; except the ſame particular cuſtom has been before tried, determined, and recorded, in the ſame court.

The cuſtoms of London differ from all others in point of trial: for if the exiſtence of the cuſtom be brought in queſtion, it ſhall not be tried by a jury, but by certificate from the lord mayor and aldermen by the mouth of their recorder; unleſs it be ſuch a cuſtom as the corporation is itſelf intereſted in, as a right of taking toll, &c. for then the law permits them not to certify on their own behalf.

When a cuſtom is actually proved to exiſt, the next inquiry is into the legality of it; for if it is not a good cuſtom, it ought to be no longer uſed. *Malus uſus abolendus eſt*, is an eſtabliſhed maxim of the law. To make a particular cuſtom good, the following are neceſſary requiſites.

1. That it have been uſed ſo long, that the memory of man runneth not to the contrary. So that, if any one can ſhow the beginning of it, it is no good cuſtom. For which reaſon, no cuſtom can prevail againſt an expreſs act of parliament, ſince the ſtatute itſelf is a proof of a time when ſuch a cuſtom did not exiſt.

2. It muſt have been *continued*. Any interruption would cauſe a temporary ceaſing: the revival gives it a new beginning, which will be within time of memory, and thereupon the cuſtom will be void. But this muſt be underſtood with regard to an interruption of the right; for an interruption of the poſſeſſion only, for 10 or 20 years, will not deſtroy the cuſtom. As if the inhabitants of a pariſh have a cuſtomary right of watering their cattle at a certain pool, the cuſtom is not deſtroyed though they do not uſe it for 10 years, it only becomes more difficult to prove: but if the right be any how diſcontinued for a day, the cuſtom is quite at an end.

3. It muſt have been *peaceable*, and acquieſced in; not ſubject to contention and diſpute. For as cuſtoms owe their original to common conſent, their being immemorially diſputed, either at law or otherwiſe, is a proof that ſuch conſent was wanting.

4. Cuſtoms muſt be *reaſonable*; or rather, taken negatively, they muſt not be unreaſonable. Which is not always, as Sir Edward Coke ſays, to be underſtood of every unlearned man's reaſon; but of artificial and legal reaſon, warranted by authority of law. Upon which account a cuſtom may be good, though the particular reaſon of it cannot be aſſigned; for it ſufficeth, if no good legal reaſon can be aſſigned againſt it. Thus a cuſtom in a pariſh, that no man ſhall put his beaſts into the common till the third of October, would be good; and yet it would be hard to ſhow the reaſon why that day in particular is fixed upon, rather than the day before or after. But a cuſtom, that no cattle

ſhall be put in till the lord of the manor has firſt put in his, is unreaſonable, and therefore bad: for peradventure the lord will never put in his; and then the tenants will loſe all their profits.

5. Cuſtoms ought to be *certain*. A cuſtom, that lands ſhall deſcend to the moſt worthy of the owner's blood, is void; for how ſhall this worth be determined? but a cuſtom to deſcend to the next male of the blood excluſive of females, is certain, and therefore good. A cuſtom to pay two pence an acre in lieu of tithes, is good; but to pay ſometimes two pence and ſometimes three pence, as the occupier of the land pleaſes, is bad for its certainty. Yet a cuſtom, to pay a year's improved value for a fine on a copyhold eſtate, is good; though the value is a thing uncertain: for the value may at any time be aſcertained; and the maxim of law is, *Id certum eſt, quod certum reddi poteſt.*

6. Cuſtoms, though eſtabliſhed by conſent, muſt be (when eſtabliſhed) *compulſory*: and not left to the option of every man, whether he will uſe them or no. Therefore a cuſtom, that all the inhabitants ſhall be rated toward the maintenance of a bridge, will be good; but a cuſtom, that every man is to contribute thereto at his own pleaſure, is idle and abſurd, and indeed no cuſtom at all.

7. Laſtly, cuſtoms muſt be *conſiſtent* with each other. One cuſtom cannot be ſet up in oppoſition to another. For if both are really cuſtoms, then both are of equal antiquity, and both eſtabliſhed by mutual conſent: which to ſay of contradictory cuſtoms, is abſurd. Therefore, if one man preſcribes that by cuſtom he has a right to have windows looking into another's garden; the other cannot claim a right by cuſtom to ſtop up or obſtruct thoſe windows: for theſe two contradictory cuſtoms cannot both be good, nor both ſtand together. He ought rather to deny the exiſtence of the former cuſtom.

Next, as to the *allowance* of ſpecial cuſtoms. Cuſtoms, in derogation of the common law, muſt be conſtrued ſtrictly. Thus, by the cuſtom of gavelkind, an infant of 15 years may by one ſpecies of conveyance (called *a deed of feoffment*) convey away his lands in fee ſimple, or for ever. Yet this cuſtom does not impower him to uſe any other conveyance, or even to leaſe them for ſeven years: for the cuſtom muſt be ſtrictly purſued. And, moreover, all ſpecial cuſtoms muſt ſubmit to the king's prerogative. Therefore, if the king purchaſes lands of the nature of gavelkind, where all the ſons inherit equally; yet, upon the king's demiſe, his eldeſt ſon ſhall ſucceed to thoſe lands alone. And thus much for the ſecond part of the *leges non ſcriptæ*, or thoſe particular cuſtoms which affect particular perſons or diſtricts only.

42
Third branch of the unwritten law.

III. The third branch of them are thoſe peculiar laws which by cuſtom are adopted and uſed only in certain peculiar courts and juriſdictions. And by theſe are underſtood the civil and canon laws.

It may ſeem a little improper, at firſt view, to rank theſe laws, under the head of *leges non ſcriptæ*, or unwritten laws, ſeeing they are ſet forth by authority in their pandects, their codes, and their inſtitutions; their councils, decrees, and decretals; and enforced by an immenſe number of expoſitions, deciſions, and treatiſes of the learned in both branches of the law. But this is done after the example of Sir Matthew Hale, becauſe it is moſt plain, that it is not on account of their being written laws, that either the canon law, or the civil law, have any obligation within this kingdom: neither do their force and efficacy depend upon their own intrinſic authority; which is the caſe of our written laws or acts of parliament. They bind not the ſubjects of England, becauſe their materials were collected from popes or emperors; were digeſted by Juſtinian, or declared to be authentic by Gregory. Theſe conſiderations give them no authority here: for the legiſlature of England doth not, nor ever did, recognize any foreign power, as ſuperior or equal to it in this kingdom; or as having the right to give law to any the meaneſt of its ſubjects. But all the ſtrength that either the papal or imperial laws have obtained in this realm (or indeed in any other kingdom in Europe) is only becauſe they have been admitted and received by immemorial uſage and cuſtom in ſome particular caſes, and ſome particular courts; and then they form a branch of the *leges non ſcriptæ*, or cuſtomary law: or elſe, becauſe they are in ſome other caſes introduced by conſent of parliament, and then they owe their validity to the *leges ſcriptæ*, or ſtatute law. This is expreſsly declared in thoſe remarkable words of the ſtatute 25 Hen. VIII. c. 21. addreſſed to the king's royal majeſty.—"This your grace's realm, recognizing no ſuperior under God but only your grace, hath been and is free from ſubjection to any man's laws, but only to ſuch as have been deviſed, made, and ordained within this realm for the wealth of the ſame; or to ſuch other as, by ſufferance of your grace and your progenitors, the people of this your realm have taken at their free liberty, by their own conſent, to be uſed among them; and have bound themſelves by long uſe and cuſtom to the obſervance of the ſame: not as to the obſervance of the laws of any foreign prince, potentate, or prelate; but as to the cuſtomed and ancient laws of this realm, originally eſtabliſhed as laws of the ſame, by the ſaid ſufferance, conſents, and cuſtoms; and none otherwiſe."

43
Civil law.

1. By the civil law, abſolutely taken, is generally underſtood the civil or municipal law of the Roman empire, as compriſed in the inſtitutes, the code, and the digeſt of the emperor Juſtinian, and the novel conſtitutions of himſelf and ſome of his ſucceſſors; of which it may not be amiſs to give a ſhort and general account.

The Roman law (founded firſt upon the regal conſtitutions of their ancient kings, next upon the 12 tables of the decemviri, then upon the laws or ſtatutes enacted by the ſenate or people, the edicts of the prætor, and the *reſponſa prudentum* or opinions of learned lawyers, and laſtly upon the imperial decrees or conſtitutions of ſucceſſive emperors) had grown to ſo great a bulk, or, as Livy expreſſes it, *tam immenſus aliarum ſuper alias acervatarum legum cumulus*, that they were computed to be many camels load by an author who preceded Juſtinian. This was in part remedied by the collections of three private lawyers, Gregorius, Hermogenes, and Papirius; and then by the emperor Theodoſius the younger, by whoſe orders a code was compiled, A. D. 438, being a methodical collection of all the imperial conſtitutions then in force: which Theodoſian code was the only book of civil law received as authentic in the weſtern part of Europe, till many centuries after; and to this it is probable that the Franks and Goths might frequently pay ſome regard, in framing legal conſtitutions for their newly erected kingdoms. For Juſtinian commanded only in the eaſtern remains of the empire; and it was under his auſpices, that the preſent body of civil law was compiled and finiſhed by Tribonian and other lawyers, about the year 533.

44 This conſiſts of, 1. The inſtitutes; which contain the elements or firſt principles of the Roman law, in four books. 2. The digeſts or pandects, in 50 books; containing the opinions and writings of eminent lawyers, digeſted in a ſyſtematical method. 3. A new code, or collection of imperial conſtitutions; the lapſe of a whole century having rendered the former code of Theodoſius imperfect. 4. The novels, or new conſtitutions, poſterior in time to the other books, and amounting to a ſupplement to the code; containing new decrees of ſucceſſive emperors, as new queſtions happened to ariſe. Theſe form the body of Roman law, or *corpus juris civilis*, as publiſhed about the time of Juſtinian: which, however, fell ſoon into neglect and oblivion, till about the year 1130, when a copy of the digeſts was found at Amalfi in Italy; which accident, concurring with the policy of the Roman eccleſiaſtics, ſuddenly gave new vogue and authority to the civil law, introduced it into ſeveral nations, and occaſioned that mighty inundation of voluminous comments, with which this ſyſtem of law, more than any other, is now loaded.

45
Canon law. 2. The canon law is a body of Roman eccleſiaſtical law, relative to ſuch matters as that church either has, or pretends to have, the proper juriſdiction over. This is compiled from the opinions of the ancient Latin fathers, the decrees of general councils, the decretal epiſtles and bulls of the holy ſee. All which lay in the ſame diſorder and confuſion as the Roman civil law: till, about the year 1151, one Gratian and Italian monk, animated by the diſcovery of Juſtinian's pandects, reduced the eccleſiaſtical conſtitutions alſo into ſome method, in three books; which he entitled *Concordia diſcordantium canonum*, but which are generally known by the name of *Decretum Gratiani*. Theſe reached as low as the time of Pope Alexander III. The ſubſequent papal decrees, to the pontificate of Gregory IX. were publiſhed in much the ſame method under the auſpices of that pope, about the year 1230, in five books; entitled *Decretalia Gregorii noni*. A ſixth book was added by Boniface VIII. About the year 1298, which is called *Sextus Decretalium*. The Clementine conſtitutions, or decrees of Clement V. were in like manner authenticated in 1317 by his ſucceſſor John XXII.; who alſo publiſhed 20 conſtitutions of his own, called *Extravagantes Joannis*: all which in ſome meaſure anſwer to the novels of the civil law. To theſe have been ſince added ſome decrees of later popes in five books, called *Extravagantes Communes*: And all theſe together, Gratian's decree, Gregory's decretals, the ſixth decretal, the Clementine conſtitutions, and the Extravagants of John and his ſucceſſors, form the *corpus juris canonici*, or body of the Roman canon law.

Beſides theſe pontifical collections, which during the times of popery were received as authentic in England, as well as in other parts of Chriſtendom, there is alſo a kind of national canon law, compoſed of legatine and provincial conſtitutions, and adapted only to the exigencies of this church and kingdom. The legatine conſtitutions were eccleſiaſtical laws, enacted in national ſynods, held under the cardinals Otho and Othobon, legates from Pope Gregory IX. and Pope Clement IV. in the reign of King Henry III. about the years 1220 and 1268. The provincial conſtitutions are principally the decrees of provincial ſynods, held under divers archbiſhops of Canterbury, from Stephen Langton in the reign of Henry III. to Henry Chichele in the reign of Henry V.; and adopted alſo by the province of York in the reign of Henry VI. At the dawn of the reformation, in the reign of King Henry VIII. it was enacted in parliament, that a review ſhould be had of the canon law; and till ſuch review ſhould be made, all canons, conſtitutions, ordinances and ſynodals provincial, being then already made, and not repugnant to the law of the land or the king's prerogative, ſhould ſtill be uſed and executed. And, as no ſuch review has yet been perfected, upon this ſtatute now depends the authority of the canon law in England.

As for the canons enacted by the clergy under James I. in the year 1603, and never confirmed in parliament, it has been ſolemly adjudged upon the principles of law and the conſtitution, that where they are not merely declaratory of the ancient canon law, but are introductory of new regulations, they do not bind the laity, whatever regard the clergy may think proper to pay them.

46 There are four ſpecies of courts, in which the civil and canon laws are permitted under different reſtrictions to be uſed. 1. The courts of the archbiſhops and biſhops, and their derivative officers; uſually called *courts Chriſtian, (curiæ Chriſtianitatis)*, or the *eccleſiaſtical courts*. 2. The military courts. 3. The courts of admiralty. 4. The courts of the two univerſities. In all, their reception in general, and the different degrees of that reception, are grounded entirely upon cuſtom; corroborated in the latter inſtance by act of parliament, ratifying thoſe charters which confirm the cuſtomary law of the univerſities. The more minute conſideration of them will fall under their proper articles. It will ſuffice at preſent to remark a few particulars relative to them all, which may ſerve to inculcate more ſtrongly the doctrine laid down concerning them.

1. And firſt, the courts of common law have the ſuperintendency over theſe courts; to keep them within their juriſdictions; to determine wherein they exceed them; to reſtrain and prohibit ſuch exceſs; and (in caſe of contumacy) to puniſh the officer who executes, and in ſome caſes the judge who enforces, the ſentence ſo declared to be illegal.

2. The common law has reſerved to itſelf the expoſition of all ſuch acts of parliament, as concern either the extent of theſe courts, or the matters depending before them. And therefore, if theſe courts either refuſe to allow theſe acts of parliament, or will expound them in any other ſenſe than what the common law puts upon them, the king's courts at Weſtminſter will grant prohibitions to reſtrain and controul them.

3. An appeal lies from all theſe courts to the king, in the laſt reſort; which proves that the juriſdiction

exerciſed in them is derived from the crown of England, and not from any foreign potentate, or intrinſic authority of their own.—And, from theſe three ſtrong marks and enſigns of ſuperiority, it appears beyond a doubt, that the civil and canon laws, though admitted in ſome caſes by cuſtom in ſome courts, are only ſubordinate and *leges ſub graviori lege;* and that thus admitted, reſtrained, altered, new-modelled, and amended, they are by no means with us a diſtinct independent ſpecies of law, but are inferior branches of the cuſtomary or unwritten laws of England, properly called the *kings eccleſiaſtical, the king's military, the king's maritime, or the king's academical, laws.*

47 The written laws.

Let us next proceed to the *leges ſcriptæ*, the written laws of the kingdom; which are ſtatutes, acts, or edicts, made by the king's majeſty, by and with the advice of the lords ſpiritual and temporal and commons in parliament aſſembled. The oldeſt of theſe now extant, and printed in our ſtatute books, is the famous *magna charta*, as confirmed in parliament 9 Hen. III. though doubtleſs there were many acts before that time, the records of which are now loſt, and the determinations of them perhaps at preſent currently received for the maxims of the old common law.

The manner of making theſe ſtatutes being explained under the article Bill and Parliament, we ſhall here only take notice of the different kinds of ſtatutes; and of ſome general rules with regard to their conſtruction (d).

48 Kinds of ſtatutes.

Firſt, as to their ſeveral kinds. Statutes are either *general* or *ſpecial*, public or private. A general or public act is an univerſal rule that regards the whole community: and of this the courts of law are bound to take notice judicially and *ex officio*, without the ſtatute being particularly pleaded, or formally ſet forth, by the party who claims an advantage under it. Special or private acts are rather exceptions than rules, being thoſe which only operate upon particular perſons and private concerns; ſuch as the Romans entitled *ſenatus decreta*, in contradiſtinction to the *ſenatus-conſulta*, which regarded the whole community; and of theſe the judges are not bound to take notice, unleſs they be formally ſhewn and pleaded. Thus, to ſhew the diſtinction, the ſtatute 13 Eliz. c. 10. to prevent ſpiritual perſons from making leaſes for longer terms than 21 years or three lives, is a public act; it being a rule preſcribed to the whole body of ſpiritual perſons in the nation: but an act to enable the biſhop of Cheſter to make a leaſe to A. B. for 60 years, is an exception to this rule; it concerns only the parties and the biſhop's ſucceſſors, and is therefore a private act.

Statutes alſo are either *declaratory* of the common law, or *remedial* of ſome defects therein. Declaratory, where the old cuſtoms of the kingdom is almoſt fallen into diſuſe, or become diſputable; in which caſe the parliament has thought proper, *in perpetuum rei teſtimonium*, and for avoiding all doubts and difficulties, to declare what the common law is and ever hath been. Thus the ſtatute of treaſons, 25 Edw. III. cap. 2. doth not make any new ſpecies of treaſons: but only, for the benefit of the ſubject, declares and enumerates thoſe ſeveral kinds of offence which before were treaſon at the common law. Remedial ſtatutes are thoſe which are made to ſupply ſuch defects, and abridge ſuch ſuperfluities, in the common law, as ariſe either from the general imperfection of all human laws, from change of time and circumſtances, from the miſtakes and unadviſed determinations of unlearned judges, or from any other cauſe whatſoever. And this being done, either by enlarging the common law where it was too narrow and circumſcribed, or by reſtraining it where it was too lax and luxuriant, hath occaſioned another ſubordinate diviſion of remedial acts of parliament into *enlarging* and *reſtraining* ſtatutes. To inſtance again in the caſe of treaſon. Clipping the current coin of the kingdom was an offence not ſufficiently guarded againſt by the common law: therefore it was thought expedient by ſtatute 5 Eliz. c. 11. to make it high treaſon, which it was not at the common law: ſo that this was an *enlarging* ſtatute. At common law, alſo, ſpiritual corporations might leaſe out their eſtates for any term of years, till prevented by the ſtatute 13 Eliz. before-mentioned: this was therefore a *reſtraining* ſtatute.

49 Conſtruction of ſtatutes.

Secondly, the rules to be obſerved with regard to the conſtruction of ſtatutes are principally theſe which follow.

1. There are three points to be conſidered in the conſtruction of all remedial ſtatutes; the old law, the miſchief, and the remedy: that is, how the common law ſtood at the making of the act; what the miſchief was, for which the common law did not provide; and what

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(d) The method of citing theſe acts of parliament is various. Many of the ancient ſtatutes are called after the name of the place where the parliament was held that made them; as the ſtatutes of Merton and Marleberge, of Weſtminſter, Gloceſter, and Wincheſter. Others are denominated entirely from their ſubject; as the ſtatutes of Wales and Ireland, the *articuli cleri*, and the *prerogativa regis*. Some are diſtinguiſhed by their initial words, a method of citing very ancient: being uſed by the Jews, in denominating the books of the pentateuch; by the Chriſtian church, in diſtinguiſhing their hymns and divine offices; by the Romaniſts, in deſcribing their papal bulls; and in ſhort by the whole body of ancient civilians and canoniſts, among whom this method of citation generally prevailed, not only with regard to chapters, but inferior ſections alſo; in imitation of all which we ſtill call ſome of the old ſtatutes by their initial words, as the ſtatute of *Quia emptores*, and that of *Circumſpecte agatis*. But the moſt uſual method of citing them, eſpecially ſince the time of Edward II. is by naming the year of the king's reign in which the ſtatute was made, together with the chapter or particular act, according to its numeral order; as, 9 Geo. II. c. 4. For all the acts of one ſeſſion of parliament taken together make properly but one ſtatute: and therefore, when two ſeſſions have been held in one year, we uſually mention ſtat. 1. or 2. Thus the bill of rights is cited, as 1 W. & M. ſt. 2 c. 2. ſignifying that it is the ſecond chapter or act of the ſecond ſtatute or the laws made in the ſecond ſeſſions of parliament held in the firſt year of king William and queen Mary.

what remedy the parliament hath provided to cure this miſchief. And it is the buſineſs of the judges ſo to conſtrue the act, as to ſuppreſs the miſchief and advance the remedy. Let us inſtance again in the ſame reſtraining ſtatute of 13 Eliz. c. 10. By the common law, eccleſiaſtical corporations might let as long leaſes as they thought proper: the miſchief was, that they let long and unreaſonable leaſes, to the impoveriſhment of their ſucceſſors: the remedy applied by the ſtatute was by making void all leaſes by eccleſiaſtical bodies for longer terms than three lives or 21 years. Now in the conſtruction of this ſtatute it is held, that leaſes, though for a longer term, if made by a biſhop, are not void during the biſhop's continuance in his ſee; or, if made by a dean and chapter, they are not void during the continuance of the dean; for the act was made for the benefit and protection of the ſucceſſor. The miſchief is therefore ſufficiently ſuppreſſed by vacating them after the determination of the intereſt of the granters; but the leaſes, during their continuance, being not within the miſchief, are not within the remedy.

2. A ſtatute, which treats of things or perſons of an inferior rank, cannot by any *general words* be extended to thoſe of a ſuperior. So a ſtatute, treating of "deans, prebendaries, parſons, vicars, *and others having ſpiritual promotion*," is held not to extend to biſhops, though they have ſpiritual promotion; deans being the higheſt perſons named, and biſhops being of a ſtill higher order.

3. Penal ſtatutes muſt be conſtrued ſtrictly. Thus the ſtatute 1 Edw. VI. c. 12. having enacted that thoſe who are convicted of ſtealing *horſes* ſhould not have the benefit of clergy, the judges conceived that this did not extend to him who ſhould ſteal but one *horſe*, and therefore procured a new act for that purpoſe in the following year. And, to come nearer to our own times, by the ſtatute 14 Geo. II. c. 6. ſtealing ſheep *or other cattle*, was made felony without benefit of clergy. But theſe general words, "or other cattle," being looked upon as much too looſe to create a capital offence, the act was held to extend to nothing but mere ſheep. And therefore, in the next ſeſſions, it was found neceſſary to make another ſtatute, 15 Geo. II. c. 34. extending the former to bulls, cows, oxen, ſteers, bullocks, heifers, calves, and lambs, by name.

4. Statutes againſt frauds are to be liberally and beneficially expounded. This may ſeem a contradiction to the laſt rule; moſt ſtatutes againſt frauds being in their conſequences penal. But this difference is here to be taken: where the ſtatute acts upon the offender, and inflicts a penalty, as the pillory or a fine, it is then to be taken ſtrictly; but when the ſtatute acts upon the offence, by ſetting aſide the fraudulent tranſaction, here it is to be conſtrued liberally. Upon this footing the ſtatute of 13 Eliz. c. 5. which voids all gifts of goods, &c. made to defraud creditors *and others*, was held to extend by the general words to a gift made to defraud the queen of a forfeiture.

5. One part of a ſtatute muſt be ſo conſtrued by another, that the whole may (if poſſible) ſtand: *ut res magis valeat quam pereat*. As if land be veſted in the king and his heirs by act of parliament, ſaving the right of A; and A has at that time a leaſe of it for three years; here A ſhall hold it for his term of three years, and afterwards it ſhall go to the king. For this interpretation furniſhes matter for every clauſe of the ſtatute to work and operate upon. But,

6. A ſaving, totally repugnant to the body of the act, is void. If therefore an act of parliament veſts land in the king and his heirs, ſaving the right of all perſons whatſoever; or veſts the land of A in the king, ſaving the right of A: in either of theſe caſes the ſaving is totally repugnant to the body of the ſtatute, and (if good) would render the ſtatute of no effect or operation; and therefore the ſaving is void, and the land veſts abſolutely in the king.

7. Where the common law and a ſtatute differ, the common law gives place to the ſtatute; and an old ſtatute gives place to a new one. And this upon the general principle laid down in the laſt ſection, that *leges poſteriores priores contrarias abrogant*. But this is to be underſtood only when the latter ſtatute is couched in negative terms, or by its matter neceſſarily implies a negative. As if a former act ſays, that a juror upon ſuch a trial ſhall have twenty pounds a-year, and a new ſtatute comes and ſays he ſhall have twenty merks; here the latter ſtatute, though it does not expreſs, yet neceſſarily implies, a negative, and virtually repeals the former. For if twenty merks be made qualification ſufficient, the former ſtatute which requires twenty pounds is at an end. But if both the acts be merely affirmative, and the ſubſtance ſuch that both may ſtand together, here the latter does not repeal the former, but they ſhall both have a concurrent efficacy. If by a former law an offence be indictable at the quarter-ſeſſions, and a latter law makes the ſame offence indictable at the aſſizes; here the juriſdiction of the ſeſſions is not taken away, but both have a concurrent juriſdiction, and the offender may be proſecuted at either: unleſs the new ſtatute ſubjoins expreſs negative words; as, that the offence ſhall be indictable at the aſſizes, *and not elſewhere*.

8. If a ſtatute, that repeals another, is itſelf repealed afterwards, the firſt ſtature is hereby revived, without any formal words for that purpoſe. So when the ſtatutes of 26 and 35 Hen. VIII. declaring the king to be the ſupreme head of the church, were repealed by a ſtatute 1 and 2 Philip and Mary, and this latter ſtatute was afterwards repealed by an act of 1 Eliz. there needed not any expreſs words of revival in queen Elizabeth's ſtatute, but theſe acts of king Henry were impliedly and virtually revived.

9. Acts of parliament derogatory from the power of ſubſequent parliaments bind not. So the ſtatute 11 Hen. VII. c. 1. which directs, that no perſon for aſſiſting a king *de facto* ſhall be attainted of treaſon by act of parliament or otherwiſe, is held to be good only as to common proſecutions for high treaſon; but will not reſtrain or clog any parliamentary attainder. Becauſe the legiſlature, being in truth the ſovereign power, is always of equal, always of abſolute authority: it acknowledges no ſuperior upon earth, which the prior legiſlature muſt have been if its ordinances could bind the preſent parliament. And upon the ſame principle Cicero, in his letters to Atticus, treats with a proper contempt theſe reſtraining clauſes, which endeavour to tie up the hands of ſucceeding legiſlatures.

giſlatures. "When you repeal the law itſelf (ſays he), you at the ſame time repeal the prohibitory clauſe which guards againſt ſuch repeal."

10. Laſtly, acts of parliament that are impoſſible to be performed are of no validity: and if there ariſe out of them collaterally any abſurd conſequences, manifeſtly contradictory to common reaſon, they are with regard to thoſe collateral conſequences void. We lay down the rule with theſe reſtrictions: though we know it is generally laid down more largely, that acts of parliament contrary to reaſon are void. But if the parliament will poſitively enact a thing to be done which is unreaſonable, we know of no power that can control it: and the examples uſually alleged in ſupport of this ſenſe of the rule do none of them prove, that where the main object of a ſtatute is unreaſonable, the judges are at liberty to reject it: for that were to ſet the judicial power above that of the legiſlature, which would be ſubverſive of all government. But where ſome collateral matter ariſes out of the general words, and happens to be unreaſonable; there the judges are in decency to conclude that this conſequence was not foreſeen by the parliament, and therefore they are at liberty to expound the ſtatute by equity, and only *quoad hoc* diſregard it. Thus if an act of parliament gives a man power to try all cauſes that ariſe within his manor of Dale; yet, if a cauſe ſhould ariſe in which he himſelf is a party, the act is conſtrued not to extend to that, becauſe it is unreaſonable that any man ſhould determine his own quarrel. But, if we could conceive it poſſible for the parliament to enact, that he ſhould try as well his own cauſes as thoſe of other perſons, there is no court that has power to defeat the intent of the legiſlature, when couched in ſuch evident and expreſs words as leave no doubt whether it was the intent of the legiſlature or not.

Theſe are the ſeveral grounds of the laws of England: over and above which, equity is alſo frequently called in to aſſiſt, to moderate, and to explain them. What equity is, and how impoſſible in its very eſſence to be reduced to ſtated rules, hath been ſhewn above. It may be ſufficient, therefore, to add in this place, that, beſides the liberality of ſentiment with which the common-law judges interpret acts of parliament, and ſuch rules of the unwritten law as are not of a poſitive kind, there are alſo courts of equity eſtabliſhed for the benefit of the ſubject, to detect latent frauds and concealments, which the proceſs of the courts of law is not adapted to reach; to enforce the execution of ſuch matters of truſt and confidence, as are binding in conſcience, though not cognizable in a court of law; to deliver from ſuch dangers as are owing to misfortune or overſight; and to give a more ſpecific relief, and more adapted to the circumſtances of the caſe, than can always be obtained by the generality of the rules of the poſitive or common law. This is the buſineſs of the courts of equity, which however are only converſant in matters of property. For the freedom of the conſtitution will not permit, that in criminal caſes a power ſhould be lodged in any judge to conſtrue the law otherwiſe than according to the letter. This caution, while it admirably protects the public liberty, can never bear hard upon individuals. A man cannot ſuffer *more* puniſhment than the law aſſigns, but he may ſuffer *leſs*. The laws cannot be ſtrained by partiality to inflict a penalty beyond what the letter will warrant; but, in caſes where the letter induces any apparent hardſhip, the crown has the power to pardon.

The objects of the laws of England are, 1. The rights of perſons. 2. The rights of things. 3. Private wrongs. 4. Public wrongs.

CHAP. I.

Of the RIGHTS *of* PERSONS.

SECT. I. *Of the abſolute rights of individuals.* [xiv.]

(1.) THE objects of the *Laws* of England are, 1. *Rights*, 2. *Wrongs*.

(2.) *Rights* are the rights of *perſons*, or the rights of *things*.

(3.) The rights of *perſons* are ſuch as concern, and are annexed to, the perſons of men: and, when the perſon *to* whom they are due is regarded, they are called (ſimply) *rights*; but, when we conſider the perſon *from* whom they are due, they are then denominated *duties*.

(4.) *Perſons* are either *natural*, that is, ſuch as they are formed by nature; or *artificial*, that is, created by human policy, as bodies politic or *corporations*.

(5.) The rights of *natural* perſons are, 1. *Abſolute*, or ſuch as belong to individuals. 2. *Relative*, or ſuch as regard members of ſociety.

(6.) The *abſolute rights of individuals*, regarded by the municipal laws (which pay no attention to *duties*, of the abſolute kind), compoſe what is called political or civil *liberty*.

(7. Political or civil *liberty* is the natural liberty of mankind, ſo far reſtrained by human laws as is neceſſary for the good of ſociety.

(8.) The abſolute rights or civil liberties of Engliſhmen, as frequently declared in parliament, are principally three; the right of *perſonal ſecurity*, of *perſonal liberty*, and of *private property*.

(9.) The right of *perſonal ſeccurity* conſiſts in the legal enjoyment of life, limb, body, health, and reputation.

(10.) The right of *perſonal liberty* conſiſts in the free power of loco-motion, without illegal reſtraint or baniſhment.

(11.) The right of *private property* conſiſts in every man's free uſe and diſpoſal of his own lawful acquiſitions, without injury or illegal diminution.

(12.) Beſides theſe three *primary* rights, there are others which are *ſecondary* and ſubordinate; *viz.* (to preſerve the former from unlawful attacks) 1. The conſtitution and power of parliaments; 2. The limitation of the king's prerogative;—And (to vindicate them when actually violated) 3. The regular adminiſtration of public juſtice; 4. The right of petitioning for redreſs of grievances; 5. The right of having and uſing arms for ſelf defence.

SECT. II. *Of the parliament.* [xiv.]

(1.) THE *relations* of perſons are, 1. *Public*. 2. *Private*. The *public* relations are thoſe of *magiſtrates* and *people. Magiſtrates* are *ſuperior* or *ſubordinate.* And of *ſupreme* magiſtrates, in England, the *parliament* is the ſupreme *legiſlative*, the *king* the ſupreme *executive.*

(2.) *Parliaments*, in ſome ſhape, are of as high antiquity in England as the Saxon government; and have ſubſiſted in their preſent form, at leaſt five hundred years

(3.) The parliament is aſſembled by the king's writs, and its ſitting muſt not be intermitted above three years.

(4.) Its conſtituent parts are the king's majeſty, the lords ſpiritual and temporal, and the commons repreſented by their members: each of which parts has a negative, or neceſſary, voice in making laws.

(5.) With regard to the *general* law of parliament; its power is abſolute: each houſe is the judge of its own privileges; and all the members of either houſe are intitled to the privilege of ſpeech, of perſon, of their domeſtics, and of their lands and goods.

(6.) The *peculiar* privileges of the lords (beſides their judicial capacity), are to hunt in the king's foreſts; to be attended by the ſages of the law; to make proxies; to enter proteſts; and to regulate the election of the 16 peers of North-Britain.

(7.) The *peculiar* privileges of the commons are to frame taxes for the ſubject; and to determine the merits of their own elections, with regard to the qualifications of the electors and elected, and the proceedings at elections themſelves.

(8.) Bills are uſually twice read in each houſe, committed, engroſſed, and then read a third time; and when they have obtained the concurrence of both houſes, and received the royal aſſent, they become *acts* of parliament.

(9.) The houſes may adjourn themſelves; but the king only can prorogue the parliament.

(10.) Parliaments are diſſolved, 1. At the king's will. 2. By the demiſe of the crown, that is, within ſix months after. 3. By length of time, or having ſat for the ſpace of ſeven years.

[xlvi.] SECT. III. *Of the king and his title.*

(1.) THE ſupreme *executive* power of England is lodged in a ſingle perſon; the king or queen.

(2.) This royal perſon may be conſidered with regard to, 1. His title. 2. His royal family. 3. His councils. 4. His duties. 5. His prerogative. 6. His revenue.

(3.) With regard to his *title;* the crown of England, by the poſitive conſtitution of the kingdom, hath ever been deſcendible, and ſo continues.

(4.) The crown is deſcendible in a courſe peculiar to itſelf.

(5.) This courſe of deſcent is ſubject to limitation by parliament.

(6.) Notwithſtanding ſuch limitations, the crown retains its deſcendible quality, and becomes hereditary in the prince to whom it is limited.

(7.) King Egbert, King Canute, and King William I. have been ſucceſſively conſtituted the common ſtocks, or anceſtors, of this deſcent.

(8.) At the revolution, the convention of eſtates, or repreſentative body of the nation, declared, that the miſconduct of King James II. amounted to an abdication of the government, and that the throne was thereby *vacant.*

(9.) In conſequence of this vacancy, and from a regard to the ancient line, the convention appointed the next Proteſtant heirs of the blood royal of King Charles I. to fill the vacant throne, in the old order of ſucceſſion; with a temporary exception, or preference, to the perſon of King William III.

(10.) On the impending failure of the proteſtant line of King Charles I. (whereby the throne might again have become vacant) the king and parliament extended the ſettlement of the crown to the Proteſtant line of King James I. viz. to the Princeſs Sophia of Hanover, and the heirs of her body, being Proteſtants: And ſhe is now the common ſtock, from whom the heir of the crown muſt deſcend.

SECT. IV. *Of the king's royal family.* [xlvii.]

(1.) THE king's royal *family* conſiſts, firſt, of the *queen:* who is regnant, conſort, or dowager.

(2.) The queen *conſort* is a public perſon, and hath many perſonal prerogatives and diſtinct revenues.

(3.) The Prince and Princeſs of Wales, and the Princeſs-royal, are peculiarly regarded by the law.

(4.) The other princes of the blood-royal are only intitled to precedence.

SECT V. *Of the councils belonging to the king.* [xlviii.]

(1.) THE *king's councils* are, 1. The *parliament.* 2. The great council of *peers.* 3. The *judges,* for matters of law. 4. The *privy* council.

(2.) In *privy-counſellors* may be conſidered, 1. Their creation. 2. Their qualifications. 3. Their duties. 4. Their powers. 5. Their privileges. 6. Their diſſolution.

SECT. VI. *Of the king's duties.* [xlix.]

(1.) THE *king's duties* are to govern his people according to law, to execute judgment in mercy, and to maintain the eſtabliſhed religion. Theſe are his part of the original contract between himſelf and the people; founded in the nature of ſociety, and expreſſed in his oath at the coronation.

SECT. VII. *Of the king's prerogative.* l.

(1.) PREROGATIVE is that ſpecial power and preeminence which the king hath above other perſons, and out of the ordinary courſe of law, in right of his regal dignity.

(2.) Such *prerogatives* are either *direct*, or *incidental.* The *incidental*, ariſing out of other matters, are conſidered as they ariſe: We now treat only of the *direct.*

(3.) The *direct* prerogatives regard, 1. The *king's dignity*, or royal character; 2. His *authority*, or regal power; 3. His *revenue*, or royal income.

(4.) The *king's dignity* conſiſts in the legal attributes of, 1. Perſonal ſovereignty. 2. Abſolute perfection. 3. Political perpetuity.

(5.) In the *king's authority*, or regal power, conſiſts the executive part of government.

(6.) In *foreign* concerns; the *king*, as the repreſentative of the nation, has the right or *prerogative*, 1. Of ſending and receiving ambaſſadors. 2. Of making treaties. 3. Of proclaiming war or peace. 4. Of iſſuing repriſals. 5. Of granting ſafe conducts.

(7.) In *domeſtic* affairs; the *king* is, firſt, a conſtituent part of the ſupreme legiſlative power; hath a negative upon all new laws; and is bound by no ſtatute, unleſs ſpecially named therein.

(8.) He is alſo conſidered as the general of the kingdom, and may raiſe fleets and armies, build forts, appoint havens, erect beacons, prohibit the exportation of arms and ammunition, and confine his ſubjects within the realm, or recall them from foreign parts.

(9.) The *king* is alſo the fountain of juſtice, and general conſervator of the peace; and therefore may erect courts (wherein he hath a legal ubiquity), proſecute offenders, pardon crimes, and iſſue proclamations.

(10.) He is likewiſe the fountain of honour, of office, and of privilege.

(11.) He is alſo the arbiter of *domeſtic* commerce; (not of *foreign*, which is regulated by the law of merchants); and is therefore intitled to the erection of public marts, the regulation of weights and meaſures, and the coinage or legitimation of money.

(12.) The *king* is, laſtly, the ſupreme head of the church; and, as ſuch, convenes, regulates, and diſſolves ſynods, nominates biſhops, and receives appeals in all eccleſiaſtical cauſes.

li. Sect. VIII. *Of the king's revenue.*

(1.) The *king's revenue* is either *ordinary* or *extraordinary*. And the *ordinary* is, 1. *Eccleſiaſtical*. 2. *Temporal*.

(2.) The *king's eccleſiaſtical* revenue conſiſts in, 1. The cuſtody of the temporalties of vacant biſhoprics. 2. Corodies and penſions. 3. Extra-parochial tithes. 4. The firſt fruits and tenths of benefices.

(3.) The *king's* ordinary *temporal* revenue conſiſts in, 1. The demeſne lands of the crown. 2. The hereditary exciſe; being part of the conſideration for the purchaſe of his feodal profits, and the prerogatives of purveyance and pre-emption. 3. An annual ſum iſſuing from the duty on wine-licences; being the reſidue of the ſame conſideration. 4. His foreſts. 5. His courts of juſtice 6. Royal fiſh. 7. Wrecks, and things jetſam, flotſam, and ligan. 8. Royal mines. 9. Treaſure trove. 10. Waifs. 11. Eſtrays. 12. Forfeitures for offences, and deodands. 13. Eſcheats of lands. 14. Cuſtody of ideots and lunatics.

(4.) The *king's extraordinary revenue*, conſiſts in aids, ſubſidies, and ſupplies, granted him by the commons in parliament.

(5.) Heretofore theſe were uſually raiſed by grants of the (nominal) *tenth* or *fifteenth* part of the moveables in every townſhip; or by ſcutages, hydages, and talliages; which were ſucceeded by *ſubſidies* aſſeſſed upon individuals, with reſpect to their lands and goods.

(6.) A new ſyſtem of taxation took place about the time of the revolution: our modern taxes are therefore 1. *Annual*. 2. *Perpetual*.

(7.) The *annual taxes* are, 1. The land-tax, or the ancient ſubſidy raiſed upon a new aſſeſſment. 2. The malt-tax, being an annual exciſe on malt, mum, cyder, and perry.

(8.) The *perpetual* taxes are, 1. The cuſtoms, or tonnage and poundage of all merchandiſe exported or imported. 2. The exciſe duty, or inland impoſition on a great variety of commodities. 3. The ſalt-duty, or exciſe on ſalt. 4. The poſt-office, or duty for the carriage of letters. 5. The ſtamp-duty on paper, parchment, &c. 6. The duty on houſes and windows. 7. The duty on licences for hackney coaches and chairs. 8. The duty on offices and penſions.

(9.) Part of this revenue is applied to pay the intereſt of the national debt, till the principal is diſcharged by parliament.

(10.) The produce of theſe ſeveral taxes were originally ſeparate and *ſpecific funds*, to anſwer *ſpecific loans* upon their reſpective credits; but are now conſolidated by parliament into three principal funds, the *aggregate*, *general*, and *South-ſea* funds, to anſwer *all* the debts of the nation: the public faith being alſo ſuperadded, to ſupply deficiencies, and ſtrengthen the ſecurity of the whole.

(11.) The ſurpluſſes of theſe funds, after paying the intereſt of the national debt, are carried together, and denominated the *ſinking* fund: which, unleſs otherwiſe appropriated by parliament, is annually to be applied towards paying off ſome part of the principal.

(12.) But, previous to this, the *aggregate* fund is now charged with an annual ſum for the *civil liſt*; which is the immediate proper revenue of the crown, ſettled by parliament on the king at his acceſſion, for defraying the charges of civil government.

lii. Sect. IX. *Of ſubordinate magiſtrates.*

(1.) SUBORDINATE magiſtrates, of the moſt general uſe and authority, are, 1. *Sheriffs*. 2. *Coroners*. 3. *Juſtices* of the *Peace*. 4. *Conſtables*. 5. *Surveyors* of the *highways*. 6. *Overſeers* of the *poor*.

(2.) The *ſheriff* is the keeper of each county, annually nominated in due form by the king; and is (within his county) a judge, a conſervator of the peace, a miniſterial officer, and the king's bailiff.

(3.) *Coroners* are permanent officers of the crown in each county, elected by the freeholders; whoſe office it is to make enquiry concerning the death of the king's ſubjects, and certain revenues of the crown; and alſo, in particular caſes, to ſupply the office of ſheriff.

(4.) *Juſtices* of the *peace* are magiſtrates in each county, ſtatutably qualified, and commiſſioned by the king's majeſty: with authority to conſerve the peace; to hear and determine felonies, and other miſdemeanors; and to do many other acts committed to their charge by particular ſtatutes.

(5.) *Conſtables* are officers of hundreds and townſhips, appointed at the leet, and empowered to preſerve the peace, to keep watch and ward, and to apprehend offenders.

(6.) *Surveyors* of the *highways* are officers appointed annually in every pariſh; to remove annoyances in and to direct the reparation of the public roads.

(7.) *Overſeers* of the *poor* are officers appointed annually in every pariſh; to relieve ſuch impotent, and employ ſuch ſturdy poor, as are *ſettled* in each pariſh, —by birth,—by parentage,—by marriage,—or by

40 days reſidence; accompanied with, 1. Notice. 2. Renting a tenement of ten pounds annual value. 3. Paying their aſſeſſed taxations. 4. Serving an annual office. 5. Hiring and ſervice for a year. 6. Apprenticeſhip for ſeven years. Having a ſufficient eſtate in the pariſh.

liii. SECT. X. *Of the people, whether aliens, denizens, or natives.*

(1.) THE *people* are either *aliens*, that is, born out of the dominions, or allegiance, of the crown of Great Britain; or *natives*, that is, born within it.

(2.) Allegiance is the duty of all ſubjects; being the reciprocal tie of the people to the prince, in return for the protection he affords them; and, in *natives*, this duty of allegiance is natural and perpetual; in *aliens*, is local and temporary only.

(3.) The rights of *natives* are alſo natural and perpetual: thoſe of *aliens*, local and temporary only; unleſs they be made denizens by the king, or naturaliſed by parliament.

liv. SECT. XI. *Of the clergy.*

(1.) THE people, whether aliens, denizens, or natives, are alſo either *clergy*, that is, all perſons in holy orders, or in eccleſiaſtical offices; or *laity*, which comprehends the reſt of the nation.

(2.) The *clerical* part of the nation, thus defined, are, 1. Archbiſhops and biſhops; who are elected by their ſeveral chapters, at the nomination of the crown, and afterwards confirmed and conſecrated by each other. 2. Deans and chapters. 3. Arch-deacons. 4. Rural deans. 5. Parſons (under which are included appropriators) and vicars; to whom there are generally requiſite, holy orders, preſentation, inſtitution, and induction. 6. Curates. To which may be added, 7. Church-wardens. 8. Pariſh-clerks and ſextons.

lv. SECT. XII. *Of the civil ſtate.*

(1.) THE *laity* are diviſible into three ſtates; *civil*, *military*, and *maritime*.

(2.) The *civil* ſtate (which includes all the nation, except the clergy, the army, and the navy, and many individuals among them alſo), may be divided into the *nobility* and the *commonalty*.

(3.) The *nobility* are dukes, marquiſes, earls, viſcounts, and barons. Theſe had anciently duties annexed to their reſpective honours: they are created either by writ, that is by ſummons to parliament; or by the king's letters-patent, that is, by royal grant: and they enjoy many privileges excluſive of their ſenatorial capacity.

(4.) The *commonalty* conſiſt of knights of the garter, knights bannerets, baronets, knights of the bath, knights bachelors, eſquires, gentlemen, yeomen, tradeſmen, artificers, and labourers.

lvi. SECT. XIII. *Of the military and maritime ſtates.*

(1.) THE *military* ſtate, by the ſtanding conſtitutional law, conſiſts of the militia of each county, raiſed from among the people by lot, officered by the principal landholders, and commanded by the lord lieutenant.

(2.) The more diſciplined occaſional troops of the kingdom are kept on foot only from year to year by parliament; and, during that period, are governed by martial law, or arbitrary articles of war, formed at the pleaſure of the crown.

(3.) The *maritime* ſtate conſiſts of the officers and mariners of the Britiſh navy; who are governed by expreſs and permanent laws, or the articles of the navy, eſtabliſhed by act of parliament.

lvii. SECT. XIV. *Of maſter and ſervant.*

(1.) THE *private*, economical, *relations* of perſons are thoſe of, 1. *Maſter* and *ſervant*. 2. *Huſband* and *wife*. 3. *Parent* and *child*. 4. *Guardian* and *ward*.

(2.) The firſt relation may ſubſiſt between a *maſter* and four ſpecies of *ſervants*; (for ſlavery is unknown in our laws): *viz.* 1. Menial ſervants; who are *hired*. 2. Apprentices, who are *bound* by indentures. 3. Labourers; who are caſually *employed*. 4. Stewards, bailiffs, and factors; who are rather in a *miniſterial* ſtate.

(3.) From this relation reſult divers powers to the maſter, and emoluments to the ſervant.

(4.) The maſter hath a property in the ſervice of his ſervant; and muſt be anſwerable for ſuch acts as the ſervant does by his expreſs, or implied, command.

lviii. SECT. XV. *Of huſband and wife.*

(4.) THE ſecond private relation is that of *marriage*; which includes the reciprocal rights and duties of *huſband* and *wife*.

(2.) *Marriage* is duly contracted between perſons, 1. Conſenting: 2. Free from canonical impediments, which make it *voidable*: 3. Free alſo from the civil impediments,—of prior marriage,—of want of age,—of non-conſent of parents or guardians, where requiſite,—and of want of reaſon; either of which make it totally *void*. And it muſt be celebrated by a clergyman in due form and place.

(3.) Marriage is diſſolved, 1. By death. 2. By divorce in the ſpiritual court; not *a menſa et thoro* only, but *a vinculo matrimonii*, for canonical cauſe exiſting previous to the contract. 3. By act of parliament, as for adultery.

(4.) By marriage the huſband and wife become one perſon in law; which unity is the principal foundation of their reſpective rights, duties, and diſabilities.

lix. SECT. XVI. *Of parent and child.*

(1.) THE third, and moſt univerſal private relation, is that of *parent* and *child*.

(2.) *Children* are, 1. *Legitimate*; being thoſe who are born in lawful wedlock, or within a competent time after. 2. *Baſtards* being thoſe who are not ſo.

(3.) The duties of parents to *legitimate* children are, 1. Maintenance. 2. Protection. 3. Education.

(4.) The power of parents conſiſts principally in correction, and conſent to marriage. Both may after death be delegated by will to a guardian; and the former alſo, living the parent, to a tutor or maſter.

(5.) The duties of *legitimate* children to parents are obedience, protection, and maintenance.

(6.) The duty of parents to *baſtards* is only that of maintenance.

(7.) The rights of a *baſtard* are ſuch only as he can acquire; for he is incapable of inheriting any thing.

lx. Sect. XVII. *Of guardian and ward.*

(1.) The fourth private relation is that of *guardian* and *ward*, which is plainly derived from the laſt; theſe being, during the continuance of their relation, reciprocally ſubject to the ſame rights and duties.

(2.) *Guardians* are of divers ſorts: 1. Guardians by nature, or the parents. 2. Guardians for nurture, aſſigned by the eccleſiaſtical courts. 3. Guardians in ſocage, aſſigned by the common law. 4. Guardians by ſtatute, aſſigned by the father's will. All ſubject to the ſuperintendance of the court of chancery.

(3.) *Full age* in male or female for all purpoſes is the age of 21 years (different ages being allowed for different purpoſes); till which age the perſon is an *infant*.

(4.) An *infant*, in reſpect of his tender years, hath various privileges, and various diſabilities, in law; chiefly with regard to ſuits, crimes, eſtates, and contracts.

lxi. Sect. XVIII. *Of corporations.*

(1.) Bodies politic, or *corporations*, which are *artificial* perſons, are eſtabliſhed for preſerving in perpetual ſucceſſion certain rights; which, being conferred on *natural* perſons only, would fail in proceſs of time.

(2.) Corporations are, 1. *Aggregate*, conſiſting of many members. 2. *Sole*, conſiſting of one perſon only.

(3.) Corporations are alſo either *ſpiritual*, erected to perpetuate the rights of the church; or *lay*. And the lay are, 1. *Civil;* erected for many temporal purpoſes. 2. *Eleemoſynary;* erected to perpetuate the charity of the founder.

(4.) Corporations are uſually erected and named, by virtue of the king's royal charter; but may be created by act of parliament.

(5.) The powers incident to all corporations are, 1. To maintain perpetual ſucceſſion. 2. To act in their corporate capacity like an individual. 3. To hold lands, ſubject to the ſtatutes of mortmain. 4. To have a common ſeal. 5. To make by-laws. Which laſt power, in ſpiritual or eleemoſynary corporations, may be executed by the king or the founder.

(6.) The duty of corporations is to anſwer the ends of their inſtitution.

(7.) To enforce this duty, all corporations may be *viſited:* ſpiritual corporations by the ordinary; lay corporations by the founder, or his repreſentatives; *viz.* the civil by the king (who is the *fundator incipiens* of all) repreſented in his court of king's bench; the eleemoſynary by the endower (who is the *fundator perficiens* of ſuch), or by his heirs or aſſigns.

(8.) Corporations may be diſſolved, 1. By act of parliament. 2. By the natural death of all their members. 3. By ſurrender of their franchiſes. 4. By forfeiture of their charter.

CHAP. II. lxii.

Of the Rights *of* Things.

Sect. I. *Of Property in general.* lxiii.

(1.) All *dominion* over external objects has its original from the gift of the Creator to man in general.

(2.) The *ſubſtance* of things was, at firſt, common to all mankind; yet a temporary property, in the *uſe* of them, might even then be acquired, and continued, by *occupancy*.

(3.) In proceſs of time a permanent property was eſtabliſhed in the *ſubſtance*, as well as the *uſe*, of things; which was originally acquired by *occupancy* only.

(4.) Leſt this property ſhould determine by the owner's dereliction or death, whereby the thing would again become common, ſocieties have eſtabliſhed *conveyances*, *wills*, and *heirſhips*, in order to continue the property of the firſt occupant: and, where by accident ſuch property becomes diſcontinued or unknown, the thing uſually reſults to the *ſovereign* of the ſtate, by virtue of the municipal law.

(5.) But of ſome things, which are incapable of permanent ſubſtantial dominion, there ſtill ſubſiſts only the ſame tranſient uſufructuary property, which originally ſubſiſted in all things.

Sect. II. *Of real property; and, firſt, of corporeal hereditaments.* lxiv.

(1.) In this *property*, or excluſive dominion, conſiſt the *rights* of *things;* which are, 1. Things *real.* 2. Things *perſonal.*

(2.) In things *real* may be conſidered, 1. Their ſeveral *kinds*. 2. The *tenures* by which they may be holden. 3. The *eſtates* which may be acquired therein. 4. The *title*, or the means of acquiring and loſing them.

(3.) All the ſeveral *kinds* of things real are reducible to one of theſe three, viz. *lands*, *tenements*, or *hereditaments;* whereof the ſecond includes the firſt, and the third includes the firſt and ſecond.

(4.) *Hereditaments*, therefore, or whatever may come to be inherited (being the moſt comprehenſive denomination of things real), are either *corporeal* or *incorporeal*.

(5.) *Corporeal* hereditaments conſiſt wholly of *lands*, in their largeſt legal ſenſe; wherein they include not only the face of the earth, but every other object of ſenſe adjoining thereto, and ſubſiſting either above or beneath it.

Sect. III. *Of incorporeal hereditaments.* lxv.

(1.) Incorporeal hereditaments are rights iſſuing out of things corporeal, or concerning, or annexed to, or exerciſable within the ſame.

(2.) Incorporeal hereditaments are, 1. *Advowſons.* 2. *Tithes.* 3. *Commons.* 4. *Ways.* 5. *Offices.* 6. *Dignities.* 7. *Franchiſes.* 8. *Corodies* or *penſions.* 9. *Annuities.* 10. *Rents.*

(3.) An *advowſon* is a right of preſentation to an eccleſiaſtical benefice; either appendant, or in groſs. This may be, 1. Preſentative. 2. Collative. 3. Donative.

(4.) *Tithes* are the tenth part of the increaſe yearly ariſing from the profits and ſtock of lands, and the perſonal induſtry of mankind. Theſe, by the ancient and poſitive law of the land, are due of common right to the parſon, or (by endowment) to the vicar; unleſs ſpecially diſcharged, 1. By real compoſition. 2. By preſcription, either *de modo decimandi*, or *de non decimando*.

(5.) *Common* is a profit which a man hath in the lands of another; being, 1. Common of paſture; which is either appendant, appurtenant, becauſe of vicinage, or in groſs. 2. Common of piſcary. 3. Common of turbary. 4. Common of eſtovers, or botes.

(6.) *Ways* are a right of paſſing over another man's ground.

(7.) *Offices* are the right to exerciſe a public or private employment.

(8.) For *dignities*, which are titles of honour, ſee Chap. I. Sect. 12.

(9.) *Franchiſes* are a royal privilege, or branch of the king's prerogative, ſubſiſting in the hands of a ſubject.

(10.) *Corodies* are allotments for one's ſuſtenance; which may be converted into *penſions*, ſee Chap. I. Sect. 8.

(11.) An *annuity* is a yearly ſum of money, charged upon the perſon, and not upon the lands of the granter.

(12.) *Rents* are a certain profit iſſuing yearly out of lands and tenements; and are reducible to, 1. Rent-ſervice. 2. Rent-charge. 3. Rent-ſeck.

lxvi. SECT IV. *Of the Feodal Syſtem.*

(1.) THE doctrine of *tenures* is derived from the *feodal* law; which was planted in Europe by its northern conquerors at the diſſolution of the Roman empire.

(2.) Pure and *proper feuds* were parcels of land allotted by a chief to his followers, to be held on the condition of perſonally rendering due military ſervice to their lord.

(3.) Theſe were granted by inveſtiture; were held under the bond of fealty; were inheritable only by deſcendants; and could not be transferred without the mutual conſent of the lord and vaſſal.

(4.) *Improper feuds* were derived from the other; but differed from them in their original, their ſervices and renders, their deſcent, and other circumſtances.

(5.) The lands of England were converted into *feuds*, of the improper kind, ſoon after the Norman conqueſt; which gave riſe to the grand maxim of tenure, viz. That all lands in the kingdom are *holden*, mediately or immediately, of the king.

lxvii. SECT. V. *Of the ancient Engliſh Tenures.*

(1.) THE diſtinction of tenures conſiſted in the nature of their ſervice: as, 1. *Chivalry*, or *knight-ſervice*; where the ſervice was free, but uncertain. 2. *Free ſocage*; where the ſervice was free, and certain. 3. Pure *villenage*; where the ſervice was baſe, and uncertain. 4. *Privileged villenage*, or *villein ſocage*; where the ſervice was baſe, but certain.

(2.) The moſt univerſal ancient tenure was that in *chivalry*, or by *knight-ſervice*; in which the tenant of every knight's fee was bound, if called upon, to attend his lord to the wars. This was granted by livery, and perfected by homage and fealty; which uſually drew after them ſuit of court.

(3.) The other fruits and conſequences of the tenure by knight-ſervice were, 1. Aid. 2. Relief. 3. Primer ſeiſin. 4. Wardſhip. 5. Marriage. 6. Fines upon alienation. 7. Eſcheat.

(4.) *Grand ſerjeanty* differed from chivalry principally in its render, or ſervice; and not in its fruits and conſequences.

(5.) The perſonal ſervice in chivalry was at length gradually changed into pecuniary aſſeſſments, which were called *ſcutage* or *eſcuage*.

(6.) The military tenures (except the ſervices of grand ſerjeanty) were, at the reſtoration of King Charles, totally aboliſhed, and reduced to free ſocage by act of parliament.

SECT. VI. *Of the modern Engliſh Tenures.* lxviii.

(1.) FREE *ſocage* is a tenure by any free, certain, and determinate ſervice.

(2.) This tenure, the relic of Saxon liberty, includes *petit ſerjeanty*, tenure in *burgage*, and *gavelkind*.

(3.) Free ſocage lands partake ſtrongly of the feodal nature, as well as thoſe in chivalry: being holden; ſubject to ſome ſervice, at the leaſt to fealty and ſuit of court; ſubject to relief, to wardſhip, and to eſcheat, but not to marriage; ſubject alſo formerly to aids, primer ſeiſin, and fines for alienation.

(4.) *Pure villenage* was a precarious and ſlaviſh tenure, at the abſolute will of the lord, upon uncertain ſervices of the baſeſt nature.

(5.) From hence, by tacit conſent or encroachment, have ariſen the modern *copyholds*, or tenure by copy of court-roll; in which lands may be ſtill held at the (nominal) will of the lord, (but regulated) according to the cuſtom of the manor.

(6.) Theſe are ſubject, like ſocage lands, to ſervices relief, and eſcheat; and alſo to heriots, wardſhip, and fines upon deſcent and alienation.

(7.) *Privileged villenage*, or *villein ſocage*, is an exalted ſpecies of copyhold tenure, upon baſe, but certain, ſervices; ſubſiſting only in the ancient demeſnes of the crown; whence the tenure is denominated the tenure in *ancient demeſne*.

(8.) Theſe copyholds of ancient demeſne have divers immunities annexed to their tenure; but are ſtill held by copy of court-roll, according to the cuſtom of the manor, though not at the will of the lord,

(9.) *Frankalmoign* is a tenure by ſpiritual ſervices at large, whereby many eccleſiaſtical and eleemoſynary corporations now hold their lands and tenements; being of a nature diſtinct from tenure by divine ſervice in certain.

SECT. VII. *Of freehold eſtates of inheritance.* lxix.

(1.) ESTATES in lands, tenements, and hereditaments, are ſuch intereſt as the tenant hath therein; to aſcertain which, may be conſidered, 1. The *quantity* of *intereſt*. 2. The *time* of *enjoyment*. 3. The *number* and *connections* of the *tenants*.

(2.) Eſtates, with reſpect to their *quantity* of *intereſt*, or duration, are either *freehold*, or *leſs* than *freehold*.

(3.) A *freehold* eſtate, in lands, is ſuch as is created by livery of ſeiſin at common law; or, in tenements of an incorporeal nature, by what is equivalent thereto.

(4.) Freehold eſtates are either eſtates of *inheritance*, or *not* of *inheritance*, viz. for *life* only: and *inheritance* are, 1. *Abſolute*, or *fee ſimple*. 2. *Limited fees*.

(5.) Tenant in *fee ſimple* is he that hath lands, tenements, or hereditaments, to hold to him and his heirs for ever.

(6.) *Limited fees* are, 1. *Qualified* or *baſe*, fees. 2. Fees *conditional* at the common law.

(7.) *Qualified* or *baſe* fees are thoſe which, having a qualification ſubjoined thereto, are liable to be defeated when the qualification is at an end.

(8.) *Conditional* fees, at the common law, were ſuch as were granted to the donee, and the heirs of his body, in excluſion of collateral heirs.

(9.) Theſe were held to be fees, granted on condition that the donee had iſſue of his body; which condition being once performed by the birth of iſſue, the donee might immediately aliene the land: but the ſtatute *de donis* being made to prevent ſuch alteration, thereupon from the diviſion of the fee (by conſtruction of this ſtatute) into a particular eſtate and a reverſion, the conditional fees began to be called *fees-tail*.

(10.) All tenements real, or ſavouring of the realty, are ſubject to entails.

(11.) Eſtates tail may be, 1. general, or ſpecial; 2. male or female; 3. given in frank marriage.

(12.) Incident to eſtates tail are, 1. Waſte. 2. Dower. 3. Curteſy. 4. Bar;—by fine, recovery, or lineal warranty with aſſets.

(13.) Eſtates tail are now, by many ſtatutes and reſolutions of the courts, almoſt brought back to the ſtate of conditional fees at the common law.

lxx. Sect. VIII. *Of freeholds, not of inheritance.*

(1.) Freeholds, *not* of *inheritance*, or for *life* only, are, 1. *Conventional*, or created by the act of the parties. 2. *Legal*, or created by operation of law.

(2.) *Conventional* eſtates for *life* are created by an expreſs grant for term of one's own life, or *pur auter vie*; or by a general grant, without expreſſing any term at all.

(3.) Incident to this, and all other eſtates for life, are eſtovers, and emblements: and to eſtates *per auter vie* general occupancy was alſo incident; as ſpecial occupancy ſtill is, if *ceſtuy que vie* ſurvives the tenant.

(4.) *Legal* eſtates for *life* are, 1. Tenancy in *tail*, after *poſſibility* of iſſue *extinct*. 2. Tenancy by the *curteſy* of England. 3. Tenancy in *dower*.

(5.) Tenancy in *tail*, after *poſſibility* of iſſue *extinct*, is where an eſtate is given in ſpecial tail; and, before iſſue had, a perſon dies from whoſe body the iſſue was to ſpring; whereupon the tenant (if ſurviving) becomes tenant in *tail*, after *poſſibility* of iſſue *extinct*.

(6.) This eſtate partakes both of the incidents to an eſtate tail, and thoſe of an eſtate for life.

(7.) Tenancy by the *curteſy* of England is where a man's wife is ſeiſed of an eſtate of inheritance; and he by her has iſſue, born alive, which was capable of inheriting her eſtate; in which caſe he ſhall, upon her death, hold the tenements for his own life, as tenant by the *curteſy*.

(8.) Tenancy in *dower* is where a woman's huſband is ſeiſed of an eſtate of inheritance, of which her iſſue might by any poſſibility have been heir; and the huſband dies: the woman is thereupon intitled to *dower*, or one third part of the lands and tenements, to hold for her natural life.

(9.) Dower is either by the common law; by ſpecial cuſtom; *ad oſtium eccleſiæ*; or, *ex aſſenſu patris*.

(10.) Dower may be forfeited or barred, particularly by an eſtate in *jointure*.

Sect. IX. *Of eſtates leſs than freehold.* lxxi.

(1.) Estates *leſs* than *freehold* are, 1. Eſtates for *years*. 2. Eſtates at *will*. 3. Eſtates at *ſufferance*.

(2.) An eſtate for *years* is where a man, ſeized of lands and tenements, letteth them to another for a certain period of time, which transfers the intereſt of the term; and the leſſee enters thereon, which gives him poſſeſſion of the term, but not legal ſeiſin of the land.

(3.) Incident to this eſtate are eſtovers; and alſo emblements, if it determines before the full end of the term.

(4.) An eſtate at *will* is where lands are let by one man to another, to hold at the will of both parties; and the leſſee enters thereon.

(5.) *Copyholds* are eſtates held at the will of the lord, (regulated) according to the cuſtom of the manor.

(6.) An eſtate at *ſufferance* is where one comes into poſſeſſion of land by lawful title, but keeps it afterwards without any title at all.

Sect. X. *Of eſtates upon condition.* lxxii.

(1.) Estates (whether freehold or otherwiſe) may alſo be held upon *condition*; in which caſe their exiſtence depends on the happening, or not happening, of ſome uncertain event.

(2.) Theſe eſtates are, 1. On condition *implied*. 2. On condition *expreſſed*. 3. Eſtates in *gage*. 4. Eſtates by *ſtatute*, merchant or ſtaple. 5. Eſtates by *elegit*.

(3.) Eſtates on condition *implied* are where a grant of an eſtate has, from its eſſence and conſtitution, a condition inſeparably annexed to it; though none be expreſſed in words.

(4.) Eſtates on condition *expreſſed* are where an expreſs qualification or proviſion is annexed to the grant of an eſtate.

(5.) On the performance of theſe conditions either expreſſed or implied (if *precedent*) the eſtate may be veſted or enlarged; or, on the breach of them (if *ſubſequent*) an eſtate already veſted may be defeated.

(6.) Eſtates in *gage*, *in vadio*, or in pledge, are eſtates granted as a ſecurity for money lent; being,

1. *In vivo vadio*, or *living gage;* where the profits of land are granted till a debt be paid, upon which payment the granter's eſtate will revive. 2. *In mortuo vadio*, in *dead*, or *mort gage;* where an eſtate is granted, on condition to be void at a day certain, if the granter then repays the money borrowed; on failure of which, the eſtate becomes abſolutely dead to the granter.

(7.) Eſtates by *ſtatute*-merchant, or *ſtatute*-ſtaple, are alſo eſtates conveyed to creditors, in purſuance of certain ſtatutes, till their profits ſhall diſcharge the debt.

(8.) Eſtates by *elegit* are where, in conſequence of a judicial writ ſo called, lands are delivered by the ſheriff to a plaintiff, till their profits ſhall ſatisfy a debt adjudged to be due by law.

lxxiii. SECT. XI. *Of eſtates in poſſeſſion, remainder, and reverſion.*

(1.) ESTATES, with reſpect to their *time* of *enjoyment*, are either in immediate *poſſeſſion*, or in *expectancy;* which eſtates in *expectancy* are created at the ſame time, and are parcel of the ſame eſtates, as thoſe upon which they are expectant. Theſe are, 1. *Remainders.* 2. *Reverſions.*

(2.) A *remainder* is an eſtate limited to take effect, and be enjoyed, after another *particular* eſtate is determined.

(3.) Therefore, 1. There muſt be a precedent particular eſtate, in order to ſupport a remainder. 2. The remainder muſt paſs out of the granter, at the creation of the particular eſtate. 3. The remainder muſt veſt in the grantee, during the continuance, or at the determination, of the particular eſtate.

(4.) Remainders are, 1. Veſted; where the eſtate is fixed to remain to a *certain* perſon, after the particular eſtate is ſpent. 2. Contingent; where the eſtate is limited to take effect, either to an *uncertain* perſon, or upon an *uncertain* event.

(5.) An *executory deviſe* is ſuch a diſpoſition of lands, by will, that an eſtate ſhall not veſt thereby at the death of the deviſor, but only upon ſome future contingency, and without any precedent particular eſtate to ſupport it.

(6.) A *reverſion* is the reſidue of an eſtate left in the granter, to commence in poſſeſſion after the determination of ſome *particular* eſtate granted: to which are incident fealty, and rent.

(7.) Where two eſtates, the one leſs, the other greater, the one in poſſeſſion, the other in expectancy, meet together in one and the ſame perſon, and in one and the ſame right, the leſs is *merged* in the greater.

lxxiv. SECT. XII. *Of eſtates, in ſeveralty, joint tenancy, coparcenary, and common.*

(1.) ESTATES, with reſpect to the *number* and *connections* of their *tenants*, may be held, 1. *In ſeveralty.* 2. In *joint-tenancy.* 3. In *coparcenary.* 4. In *common.*

(2.) An eſtate in *ſeveralty* is where one tenant holds it in his own ſole right, without any other perſon being joined with him.

(3.) An eſtate in *joint-tenancy* is where an eſtate is granted to two or more perſons; in which caſe the law conſtrues them to be *joint-tenants*, unleſs the words of the grant expreſsly exclude ſuch conſtruction.

(4.) Joint-tenants have an unity of intereſt, of title, of time, and of poſſeſſion: they are raiſed *per my & per tout:* and therefore upon the deceaſe of one joint-tenant, the whole intereſt remains to the ſurvivor.

(5.) Joint-tenancy may be diſſolved, by deſtroying one of its four conſtituent unities.

(6.) An eſtate in *coparcenary* is where an eſtate of inheritance deſcends from the anceſtor to two or more perſons; who are called *parceners*, and all together make but one heir.

(7.) Parceners have an unity of intereſt, title, and poſſeſſion; but are only ſeized *per my*, and not *per tout:* wherefore there is no ſurvivorſhip among parceners.

(8.) Incident to this eſtate is the law of *hotchpot*.

(9.) Coparcenary may alſo be diſſolved, by deſtroying any of its three conſtituent unities.

(10.) An eſtate in *common* is where two or more perſons hold lands, poſſibly by diſtinct titles, and for diſtinct intereſts; but by unity of poſſeſſion, becauſe none knoweth his own ſeveralty.

(11.) Tenants in common have therefore an unity of poſſeſſion, (without ſurvivorſhip; being ſeized *per my*, and not *per tout;*) but no neceſſary unity of title, time, or intereſt.

(12.) This eſtate may be created, 1. By diſſolving the conſtituent unities of the two former; 2. By expreſs limitation in a grant: and may be deſtroyed, 1. By uniting the ſeveral titles in one tenant; 2. By partition of the land.

SECT. XIII. *Of the title to things real, in general.* lxxv.

(1.) A *title* to things real is the means whereby a man cometh to the juſt poſſeſſion of his property.

(2.) Herein may be conſidered, 1. A mere or naked poſſeſſion. 2. The right of poſſeſſion; which is, 1*ſt*, an apparent, 2*dly*, an actual right. 3. The mere right of property. 4. The conjunction of actual poſſeſſion with both theſe rights; which conſtitutes a perfect *title*.

SECT. XIV. *Of title by deſcent.* lxxvi.

(1.) THE *title* to things real may be reciprocally acquired or loſt, 1. By *deſcent*. 2. By *purchaſe*.

(2.) *Deſcent* is the means whereby a man, on the death of his anceſtor, acquires a title to his eſtate, in right of repreſentation, as his *heir* at law.

(3.) To underſtand the doctrine of deſcents, we muſt form a clear notion of *conſanguinity;* which is the connection, or relation, of perſons deſcended from the ſame ſtock or common anceſtor; and it is, 1. *Lineal*, where one of the kinſmen is lineally deſcended from the other. 2. *Collateral*, where they are lineally deſcended, not one from the other, but both from the ſame common anceſtor.

(4.) The rules of deſcent, or *canons*, of *inheritance*, obſerved by the laws of England, are theſe:

1*ſt*, Inheritances ſhall lineally *deſcend* to the *iſſue* of the perſon laſt actually ſeiſed, *in infinitum;* but ſhall never lineally *aſcend.*

2d, The *male* iſſue ſhall be admitted before the *female.*

3d, Where there are two or more males in equal degree, the *eldeſt* only ſhall inherit; but the females *all* together.

4th, The lineal deſcendants, *in infinitum*, of any perſon deceaſed ſhall *repreſent* their anceſtor; that is, ſhall ſtand in the ſame place as the perſon himſelf would have done, had he been living.

5th, On failure of *lineal* deſcendants, or iſſue, of the perſon laſt ſeiſed, the inheritance ſhall deſcend to the blood of the *firſt purchaſer;* ſubject to the three preceding rules. To evidence which blood, the two following rules are eſtabliſhed.

6th, The collateral heir of the perſon laſt ſeiſed muſt be his next collateral kinſman, of the *whole* blood.

7th, In collateral inheritances, the *male ſtocks* ſhall be preferred to the *female;* that is, kindred derived from the blood of the male anceſtors ſhall be admitted before thoſe from the blood of the female: unleſs where the lands have, in fact, deſcended from a female.

lxxvii. SECT. XV. *Of title by purchaſe, and firſt by eſcheat.*

(1.) PURCHASE, or perquiſition, is the poſſeſſion of an eſtate which a man hath by his own act or agreement; and not by the mere act of law, or deſcent from any of his anceſtors. This includes, 1. *Eſcheat.* 2. *Occupancy.* 3. *Preſcription.* 4. *Forfeiture.* 5. *Alienation.*

(2.) *Eſcheat* is where, upon deficiency of the tenant's *inheritable blood*, the eſtate falls to the lord of the fee.

(3.) *Inheritable blood* is wanting to, 1. Such as are not related to the perſon laſt ſeiſed. 2. His maternal relations in paternal inheritances, and *vice verſa.* 3. His kindred of the half blood. 4. Monſters. 5. Baſtards. 6. Aliens, and their iſſue. 7. Perſons attained of treaſon or felony. 8. Papiſts, in reſpect of themſelves only, by the ſtatute law.

lxxviii. SECT. XVI. *Of title by occupancy.*

(1.) OCCUPANCY is the taking poſſeſſion of thoſe things which before had no owner.

(2.) Thus, at the common law, where tenant *pur auter vie* died during the life of *ceſtuy que vie*, he, who could firſt enter, might lawfully retain the poſſeſſion; unleſs by the original grant the heir was made a *ſpecial* occupant.

(3.) The law of *derelictions* and *alluvions* has narrowed the title by occupancy.

lxxix. SECT. XVII. *Of title by preſcription.*

(1.) PRESCRIPTION (as diſtinguiſhed from *cuſtom*) is a *perſonal* immemorial uſage of enjoying a right in ſome incorporeal hereditament, by a man, and either his anceſtors or thoſe whoſe eſtate of inheritance he hath: of which the firſt is called *preſcribing in his anceſtors*, the latter in a *que eſtate.*

SECT. XVIII. *Of title by forfeiture.* lxxx.

(1.) FORFEITURE is a puniſhment annexed by law to ſome illegal act, or negligence, in the owner of things real; whereby the eſtate is transferred to another, who is uſually the party injured.

(2.) Forfeitures are occaſioned, 1. By *crimes.* 2 By *alienation*, contrary to law. 3. By *lapſe.* 4. By *ſimony.* 5. By *nonperformance* of *conditions.* 6. By *waſte.* 7. By *breach* of *copyhold cuſtoms.* 8. By *bankruptcy.*

(3.) Forfeitures for *crimes*, or miſdemeanors, are for, 1. Treaſon. 2. Felony. 3. Miſpriſion of treaſon. 4. *Præmunire.* 5. Aſſaults on a judge, and batteries, ſitting the courts. 6. Popiſh recuſancy, &c.

(4.) *Alienations*, or conveyances, which induce a forfeiture, are, 1. Thoſe in mortmain, made to corporations contrary to the ſtatute law. 2. Thoſe made to aliens. 3. Thoſe made by particular tenants, when larger than their eſtates will warrant.

(5.) *Lapſe* is a forfeiture of the right of preſentation to a vacant church, by neglect of the patron to preſent within ſix kalendar months.

(6.) *Simony* is the corrupt preſentation of any one to an eccleſiaſtical benefice, whereby that turn becomes forfeited to the crown.

(7.) For forfeiture by *nonperformance* of *conditions*, ſee Sect. 10.

(8.) *Waſte* is a ſpoil, or deſtruction, in any corporeal hereditaments, to the prejudice of him that hath the inheritance.

(9.) *Copyhold* eſtates may have alſo other peculiar cauſes of forfeiture, according to the cuſtom of the manor.

(10.) *Bankruptcy* is the act of becoming a *bankrupt;* that is, a trader who ſecretes himſelf, or does certain other acts tending to defraud his creditors, (See Sect. 22.)

(11.) By bankruptcy all the eſtates of the bankrupt are transferred to the aſſignees of his commiſſioners, to be ſold for the benefit of his creditors.

SECT. XIX. *Of title by alienation.* lxxxi.

(1.) ALIENATION, conveyance, or purchaſe in its more limited ſenſe, is a means of transferring real eſtates, wherein they are voluntarily reſigned by one man, and accepted by another.

(2.) This formerly could not be done by a tenant, without *licence* from his lord; nor by a lord, without *attornment* of his tenant.

(3.) All perſons are *capable* of purchaſing; and all that are in poſſeſſion of any eſtates, are *capable* of conveying them: unleſs under peculiar diſabilities by law; as being attainted, *non compotes*, infants, under dureſs, feme-coverts, aliens, or papiſts.

(4.) Alienations are made by *common aſſurances;* which are, 1. By *deed*, or matter in *pais.* 2. By matter of *record.* 3. By ſpecial *cuſtom.* 4. By *deviſe.*

SECT. XX. *Of alienation by deed.* lxxxii.

(1.) IN aſſurances by *deed* may be conſidered, 1. Its *general nature.* 2. Its *ſeveral ſpecies.*

(2.) A deed, in *general*, is the ſolemn act of the parties; being uſually a writing ſealed and delivered; and it may be, 1. A deed indented, or indenture. 2. deed-poll.

(3.) The *requiſites* of a deed are, 1. Sufficient *parties*, and proper *ſubject-matter*. 2. A good and ſufficient *conſideration*. 3. *Writing* on paper, or parchment, duly ſtamped. 4. Legal and orderly *parts:* (which are uſually, 1ſt, the premiſes; 2dly, the *habendum;* 3dly, the *tenendum;* 4thly, the *reddendum;* 5thly, the conditions; 6thly, the warrantry, which is either lineal or collateral; 7thly, the covenants; 8thly, the concluſion, which includes the date). 5. *Reading* it, if deſired. 6. *Sealing*, and, in many caſes, *ſigning* it alſo. 7. *Delivery*. 8. *Atteſtation*.

(4.) A deed may be *avoided*, 1. By the want of any of the requiſites beforementioned. 2. By ſubſequent matter; as, 1ſt, Raſure, or alteration. 2dly, Defacing its ſeal. 3dly, Cancelling it. 4thly, Diſagreement of thoſe whoſe conſent is neceſſary. 5thly, Judgment of a court of juſtice.

(5.) Of the ſeveral *ſpecies* of deeds, ſome ſerve to *convey* real property, ſome only to *charge* and *diſcharge* it.

(6.) Deeds which ſerve to *convey* real property, or *couveyances*, are either by *common law*, or by *ſtatute*. And, of conveyances by *common law*, ſome are *original* or primary, others *derivative* or ſecondary.

(7.) *Original* conveyances are, 1. *Feoffments*. 2. *Gifts*. 3. *Grants*. 4. *Leaſes*. 5. *Exchanges*. 6. *Partitions*. *Derivative* are, 7. *Releaſes*. 8. *Confirmations*. 9. *Surrenders*. 10. *Aſſignments*. 11. *Defeazances*.

(8.) A *feoffment* is the transfer of any *corporeal* hereditament to another, perfected by *livery* of *ſeiſin*, or delivery of bodily poſſeſſion from the feoffer to the feoffee; without which no freehold eſtate therein can be created at common law.

(9.) A *gift* is properly the conveyance of lands in tail.

(10.) A *grant* is the regular method, by common law, of conveying *incorporeal* hereditaments.

(11.) A *leaſe* is the demiſe, granting, or letting to farm of any tenement, uſually for a leſs term than the leſſor hath therein; yet ſometimes poſſibly for a greater; according to the regulations of the reſtraining and enabling ſtatutes.

(12.) An *exchange* is the mutual conveyance of equal intereſts, the one in conſideration of the other.

(13.) A *partition* is the diviſion of an eſtate held in joint-tenancy, in coparcenary, or in common, between the reſpective tenants; ſo that each may hold his diſtinct part in ſeveralty.

(14.) A *releaſe* is the diſcharge or conveyance of a man's right, in lands and tenements, to another that hath ſome former eſtate in poſſeſſion therein.

(15.) A *confirmation* is the conveyance of an eſtate or right *in eſſe*, whereby a voidable eſtate is made ſure, or a particular eſtate is increaſed.

(16.) A *ſurrender* is the yielding up of an eſtate for life, or years, to him that hath the immediate remainder or reverſion; wherein the particular eſtate may merge.

(17.) An *aſſignment* is the transfer, or making over to another, of the whole right one has in any eſtate; but uſually in a leaſe, for life or years.

(18.) A *defeazance* is a collateral deed, made at the ſame time with the original conveyance; containing ſome condition, upon which the eſtate may be defeated.

(19.) Conveyances by *ſtatute* depend much on the doctrine of *uſes* and *truſts:* which are a confidence repoſed in the *terre tenant*, or tenant of the land, that he ſhall permit the profits to be enjoyed, according to the directions of *ceſtuy que uſe*, or *ceſtuy que truſt*.

(20.) The ſtatute of uſes, having transferred all uſes into actual poſſeſſion, (or, rather, having drawn the poſſeſſion to the uſe), has given birth to divers other ſpecies of conveyance: 1. A *covenant* to ſtand ſeiſed to *uſe*. 2. A *bargain* and *ſale*, enrolled. 3. A *leaſe* and *releaſe*. 4. A deed to *lead* or *declare* the uſe of other more direct conveyances. 5. A *revocation* of *uſes;* being the execution of a power, reſerved at the creation of the uſe, of recalling at a future time the uſe or eſtate ſo creating. All which owe their preſent operation principally to the ſtatute of uſes.

(21.) Deeds which do not *convey*, but only *charge* real property, and *diſcharge* it, are, 1. *Obligations*. 2. *Recognizances*. 3. *Defeazances* upon both.

Sect. XXI. *Of alienation by matter of record.* lxxxiii.

(1.) Assurances by matter of *record* are where the ſanction of ſome court of record is called in, to ſubſtantiate and witneſs the transfer of real property. Theſe are, 1. *Private acts of parliament*. 2. The *king's grants*. 3. *Fines*. 4. Common *recoveries*.

(2.) *Private acts* of *parliament* are a ſpecies of aſſurances, calculated to give (by the tranſcendent authority of parliament) ſuch reaſonable powers of relief as are beyond the reach of the ordinary courſe of law.

(3.) The *king's grants*, contained in charters or letters patent, are all entered on record, for the dignity of the royal perſon, and ſecurity of the royal revenue.

(4.) A *fine* (ſometimes ſaid to be a feoffment of record) is an amicable compoſition and agreement of an actual, or fictitious, ſuit; whereby the eſtate in queſtion is acknowledged to be the right of one of the parties.

(5.) The *parts* of a fine are, 1. The writ of covenant. 2. The licence to agree. 3. The concord. 4. The note. 5. The foot. To which the ſtatute hath added, 6. Proclamations.

(6.) Fines are of four *kinds:* 1. *Sur cognizance de droit, come ceo que il ad de ſon done*. 2. *Sur cognizance de droit tantum*. 3. *Sur conceſſit*. 4. *Sur done, grant, et render;* which is a double fine.

(7.) The *force* and *effect* of fines (when levied by ſuch as have themſelves any intereſt in the eſtate) are to aſſure the lands in queſtion to the cognizee, by barring the reſpective rights of parties, privies, and ſtrangers.

(8.) A common *recovery* is by an actual, or fictitious, ſuit or action for land, brought againſt the tenant of the freehold; who thereupon vouches another, who undertakes to warrant the tenant's title: but, upon ſuch vouchee's making default, the land is *recovered* by judgment at law againſt the tenant; who, in return, obtains judgment againſt the vouchee to recover lands of equal value in recompenſe.

(9.) The *force* and *effect* of a recovery are to aſſure lands to the recoverer, by barring eſtates tail, and all remainders and reverſions expectant thereon; provided the tenant in tail either ſuffers, or is vouched in, ſuch recovery.

(10.) The *uſes* of a fine or recovery may be directed by, 1. Deeds to *lead* ſuch uſes; which are made previous to the levying or ſuffering them. 2. Deeds to *declare* the uſes; which are made ſubſequent.

lxxxiv. SECT. XXII. *Of alienation by ſpecial cuſtom.*

(1.) ASSURANCES by ſpecial *cuſtom* are confined to the transfer of *copyhold* eſtates.

(2.) This is effected by, 1. *Surrender* by the tenant into the hands of the lord to the uſe of another, according to the cuſtom of the manor. 2. *Preſentment*, by the tenants or homage, of ſuch ſurrender. 3. *Admittance* of the ſurrenderee by the lord, according to the uſes expreſſed in ſuch ſurrender.

(3.) *Admittance* may alſo be had upon original *grants* to the tenant from the lord, and upon *deſcents* to the heir from the anceſtor.

lxxxv. SECT. XXIII. *Of alienation by deviſe.*

(1.) DEVISE is a diſpoſition of lands and tenements, contained in the laſt will and teſtament of the owner.

(2) This was not permitted by the common law, as it ſtood ſince the conqueſt; but was introduced by the ſtatute law, under Henry VIII. ſince made more univerſal by the ſtatute of tenures under Charles II. with the introduction of additional ſolemnities by the ſtatute of frauds and perjuries in the ſame reign.

(3.) The *conſtruction* of all *common aſſurances* ſhould be, 1. Agreeable to the intention. 2. To the words of the parties. 3. Made upon the entire deed. 4. Bearing ſtrongeſt againſt the contractor. 5. Conformable to law. 6. Rejecting the latter of two totally repugnant clauſes in the deed, and the former in a will. 7. Moſt favourable in caſe of a deviſe.

lxxxvi. SECT. XXIV. *Of things perſonal.*

(1.) THINGS *perſonal* are comprehended under the general name of *chattels;* which includes whatever wants either the duration, or the immobility, attending things real.

(2.) In theſe are to be conſidered, 1. Their *diſtribution*. 2. The *property* of them. 3. The *title* to that property.

(3.) As to the *diſtribution* of chattels, they are, 1. Chattels *real*. 2. Chattels *perſonal*.

(4.) Chattels *real* are ſuch quantities of intereſt, in things *immoveable*, as are ſhort of the duration of freeholds; being limited to a time certain, beyond which they cannot ſubſiſt. (See Sect. 7.)

(5.) Chattels *perſonal* are things *moveable;* which may be transferred from place to place, together with the perſon of the owner.

lxxxvii. SECT. XXV. *Of property in things perſonal.*

(1.) PROPERTY, in chattels perſonal, is either in *poſſeſſion*, or in *action*.

(2.) Property in *poſſeſſion*, where a man has the actual enjoyment of the thing, is, 1. *Abſolute*. 2. *Qualified*.

(3.) *Abſolute* property is where a man has ſuch an excluſive right in the thing, that it cannot ceaſe to be his, without his own act or default.

(4.) *Qualified* property is ſuch as is not, in its nature, permanent; but may ſometimes ſubſiſt, and at other times not ſubſiſt.

(5.) This may ariſe, 1. Where the ſubject is incapable of abſolute ownerſhip. 2. From the peculiar circumſtances of the owners.

(6.) Property in *action*, is where a man hath not the actual *occupation* of the thing; but only a *right* to it, ariſing upon ſome contract, and recoverable by an action at law.

(7.) The property of chattels perſonal is liable to remainders, expectant on eſtates for life; to joint-tenancy; and to tenancy in common.

lxxxviii. SECT. XXVI. *Of title to things perſonal by occupancy.*

(1.) THE *title* to things perſonal may be acquired or loſt by, 1. *Occupancy*. 2. *Prerogative*. 3. *Forfeiture*. 4. *Cuſtom*. 5. *Succeſſion*. 6. *Marriage*. 7. *Judgement*. 8. *Gift*, or *grant*. 9. *Contract*. 10. *Bankruptcy*. 11. *Teſtament*. 12. *Adminiſtration*.

(2.) Occupancy ſtill gives the firſt occupant a right to thoſe few things which have no legal owner, or which are incapable of permanent ownerſhip. Such as, 1. Goods of alien enemies. 2. Things found. 3. The benefit of the elements. 4. Animals *feræ naturæ*. 5. Emblements. 6. Things gained by acceſſion; or, 7. By confuſion. 8. Literary property.

lxxxix. SECT. XXVII. *Of title of prerogative, and forfeiture.*

(1.) BY *prerogative* is veſted in the crown, or its grantees, the property of the royal revenue, (ſee Chap. I. Sect. 8.); and alſo the property of all game in the kingdom, with the right of purſuing and taking it.

(2.) By *forfeiture*, for crimes and miſdemeanors, the right of goods and chattels may be transferred from one man to another; either in part or totally.

(3.) Total forfeitures of goods ariſe from conviction of, 1. Treaſon, and miſpriſion thereof. 2. Felony. 3. Excuſable homicide. 4. Outlawry for treaſon or felony. 5. Flight. 6. Standing mute. 7. Aſſaults on a judge: and batteries, ſitting the courts. 8. *Præmunire*. 9. Pretended prophecies. 10. Owling. 11. Reſiding abroad of artificers. 12. Challenges to fight, for debts at play.

xc. SECT. XXVIII. *Of title by cuſtom.*

(1.) By *cuſtom*, obtaining in particular places, a right may be acquired in chattels: the moſt uſual of which cuſtoms are thoſe relating to, 1. *Heriots*. 2. *Mortuaries*. 3. *Heir looms*.

(2.) *Heriots* are either heriot-*ſervice*, which differs little from a rent; or heriot-cuſtom, which is a cuſtomary tribute, of goods and chattels payable to the lord of the fee on the deceaſe of the owner of lands.

(3.) *Mortuaries* are a cuſtomary gift, due to the miniſter in many pariſhes, on the death of his pariſhioners.

(4.) *Heir-looms* are ſuch perſonal chattels, as deſcend by ſpecial cuſtom to the heir, along with the inheritance of his anceſtor.

xci. Sect. XXIX. *Of title by ſucceſſion, marriage, and judgment.*

(1.) By *ſucceſſion* the right of chattels is veſted in corporations *aggregate;* and likewiſe in ſuch corporations *ſole* as are the heads and repreſentatives of bodies aggregate.

(2.) By *marriage* the chattels real and perſonal of the wife are veſted in the huſband, in the ſame degree of property, and with the ſame powers, as the wife when ſole had over them; provided he reduces them to poſſeſſion.

(3.) The wife alſo acquires, by *marriage*, a property in her own *paraphernalia*.

(4). By *judgment*, conſequent on a ſuit at law, a man may in ſome caſes, not only *recover*, but originally *acquire*, a right to perſonal property. As, 1. To penalties recoverable by action popular. 2. To damages. 3. To coſts of ſuit.

xcii. Sect. XXX. *Of title by gift, grant, aud contract.*

(1.) A *gift*, or *grant*, is a voluntary conveyance of a chattel perſonal in poſſeſſion, without any conſideration or equivalent.

(2.) A *contract* is an agreement, upon ſufficient conſideration, to do or not to do a particular thing: and, by ſuch contract, any perſonal property (either in poſſeſſion or in action) may be transferred.

(3.) Contracts may either be expreſs or implied; either executed or executory.

(4.) The *conſideration* of contracts is, 1. A good conſideration. 2. A valuable conſideration; which is, 1. *Do ut des.* 2. *Facio ut facias.* 3. *Facio, ut des.* 4. *Do, ut facias.*

(5.) The moſt uſual *ſpecies* of perſonal contracts are, 1. *Sale* or *exchange.* 2. *Bailment.* 3. *Hiring* or *borrowing.* 4. *Debt.*

(6.) *Sale* or *exchange* is a tranſmutation of property from one man to another, in conſideration of ſome recompenſe in value.

(7.) *Bailment* is the delivery of goods in truſt; upon a contract, expreſs or implied, that the truſt ſhall be faithfully performed by the bailee.

(8.) *Hiring* or *borrowing* is a contract, whereby the poſſeſſion of chattels is transferred for a particular time, on condition that the identical goods (or ſometimes their value) be reſtored at the time appointed: together with (in caſe of *hiring)* a ſtipend or price for the uſe.

(9.) This price, being calculated to anſwer the hazard as well as inconvenience of lending, gives birth to the doctrine of *intereſt*, or *uſury*, upon loans; and, conſequently, to the doctrine of *bottomry* or *reſpondentia*, and *inſurance*.

(10.) *Debt* is any contract, whereby a certain ſum of *money* becomes due to the creditor. This is, 1. A debt of *record*. 2. A debt upon *ſpecial* contract. 3. A debt upon *ſimple* contract; which laſt includes paper credit, or bills of exchange, and promiſſory notes.

Sect. XXXI. *Of title by bankruptcy.*

(1.) Bankruptcy (as defined in Sect. 18.) is the act of becoming a bankrupt.

(2.) Herein may be conſidered, 1. Who may become a bankrupt. 2. The *acts* whereby he may become a bankrupt. 3. The *proceedings* on a commiſſion of bankrupt. 4. How his *property* is transferred thereby.

(3.) Perſons of full age, *uſing* the *trade* of merchandize, by buying, and ſelling, and ſeeking their livelihood thereby, are liable to become bankrupts; for debts of a ſufficient amount.

(4.) A trader, who endeavours to avoid his creditors, or evade their juſt demands, by any of the ways ſpecified in the ſeveral ſtatutes of bankruptcy, doth thereby commit an *act* of bankruptcy.

(5.) The *proceedings* on a commiſſion of bankrupt, ſo far as they affect the bankrupt himſelf, are principally by, 1. Petition. 2. Commiſſion. 3. Declaration of bankruptcy. 4. Choice of aſſignees. 5. The bankrupt's ſurrender. 6. His examination. 7. His diſcovery. 8. His certificate. 9. His allowance. 10. His indemnity.

(6.) the *property* of a bankrupt's perſonal eſtate is, immediately upon the act of bankruptcy, veſted by conſtruction of law in the aſſignees: and they, when they have collected, diſtribute the whole by equal dividends among all the creditors.

Sect. XXXII. *Of title by teſtament, and adminiſtration.* xciii.

(1.) Concerning *teſtaments* and *adminiſtrations*, conſidered jointly, are to be obſerved, 1. Their *original* and *antiquity*. 2. *Who* may make a teſtament. 3. Its *nature* and *incidents*. 4. What are *executors* and *adminiſtrators*. 5. Their *office* and *duty*.

(2.) *Teſtaments* have ſubſiſted in England immemorially; whereby the deceaſed was at liberty to diſpoſe of his perſonal eſtate, reſerving anciently to his wife and children their *reaſonable part* of his effects.

(3.) The goods of *inteſtates* belonged anciently to the king; who granted them to the prelates to be diſpoſed in pious uſes: but, on their abuſe of this truſt in the times of popery, the legiſlature compelled them to delegate their power to *adminiſtrators* expreſly provided by law.

(4.) *All* perſons may make a teſtament unleſs diſabled by, 1. Want of diſcretion. 2. Want of free-will. 3. Criminal conduct.

(5.) *Teſtaments* are the legal declaration of a man's intentions, which he wills to be performed after his death. Theſe are, 1. Written. 2. Nuncupative.

(6.) An *executor* is he, to whom a man by his will commits the execution thereof.

(7.) *Adminiſtrators* are, 1. *Durante minore ætate* of an infant executor or adminiſtrator; or *durante abſentia;* or *pendente lite.* 2. *Cum teſtamento annexo;* when no executor is named, or the executor refuſes to act. 3. General adminiſtrators; in purſuance of the ſtatutes of Edward III. and Henry VIII. 4. Adminiſtrator *de bonis non;* when a former executor or adminiſtrator dies without completing his truſt.

(8.) The *office* and *duty* of executors (and, in many points, of adminiſtrators alſo), are, 1. To bury the deceaſed. 2. To prove the will, or take out adminiſtration. 3. To make an inventory. 4. To collect the goods and chattels. 5. To pay debts; obſerving the rules of priority. 6. To pay legacies, either general or ſpecific; if they be veſted, and not lapſed. 7. To diſtribute the undeviſed ſurplus, according to the ſtatute of diſtributions.

CHAP. III.

Of PRIVATE WRONGS.

xcv. SECT. I. *Of the redreſs of private wrongs, by the mere act of the parties.*

(1.) WRONGS are the privation of *right*; and are, 1. *Private*. 2. *Public*.

(2.) *Private wrongs*, or *civil injuries*, are an infringement, or privation, of the civil rights of individuals, conſidered as individuals.

(3.) The *redreſs* of civil injuries is one principal object of the laws of England.

(4.) This *redreſs* is effected, 1. By the mere *act* of the parties. 2. By the mere *operation* of *law*. 3. By *both* together, or *ſuit* in *courts*.

(5.) *Redreſs*, by the mere *act* of the parties, is that which ariſes, 1. From the *ſole* act of the party injured. 2. From the *joint* act of all the parties.

(6.) Of the firſt ſort are, 1. Defence of one's ſelf, or relations. 2. Recaption of goods. 3. Entry on lands and tenements. 4. Abatement of nuſances. 5. Diſtreſs; for rent, for ſuit or ſervice, for amercements, for damage, or for divers ſtatutable penalties;—made of ſuch things only as are legally diſtrainable;—and taken and diſpoſed of according to the due courſe of law. 6. Seiſing of heriots, &c.

(7.) Of the ſecond ſort are, 1. Accord. 2. Arbitration.

xcvi. SECT. II. *Of redreſs by the mere operation of law.*

REDRESS, effected by the mere *operation* of *law*, is, 1. In the caſe of *retainer*; where a creditor is executor or adminiſtrator, and is thereupon allowed to retain his own debt. 2. In the caſe of *remitter*; where one, who has a *good* title to lands, &c. comes into poſſeſſion by a *bad* one, and is thereupon remitted to his ancient good title, which protects his ill-acquired poſſeſſion.

xcvii. SECT. III. *Of courts in general.*

(1.) REDRESS, that is effected by the *act* both of law and of the *parties*, is by *ſuit* or *action* in the *courts* of juſtice.

(2.) Herein may be conſidered, 1. The *courts* themſelves. 2. The *cognizance* of wrongs or injuries therein. And, of *courts*, 1. Their *nature* and *incidents*. 2. Their ſeveral *ſpecies*.

(3.) A *court* is a place wherein juſtice is judicially adminiſtered, by officers delegated by the crown; being a court either of record, or not of record.

(4.) *Incident* to all courts are a plaintiff, defendant, and judge: and, with us, there are alſo uſually attorneys; and advocates or counſel, *viz*. either barriſters or ſerjeants at law.

xcviii. SECT. IV. *Of the public courts of common law and equity.*

(1.) COURTS of juſtice, with regard to their ſeveral *ſpecies*, are, 1. Of a *public*, or general, juriſdiction throughout the realm. 2. Of a *private*, or ſpecial, juriſdiction.

(2.) *Public* courts of juſtice are, 1. The courts of *common law* and *equity*. 2. The *eccleſiaſtical* courts. 3. The *military* courts. 4. The *maritime* courts.

(3.) The general and public courts of *common law* and *equity* are, 1. The courts of piepoudre. 2. The court-baron. 3. The hundred court. 4. The county court. 5. The court of common pleas. 6. The court of king's bench. 7. The court of exchequer. 8. The court of chancery. (Which two laſt are courts of *equity* as well as *law*.) 9. The courts of exchequer-chamber. 10. The houſe of peers. To which may be added, as auxiliaries, 11. The courts of aſſize and *niſi prius*.

xcix. SECT. V. *Of courts eccleſiaſtical, military, and maritime.*

(1.) ECCLESIASTICAL courts (which were ſeparated from the *temporal* by William the Conqueror), or courts *Chriſtian*, are, 1. The court of the archdeacon. 2. The court of the biſhop's conſiſtory. 3. The court of arches. 4. The court of peculiars. 5. The prerogative court. 6. The court of delegates. 7. The court of review.

(2.) The only permanent *military* court is that of chivalry; the courts martial, annually eſtabliſhed by act of parliament, being only temporary.

(3.) *Maritime* courts are, 1. The court of admiralty and vice-admiralty. 2. The court of delegates. 3. The lords of the privy council, and others, authoriſed by the king's commiſſion, for appeals in prize-cauſes.

c. SECT. VI. *Of courts of a ſpecial juriſdiction.*

COURTS of a ſpecial or private juriſdiction are, 1. The foreſt courts, including the courts of attachments, regard, ſwinemote, and juſtice ſeat. 2. The court of commiſſioners of ſewers. 3. The court of policies of aſſurance. 4. The court of the marſhalſea and the palace court. 5. The courts of the principality of Wales. 6. The court of the duchy chamber of Lancaſter. 7. The courts of the counties palatine, and other royal franchiſes. 8. The ſtannary courts. 9. The courts of London, and other corporations:—To which may be referred the courts of requeſts or courts of conſcience; and the modern regulations of certain courts baron and county courts. 10. The courts of the two univerſities.

ci. SECT. VII. *Of the cogniſance of private wrongs.*

(1.) ALL private wrongs or civil injuries are *cogniſable* either in the courts *eccleſiaſtical*, *military*, *maritime*, or thoſe of *common law*.

(2.) Injuries cogniſable in the *eccleſiaſtical* courts are, 1. *Pecuniary.* 2. *Matrimonial.* 3. *Teſtamentary.*

(3.) *Pecuniary* injuries, here cogniſable, are, 1. *Subtraction* of *tithes.* For which the remedy is by ſuit to compel their payment, or an equivalent; and alſo their double value. 2. *Nonpayment* of eccleſiaſtical *dues.* Remedy: by ſuit for payment. 3. *Spoliation.* Remedy: by ſuit for reſtitution. 4. *Dilapidations.* Remedy: by ſuit for damages. 5. *Non-repair* of the church, &c.; and *non-payment* of church-rates. Remedy: by ſuit to compel them.

(4.) *Matrimonial* injuries are, 1. *Jactitation* of *marriage.* Remedy: by ſuit for perpetual ſilence. 2. *Subtraction* of *conjugal* rights. Remedy: by ſuit for reſtitution. 3. *Inability* for the marriage ſtate. Remedy: by ſuit for divorce. 4. *Refuſal* of decent *maintenance,* to the wife. Remedy: by ſuit for alimony.

(5.) *Teſtamentary* injuries are, 1. *Diſputing* the validity of *wills.* Remedy: by ſuit to eſtabliſh them. 3. *Obſtructing* of *adminiſtrations.* Remedy: by ſuit for the granting them. 3. *Subtraction* of *legacies.* Remedy: by ſuit for payment.

(6.) The courſe of proceedings herein is much conformed to the civil and canon law: but their only compulſive proceſs is that of excommunication; which is enforced by the temporal writ of *ſignificavit,* or *de excommunicato capiendo.*

(7.) Civil injuries, cogniſable in the court *military,* or court of chivalry, are, 1. Injuries in point of *honour.* Remedy: by ſuit for honourable amends. 2. *Encroachments* in *coat-armour,* &c. Remedy: by ſuit to remove them. The proceedings are a ſummary method.

(8.) Civil injuries cogniſable in the courts *maritime,* are injuries, in their nature of common law cogniſance, but ariſing wholly upon the ſea, and not within the precincts of any county. The proceedings are herein alſo much conformed to the civil law.

(9.) All other injuries are cogniſable only in the courts of *common law:* of which in the remainder of this chapter.

(10.) Two of them are, however, commiſſible by theſe and other inferior courts; *viz.* 1. *Refuſal,* or *neglect,* of *juſtice.* Remedies: by writ of *procedendo,* or *mandamus.* 2. *Encroachment* of *juriſdiction.* Remedy: by writ of prohibition.

cii. SECT. VIII. *Of wrongs, and their remedies, reſpecting the rights of perſons.*

(1.) IN treating of the cogniſance of injuries by the courts of *common* law, may be conſidered, 1. The *injuries* themſelves, and their reſpective *remedies.* 2. The *purſuit* of thoſe remedies in the ſeveral courts.

(2.) *Injuries* between ſubject and ſubject, cogniſable by the courts of *common* law, are in general *remedied* by putting the party injured into poſſeſſion of that right whereof he is unjuſtly deprived.

(3.) This is effected, 1. By *delivery* of the *thing* detained to the rightful owner. 2. Where that remedy is either impoſſible or inadequate, by giving the party injured a *ſatisfaction* in *damages.*

(4.) The inſtruments, by which theſe remedies may be obtained, are *ſuits* or *actions*; which are defined to be the legal demand of one's right: and theſe are, 1. Perſonal. 2. Real. 3. Mixed.

(5.) Injuries (whereof ſome are with, others without *force)* are 1. Injuries to the rights of *perſons.* 2. Injuries to the rights of *property.* And the former are, 1. Injuries to the *abſolute.* 2. Injuries to the *relative,* rights of perſons.

(6.) The *abſolute* rights of individuals are, 1. *Perſonal ſecurity.* 2. *Perſonal liberty.* 3. *Private property:* (See Chap. I. Sect. 1.). To which the injuries muſt be correſpondent.

(7.) Injuries to *perſonal ſecurity* are 1. Againſt a man's *life.* 2. Againſt his *limbs.* 3. Againſt his *body.* 4. Againſt his *health.* 5. Againſt his *reputation.*—The firſt muſt be referred to the next chapter.

(8.) Injuries to the *limbs* and *body,* are, 1. *Threats.* 2. *Aſſault.* 3. *Battery.* 4. *Wounding.* 5. *Mayhem.* Remedy: by action of treſpaſs, *vi et armis;* for damages.

(9.) Injuries to *health,* by any unwholeſome practices, are remedied by a ſpecial action of treſpaſs, on the caſe; for damages.

(10.) Injuries to *reputation* are, 1. Slanderous and malicious *words.* Remedy: by action on the caſe; for damages. 2. *Libels.* Remedy: the ſame. 3. Malicious *proſecutions.* Remedy: by action of conſpiracy, or on the caſe; for damages.

(11.) The ſole injury to *perſonal liberty* is *falſe impriſonment.* Remedies: 1. By writ of, 1ſt. Mainprize; 2dly, *Odio et atia;* 3dly, *Homine replegiando.* 4thly, *Habeas corpus;* to remove the wrong. 2. By action of treſpaſs; to recover damages.

(12.) For injuries to *private property,* ſee the next ſection.

(13.) Injuries to *relative* rights affect, 1. *Huſbands.* 2. *Parents.* 3. *Guardians.* 4. *Maſters.*

(14.) Injuries to an *huſband* are, 1. *Abduction,* or taking away his wife. Remedy: by action of treſpaſs, *de uxore rapta et abducta;* to recover poſſeſſion of his wife, and damages. 2. *Criminal converſation* with her. Remedy: by action on the caſe; for damages. 3. *Beating* her. Remedy: by action on the caſe, *per quod conſortium amiſit;* for damages.

(15.) The only injury to a *parent* or *guardian* is the *abduction* of their children or wards. Remedy: by action of treſpaſs, *de filiis, vel cuſtodiis, raptis vel abductis;* to recover poſſeſſion of them, and damages.

(16.) Injuries to a *maſter* are, 1. *Retaining* his ſervants. Remedy: by action on the caſe; for damages. 2. *Beating* them. Remedy: by action on the caſe, *per quod ſervitium amiſit;* for damages.

SECT. IX. *Of injuries to perſonal property.* ciii.

(1.) INJURIES to the rights of *property* are either to thoſe of *perſonal* or *real* property.

(2.) *Perſonal* property is either in *poſſeſſion* or in *action.*

(3.) Injuries to perſonal property in poſſeſſion are, 1. By *diſpoſſeſſion.* 2. By *damage,* while the owner remains in poſſeſſion.

(4.) *Diſpoſſeſſion,* may be effected, 1. By an unlawful *taking.* 2. By an unlawful *detaining.*

(5.) For the unlawful *taking* of goods and chattels perſonal, the remedy is, 1. Actual reſtitution, which (in caſe of a wrongful diſtreſs) is obtained by action of replevin. 3. Satiſfaction in damages: *1ſt*, in caſe of *reſcous*, by action of *reſcous*, poundbreach, or on the caſe; *2dly*, in caſe of other unlawful takings, by action of treſpaſs or trover.

(6.) For the unlawful *detaining* of goods lawfully taken, the remedy is alſo, 1. Actual reſtitution; by action of replevin or detinue. 2. Satiſfaction in damages: by action on the caſe, for trover and converſion.

(7.) For *damage* to perſonal property, while in the owner's poſſeſſion, the remedy is in damages; by action of treſpaſs *vi et armis*, in caſe the act be immediately injurious; or by action of treſpaſs on the caſe, to redreſs conſequential damage.

(8.) Injuries to perſonal property, in *action*, ariſe by breach of *contracts*, 1. *Expreſs*. 2. *Implied*.

(9.) Breaches of *expreſs* contracts are, 1. By *nonpayment* of *debts*. Remedy: *1ſt*, Specific payment; recoverable by action of debt. *2dly*, Damages for nonpayment; recoverable by action on the caſe. 2. By *nonperformance* of *covenants*. Remedy: by action of covenant, *1ſt*, to recover damages, in covenants perſonal; *2dly*, to compel performance, in covenants real. 3. By *nonperformance* of *promiſes*, or *aſſumpſits*. Remedy: by action on the caſe; for damages.

(10.) *Implied* contracts are ſuch as ariſe, 1. From the nature and conſtitution of *government*. 2. From *reaſon* and the conſtruction of law.

(11.) Breaches of contracts, implied, in the nature of *government*, are by the *nonpayment* of money which the laws have directed to be paid. Remedy: by action of debt (which, in ſuch caſes, is frequently a *popular*, frequently a *qui tam*, action); to compel the ſpecific payment;—or, ſometimes, by action on the caſe; for damages.

(12.) Breaches of contracts, implied in *reaſon* and conſtruction of law, are by the *nonperformance* of legal preſumptive *aſſumpſits*: for which the remedy is in damages; by an action on the caſe on the implied *aſſumpſits*, 1. Of a *quantum meruit*. 2. Of a *quantum valebat*. 3. Of money expended for another. 4. Of receiving money to another's uſe. 5. Of an *inſimul computaſſent*, on an account ſtated (the remedy on an account unſtated being by action of account). 6. Of performing one's duty, in any employment, with integrity, diligence, and ſkill. In ſome of which caſes an action of deceit (or on the caſe, in nature of deceit) will lie.

xiv. SECT. X. *Of injuries to real property: and, firſt, of diſpoſſeſſion, or ouſter, of the freehold.*

(1.) INJURIES affecting *real* property are, 1. *Ouſter*. 2. *Treſpaſs*. 3. *Nuſance*. 4. *Waſte*. 5. *Subtraction*. 6. *Diſturbance*.

(2.) *Ouſter* is the amotion of poſſeſſion; and is, 1. From *freeholds*. 2. From *chattels* real.

(3.) Ouſter from *freeholds* is effected by, 1. *Abatement*. 2. *Intruſion*. 3. *Diſſeiſin*. 4. *Diſcontinuance*. 5. *Deforcement*.

(4.) *Abatement* is the entry of a ſtranger, after the death of the anceſtor, before the heir.

(5.) *Intruſion* is the entry of a ſtranger, after a particular eſtate of freehold is determined, before him in remainder or reverſion.

(6.) *Diſſeiſin* is a wrongful putting out of him that is ſeiſed of the freehold.

(7.) *Diſcontinuance* is where tenant in tail, or or the huſband of tenant in fee, makes a larger eſtate of the land than the law alloweth.

(8.) *Deforcement* is any other detainer of the freehold from him who hath the property, but who never had the poſſeſſion.

(9.) The univerſal remedy for all theſe is reſtitution or delivery of poſſeſſion; and, ſometimes, damages for the detention. This is effected, 1. By mere *entry*. 2. By action *poſſeſſory*. 3. By writ of *right*.

(10.) Mere *entry*, on lands, by him who hath the apparent right of poſſeſſion, will (if *peaceable*) diveſt the mere *poſſeſſion* of a wrongdoer. But *forcible* entries are remedied by immediate reſtitution, to be given by a juſtice of the peace.

(11.) Where the wrongdoer hath not only mere poſſeſſion, but alſo an *apparent* right of poſſeſſion, this may be diveſted by him who hath the *actual* right of poſſeſſion, by means of the *poſſeſſory* actions of *writ* of *entry* or *aſſiſe*.

(12.) A writ of *entry* is a real action, which diſproves the title of the tenant, by ſhowing the unlawful means under which he gained or continues poſſeſſion. And it may be brought either againſt the wrongdoer himſelf, or in the degrees called the *per*, the *per* and *cui*, and the *poſt*.

(13.) An *aſſiſe* is a real action, which proves the title of the demandant, by ſhowing his own or his anceſtor's poſſeſſion. And it may be brought either to remedy abatements; *viz.* the aſſize of *mort d'anceſtor*, &c.; Or to remedy recent diſſeiſins; *viz.* the aſſize of *novel diſſeiſin*.

(14.) Where the wrongdoer hath gained the actual right of *poſſeſſion*, he who hath the right of *property* can only be remedied by a writ of *right*, or ſome writ of a ſimilar nature. As, 1. Where ſuch right of poſſeſſion is gained by the *diſcontinuance* of tenant in tail. Remedy, for the right of property: by writ of *formedon*. 2. Where gained by *recovery* in a poſſeſſory action, had againſt tenants of particular eſtates by their own default. Remedy: by writ of *quod ei deforceat*. 3. Where gained by *recovery* in a poſſeſſory action, had upon the merits. 4. Where gained by the *ſtatute* of *limitations*. Remedy, in both caſes: by a mere writ of *right*, the higheſt writ in the law.

SECT. XI. *Of diſpoſſeſſion, or ouſter, of chattels real.* xv.

(1.) OUSTER from *chattels* real is, 1. From eſtates by *ſtatute* and *elegit*. 2. From an eſtate for *years*.

(2.) Ouſter from eſtates by *ſtatute* or *elegit*, is effected by a kind of *diſſeiſin*. Remedy: reſtitution and damages; by aſſiſe of *novel diſſeiſin*.

(3.) Ouſter from an eſtate for years, is effected by a like diſſeiſin, or *ejectment*. Remedy: reſtitution, and damages; 1. By writ of *ejectione firmæ*. 2. By writ of *quare ejecit infra terminum*.

(4.) A writ of *ejectione firmæ*, or action of treſpaſs in ejectment, lieth where lands, &c. are let for a term of years, and the leſſee is ouſted or ejected from his term; in which caſe he ſhall recover poſſeſſion of his term, and damages.

(5.) This is now the uſual method of trying titles to land, inſtead of an action real: *viz.* By, 1. The claimant's making an actual (or ſuppoſed) leaſe upon the land to the plaintiff. 2. The plaintiff's actual (or ſuppoſed) entry thereupon. 3. His actual (or ſuppoſed) ouſter and ejectment by the defendant. For which injury this action is brought either againſt the tenant, or (more uſually) againſt ſome caſual or fictitious ejector; in whoſe ſtead the tenant may be admitted defendant, on condition that the leaſe, entry, and ouſter, be confeſſed, and that nothing elſe be diſputed but the merits of the title claimed by the leſſor of the plaintiff.

(6.) A writ of *quare ejecit infra terminum* is an action of a ſimilar nature; only not brought againſt the wrongdoer or ejector himſelf, but ſuch as are in poſſeſſion under his title.

cvi. Sect. XII. *Of treſpaſs.*

Treſpaſs is an entry upon, and damage done to, another's lands, by one's ſelf, or one's cattle; without any lawful authority, or cauſe of juſtification: which is called a *breach of his cloſe.* Remedy: damages; by action of treſpaſs, *quare clauſum fregit:* beſides that of diſtreſs, damage feaſant. But, unleſs the title to the land came chiefly in queſtion, or the treſpaſs was wilful or malicious, the plaintiff (if the damages be under forty ſhillings) ſhall recover no more coſts than damages.

cvii. Sect. XIII. *Of nuſance.*

(1.) Nuſance, or annoyance, is any thing that worketh damage or inconvenience: and it is either a *public* and *common* nuſance, of which in the next chapter; or, a *private* nuſance, which is any thing done to the hurt or annoyance of, 1. The corporeal; 2. The incorporeal, hereditaments of another.

(2.) The remedies for a private nuſance (beſides that of abatement) are. 1. Damages; by action on the caſe; (which alſo lies for ſpecial prejudice by a public nuſance). 2. Removal thereof, and damages; by aſſiſe of nuſance. 3. Like removal, and damages; by writ of *Quod permittat proſternere.*

cviii. Sect. XIV. *Of waſte.*

(1.) Waſte is a ſpoil and deſtruction in lands and tenements, to the injury of him who hath, 1. An immediate intereſt (as, by right of common) in the lands. 2. The remainder or reverſion of the inheritance.

(2.) The remedies, for a commoner, are reſtitution, and damages; by aſſiſe of common: Or, damages only; by action on the caſe.

(3.) The remedy, for him in remainder, or reverſion, is, 1. Preventive: by writ of *eſtrepement* at law, or injunction out of chancery; to ſtay waſte. 2. Corrective: by action of waſte; to recover the place waſted, and damages.

cix. Sect. XV. *Of ſubtraction.*

(1.) Subtraction is when one, who owes ſervices to another, withdraws or neglects to perform them. This may be, 1. Of rents, and other ſervices, due by *tenure.* 2. Of thoſe due by *cuſtom.*

(2.) For ſubtraction of rents and ſervices, due by *tenure,* the remedy is, 1. By diſtreſs; to compel the payment or performance. 2. By action of debt. 3. By aſſiſe. 4. By writ *de conſuetudinibus et ſervitiis;*—to compel the payment. 5. By writ of *ceſſavit;*—and, 6. By writ of right *ſur diſclaimer;*—to recover the land itſelf.

(3.) To remedy the oppreſſion of the lord, the law has alſo given, 1. The writ of *Ne injuſte vexes:* 2. The writ of *meſne.*

(4.) For ſubtraction of ſervices, due by *cuſtom,* the remedy is. 1. By writ of *Secta ad molendinum, furnum, torrale,* &c. to compel the performance, and recover damages. 2. By action on the caſe; for damages only.

cx. Sect. XVI. *Of diſturbance.*

(1.) Diſturbance is the hindering, or diſquieting, the owners of an incorporeal hereditament, in their regular and lawful enjoyment of it.

(2.) Diſturbances are, 1. Of *franchiſes.* 2. Of *commons.* 3. Of *ways.* 4. Of *tenure.* 5. Of *patronage.*

(3). Diſturbance of *franchiſes,* is remedied by a ſpecial action on the caſe; for damages.

(4.) Diſturbance of *common,* is, 1. *Intercommoning* without right. Remedy: Damages; by an action on the caſe, or of treſpaſs: beſides diſtreſs, damage feaſant; to compel ſatisfaction. 2. *Surcharging* the common. Remedies: diſtreſs, damage feaſant; to compel ſatisfaction: Action on the caſe; for damages: or, Writ of admeaſurement of paſture; to apportion the common; and writ *de ſecunda ſuperoneratione;* for the ſupernumerary cattle, and damages. 3. *Incloſure,* or obſtruction. Remedies: Reſtitution of the common, and damages; by aſſiſe of *novel diſſeiſin,* and by writ of *quod permittat:* or, Damages only; by action on the caſe.

(5.) Diſturbance of *ways,* is the obſtruction, 1. Of a way in groſs, by the owner of the land. 2. Of a way appendant, by a ſtranger. Remedy, for both: damages; by action on the caſe.

(6.) Diſturbance of *tenure,* by driving away tenants, is remedied by a ſpecial action on the caſe; for damages.

(7.) Diſturbance of *patronage,* is the hindrance of a patron to preſent his clerk to a benefice; whereof *uſurpation,* within ſix months, is now become a ſpecies.

(8.) Diſturbers may be, 1. The pſeudo-patron, by his wrongful preſentation. 2. His clerk, by demanding inſtitution. 3. The ordinary, by refuſing the clerk of the true patron.

(9.) The remedies are, 1. By aſſiſe of *darrein preſentment;* 2. By writ of *quare impedit;*—to compel inſtitution and recover damages: Conſequent to which are the writs of *quare incumbravit,* and *quare non admiſit;* for ſubſequent damages. 3. By writ of right of advowſon; to compel inſtitution, or eſtabliſh the permanent right.

cxi. SECT. XVII. *Of injuries proceeding from, or affecting, the crown.*

(1.) INJURIES to which the crown is a party are, 1. Where the crown is the aggreſſor. 2. Where the crown is the ſufferer.

(3.) The crown is the aggreſſor, whenever it is in poſſeſſion of any property to which the ſubject hath a right.

(3.) This is remedied, 1. By *petition* of *right*; where the right is grounded on facts diſcloſed in the petition itſelf. 2. By *monſtrans de droit*; where the claim is grounded on facts, already appearing on record. The effect of both which is to remove the hands (or poſſeſſion) of the king.

(4.) Where the crown is the ſufferer, the king's remedies are, 1. By ſuch common law actions as are conſiſtent with the royal dignity. 2. By *inqueſt* of *office*, to recover poſſeſſion: which, when found, gives the king his right by ſolemn matter of record; but may afterwards be *traverſed* by the ſubject. 3. By writ of *ſcire facias*, to repeal the king's patent or grant. 4. By *information* of *intruſion*, to give damages for any treſpaſs on the lands of the crown; or of *debt*, to recover moneys due upon contract, or forfeited by the breach of any penal ſtatute; or ſometimes (in the latter caſe) by information *in rem*: all filed in the exchequer *ex officio* by the king's attorney-general. 5. By writ of *quo warranto*, or information in the nature of ſuch writ; to ſeiſe into the king's hands any franchiſe uſurped by the ſubject, or to ouſt an uſurper from any public office. 6. By writ of *mandamus*, unleſs cauſe; to admit or reſtore any perſon intitled to a franchiſe or office: to which if a falſe cauſe be returned, the remedy is by traverſe, or by action on the caſe for damages; and, in conſequence, a peremptory *mandamus*, or writ of reſtitution.

cxii. SECT. XVIII. *Of the purſuit of remedies by action, and, firſt of the original writ.*

(1.) The *purſuit* of the ſeveral remedies furniſhed by the laws of England, is, 1. By *action* in the courts of *common law*. 2. By *proceedings* in the courts of *equity*.

(2.) Of an *action* in the court of *common pleas* (originally the proper court for proſecuting civil ſuits) the orderly parts are, 1. The *original* writ. 2. The *proceſs*. 3. The *pleadings*. 4. The *iſſue*, or *demurrer*. 5. The *trial*. 6. The *judgment*. 7. The proceedings in nature of *appeal*. 8. The *execution*.

(3.) The *original* writ is the beginning or foundation of a ſuit, and is either *optional* (called a *præcipe*), commanding the defendant to do ſomething in certain, or otherwiſe ſhow cauſe to the contrary; or *peremptory* called a *ſi te fecerit ſecurum*), commanding, upon ſecurity given by the plaintiff, the defendant to appear in court, to ſhow wherefore he hath injured the plaintiff: both iſſuing out of chancery under the king's great ſeal, and returnable in bank during term-time.

cxiii. SECT. XIX. *Of proceſs.*

(1.) PROCESS is the means of compelling the defendant to appear in court.

(2.) This includes, 1. Summons. 2. The writ of attachment, or *pone*; which is ſometimes the firſt or original proceſs. 3. The writ of *diſtringas*, or diſtreſs infinite. 4. The writs of *capias ad reſpondendum*, and *teſtatum capias*: or, inſtead of theſe, in the king's bench, the bill of Middleſex, and writ of *latitat*: and, in the exchequer, the writ of *quo minus*. 5. The *alias* and *pluries* writs. 6. The exigent, or writ of *exigi facias*, proclamations, and outlawry. 7. Appearance, and common bail. 8. The arreſt. 9. Special bail, firſt to the ſheriff, and then to the action

cxiv. SECT. XX. *Of pleadings.*

PLEADINGS are the mutual altercations of the plaintiff and defendant in writing; under which are compriſed, 1. The declaration or count; (wherein, incidentally, of the viſne, nonſuit, *retraxit*, and diſcontinuance). 2. The defence, claim of cognizance, imparlance, view, oyer, aid-prayer, voucher, or age; 3. The plea; which is either a *dilatory* plea (*1ſt*, to the juriſdiction; *2dly*, in diſability of the plaintiff; *3dly*, in abatement), or it is a plea *to the action*; ſometimes confeſſing the action either in whole or in part; (wherein of a tender, paying money into court, and ſet off): but uſually denying the complaint, by pleading either, *1ſt*, the general iſſue; or, *2dly*, a ſpecial bar (wherein of juſtifications, the ſtatutes of limitation, &c.). 4. Replication, rejoinder, ſurrejoinder, rebutter, ſurrebutter, &c. Therein of eſtoppels, colour, duplicity, departure, new aſſignment, proteſtation, averment, and other incidents of pleading.

cxv. SECT. XXI. *Of iſſue and demurrer.*

(1.) ISSUE is where the parties, in a courſe of pleading, come to a point affirmed on one ſide and denied on the other; which, if it be a matter of law, is called a *demurrer*; if it be a matter of fact, ſtill retains the name of an iſſue, of fact.

(2.) *Continuance* is the detaining of the parties in court from time to time, by giving them a day certain to appear upon. And, if any new matter ariſes ſince the laſt continuance or adjournment, the defendant may take advantage of it, even after demurrer or iſſue, by alleging it in a plea *puis darrein continuance*.

(3.) The determination of an iſſue in law, or demurrer, is by the opinion of the judges of the court; which is afterwards entered on *record*.

cxvi. SECT. XXII. *Of the ſeveral ſpecies of trial.*

(1.) TRIAL is the examination of the matter of fact put in iſſue.

(2.) The ſpecies of trials are, 1. By the *record*. 2. By *inſpection*. 3. By *certificate*. 4. By *witneſſes*. 5. By *wager* of *battel*. 6. By *wager* of *law*. 7. By *jury*.

(3.) Trial by the *record* is had when the exiſtence of ſuch record is the point in iſſue.

(4.) Trial by *inſpection* or *examination* is had by the court, principally when the matter in iſſue is the evident object of the ſenſes.

(5.) Trial by *certificate* is had in thoſe caſes, where ſuch certificate muſt have been concluſive to a jury.

(6.) Trial by *witneſſes* (the regular method in the civil law) is uſed only on a writ of dower, when the death of the huſband is in iſſue.

(7.) Trial by *wager* of *battel*, in civil caſes, is only had on a writ of right; but, in lieu thereof, the tenant may have, at his option, the trial by the *grand aſſiſe*.

(8.) Trial by *wager* of *law* is only had, where the matter in iſſue may be ſuppoſed to have been privily tranſacted between the parties themſelves, without the intervention of other witneſſes.

cxvii. SECT. XXIII. *Of the trial by jury.*

(1.) TRIAL by *jury* is, 1. *Extraordinary*; as, by the grand aſſize, in writs of right; and by the grand jury, in writs of attaint, 2. *Ordinary*.

(2.) The method and proceſs of the *ordinary* trial by jury is, 1. The writ of *venire facias* to the ſheriff, coroners, or eliſors; with the ſubſequent compulſive proceſs of *habeas corpora*, or *diſtringas*. 2. The carrying down of the record to the court of *niſi prius*. 3. The ſheriff's return; or panel of, 1ſt, ſpecial, 2dly, common jurors. 4. The challenges; 1ſt, to the array; 2dly, to the polls of the jurors; either, *propter honoris reſpectum, propter defectum, propter affectum* (which is ſometimes a principal challenge, ſometimes to the favour), or *propter delictum*. 5. The *tales de circumſtantibus*. 6. The oath of the jury. 7. The evidence; which is either by proofs, 1ſt, written; 2dly, parole:—or, by the private knowledge of the jurors. 6. The verdict; which may be, 1ſt, privy; 2dly, public, 3dly, ſpecial.

cxviii. SECT. XXIV. *Of judgment, and its incidents.*

(1.) WHATEVER is tranſacted at the trial, in the court of *niſi prius*, is added to the record, under the name of a *poſtea*: conſequent upon which is the *judgement*.

(2.) Judgment may be *arreſted* or ſtayed for cauſes, 1. Extrinſic, or *dehors* the record; as in the caſe of *new trials*. 2. Intrinſic, or within it; as where the declaration varies from the writ, or the verdict from the pleadings, and iſſue; or where the caſe, laid in the declaration, is not ſufficient to ſupport the action in point of law.

(3.) Where the iſſue is immaterial, or inſufficient, the court may award a *repleader*.

(4.) *Judgment* is the ſentence of the law, pronounced by the court, upon the matter contained in the record.

(5.) Judgments are, 1. Interlocutory; which are incomplete till perfected by a writ of inquiry. 2. Final.

(6.) *Coſts*, or expences of ſuit, are now the neceſſary conſequence of obtaining judgment.

cxix. SECT. XXV. *Of proceeding, in the nature of appeals.*

(1.) PROCEEDINGS, in the nature of *appeals* from judgment, are, 1. A writ of *attaint*; to impeach the verdict of a jury; which of late has been ſuperſeded by new trials. 2. A writ of *audita querela*; to diſcharge a judgment by matter that has ſince happened. 3. A writ of *error*, from one court of record to another; to correct judgments, erroneous in point of law, and not helped by the ſtatutes of amendment and jeofails.

(2.) Writs of error lie, 1. To the court of *king's bench*, from all inferior courts of record; from the court of *common-pleas* at Weſtminſter; and from the court of *king's-bench* in Ireland. 2. To the courts of *exchequer-chamber*, from the law ſide of the court of *exchequer*; and from proceedings in the court of *king's bench* by bill. 3. To the houſe of *peers*, from proceedings in the court of *king's-bench* by original, and on writs of error; and from the ſeveral courts *exchequer-chamber*.

cxx. SECT. XXVI. *Of execution.*

EXECUTION is the putting in force of the ſentence or judgement of the law. Which is effected, 1. Where poſſeſſion of any hereditament is recovered: by writ of *habere facias ſeiſinam, poſſeſſionem, &c.* 2. Where any thing is awarded to be done or rendered, by a ſpecial writ for that purpoſe: as, by writ of abatement, in caſe of nuſance; *retorna habendo*, and *capias in withernam*, in replevin; *diſtringas* and *ſcire facias*, in detinue. 3, Where money only is recovered; by writ of, 1ſt, *capias ad ſatisfaciendum*, againſt the *body* of the defendant; or, in default thereof, *ſcire facias* againſt his bail. 2dly, *Fieri facias*, againſt his *goods* and chattels. 3dly, *Levari facias*, againſt his *goods* and the *profits* of his lands. 4thly, *Elegit*, againſt his *goods*, and the *poſſeſſion* of his *lands*. 5thly, *Extendi facias*, and other proceſs, on ſtatutes, recognizances, &c. againſt his *body*, *lands*, and *goods*.

cxxi. SECT. XXVII. *Of proceedings in the courts of equity.*

(1.) MATTERS of equity which belong to the peculiar juriſdiction of the court of *chancery*, are, 1. the guardianſhip of infants. 2. The cuſtody of ideots and lunatics. 3. The ſuperintendants of charities. 5. Commiſſions of bankrupt.

(2.) The court of *exchequer* and the duchy-court of *Lancaſter*, have alſo ſome peculiar cauſes, in which the intereſt of the king is more immediately concerned.

(3.) *Equity* is the true ſenſe and ſound interpretation of the rules of law; and, as ſuch, is equally attended to by the judges of the courts both of common law and equity.

(4.) The eſſential differences, whereby the Engliſh courts of equity are diſtinguiſhed from the courts of law, are, 1. The mode of *proof*, by a diſcovery on the oath of the party; which gives a juriſdiction in matters of account, and fraud. 2. The mode of *trial*; by depoſitions taken in any part of the world. 3. The mode of *relief*; by giving a more ſpecific and extenſive remedy than can be had in the courts of law; as, by carrying agreements into execution, ſtaying waſte or other injuries by injunction, directing the ſale of incumbered lands, &c. 4. The true conſtruction of *ſecurities* for money, by conſidering them merely as a pledge. 5. The execution of *truſts*, or ſecond uſes, in a manner analogous to the law of legal eſtates.

(5.) The proceedings in the court of chancery (to which thoſe in the exchequer, &c. very nearly conform) are, 1. Bill. 2. Writ of *ſubpœna*; and, perhaps, injunction. 3. Proceſs of contempt; viz. (ordinarily) attachment, attachment with proclamations, commiſſion of rebellion, ſerjeant at arms, and ſequeſtrations. 4. Appearance. 5. Demurrer. 6. Plea. 7. Anſwer. 8. Exceptions; amendments; croſs, or ſupplemental, bills; bills of revivor, interpleader, &c. 9. Replication. 10. Iſſue. 11. Depoſitions, taken upon interrogatories; and ſubſequent publication thereof. 12. Hearing. 13. Interlocutory decree; feigned iſſue, and trial; reference to the maſter, and report; &c. 14. Final decree. 15. Rehearing, or bill of review, 16. Appeal to parliament.

CHAP. IV.

Of PUBLIC WRONGS.

cxxiii. SECT. I. *Of the nature of crimes, and their puniſhment.*

(1.) IN treating of *public wrongs* may be conſidered, 1. The general *nature* of crimes and puniſhments. 2 The perſons *capable* of committing crimes, 3. Their ſeveral *degrees* of guilt. 4. The ſeveral *ſpecies* of crimes, and their reſpective puniſhments. 5. The means of *prevention*. 6. The method of *puniſhment*.

(2.) A *crime*, or *miſdemeanor*, is an act committed, or omitted, in violation of a public law either forbidding or commanding it.

(3.) Crimes are diſtinguiſhed from civil injuries, in that they are a breach and violation of the *public* rights, due to the whole community, conſidered as a community.

(4.) *Puniſhments* may be conſidered with regard to, 1. The *power*; 2. The *end*; 3. The *meaſure*;—of their infliction.

(5.) the *power*, or right, of inflicting human puniſhments for *natural* crimes, or ſuch as are *mala in ſe*, was by the law of nature veſted in every individual: but, by the fundamental contract of ſociety, is now transferred to the ſovereign power; in which alſo is veſted, by the ſame contract, the right of puniſhing *poſitive* offences, or ſuch as are *mala prohibita*.

(6.) The *end* of human puniſhments is to prevent future offences; 1. By amending the offender himſelf. 2. By deterring others through his example. 3. By depriving him of the power to do future miſchief.

(7.) The *meaſure* of human puniſhments muſt be determined by the wiſdom of the ſovereign power, and not by any uniform univerſal rule: though that wiſdom may be regulated, and aſſiſted, by certain general, equitable, principles.

cxxiv. SECT. II. *Of the perſons capable of committing crimes.*

(1.) ALL perſons are *capable* of committing crimes, unleſs there be in them a *defect* of *will*: for, to conſtitute a legal crime, there muſt be both a vitious will, and a vitious act.

(2.) The will does not concur with the act, 1. Where there is a defect of *underſtanding*. 2. Where no will is *exerted*. 3. Where the act is *conſtrained* by force and violence.

(3.) A vitious will may therefore be wanting, in the caſes of, 1. Infancy. 2. Idiocy, or lunacy. 3. Drunkenneſs; which doth not, however, excuſe. 4. Misfortune. 5. Ignorance, or miſtake of fact. 6. Compulſion, or neceſſity; which is, 1ſt, that of civil ſubjection; 2dly, that of dureſs *per minas*; 3dly, that of chooſing the leaſt pernicious of two evils, where one is unavoidable; 4thly, that of want, or hunger; which is no legitimate excuſe.

(4.) the king, from his excellence and dignity, is alſo incapable of doing wrong.

cxxv. SECT. III. *Of principles and acceſſories.*

(1.) THE different *degrees* of guilt in criminals are, 1. As *principals*. 2. As *acceſſories*.

(2.) A *principal* in a crime is, 1. He who commits the fact. 2. He who is preſent at, aiding, and abetting, the commiſſion.

(3.) An *acceſſory* is he who doth not commit the fact, nor is preſent at the commiſſion; but is in ſome ſort concerned therein, either *before* or *after*.

(4.) Acceſſories can only be in petit treaſon, and felony: in high treaſon, and miſdemeanors, all are principals.

(5.) An acceſſory, *before* the fact, is one who, being abſent when the crime is committed, hath procured, counſelled, or commanded, another to commit it.

(6.) An acceſſory *after* the fact, is where a perſon, knowing a felony to have been committed, receives, relieves, comforts, or aſſiſts, the felon. Such acceſſory is uſually intitled to the benefit of clergy; where the principal, and acceſſory *before* the fact, are excluded from it.

cxxvi SECT. IV. *Of offences againſt* GOD *and religion.*

(1.) CRIMES and miſdemeanors cognizable by the laws of England are ſuch as more immediately offend, 1. GOD, and his holy *religion*. 2. The law of *nations*. 3. The *king*, and his *government*. 4. The *public*, or *commonwealth*. 5. *Individuals*.

(2.) Crimes more immediately offending GOD and *religion* are, 1. *Apoſtacy*. For which the penalty is incapacity, and impriſonment. 2. *Hereſy*. Penalty, for one ſpecies thereof: the ſame. 3. Offences againſt the eſtabliſhed *church*:—Either, by *reviling* its ordinances. Penalties: fine; deprivation; impriſonment; forfeiture.—Or, by *nonconformity* to its worſhip; 1ſt, Thro' total *irreligion*. Penalty: fine. 2dly, Thro' proteſtant *diſſenting*. Penalty: ſuſpended by the toleration act. 3dly, through *popery*, either in profeſſors of the popiſh religion, popiſh recuſants, convict, or popiſh prieſts. Penalties incapacity; double taxes; impriſonment; fines; forfeitures; abjuration of the realm; judgment of felony, without clergy and judgment of high treaſon. 4. *Blaſphemy*. Penalty: fine, impriſonment, and corporal puniſhment. 5. Profane, *ſwearing* and *curſing*. Penalty: fine, or houſe of correction. 6. *Witchcraft*; or, at leaſt, the pretence thereto. Penalty: impriſonment, and pillory. 7. Religious *impoſtures*. Penalty: fine, impriſonment, and corporal puniſhment. 8. *Simony.* Penalties: forfeiture of doubt value; incapacity. 9. *Sabbath-breaking.* Penalty: fine. 10. *Drunkenneſs.* Penalty: fine, or ſtocks. 11. *Lewdneſs.* Penalties: fine; impriſonment; houſe of correction.

Sect. V. *Of offences againſt the law of nations.*

(1.) The *law* of *nations* is a ſyſtem of rules, deducible by natural reaſon, and eſtabliſhed by univerſal conſent, to regulate the intercourſe between independent ſtates.

(2.) In England, the *law* of *nations* is adopted in its full extent, as part of the law of the land.

(3.) Offences againſt this law are principally incident to whole ſtates or nations; but, when committed by private ſubjects, are then the objects of the municipal law.

(4.) Crimes againſt the law of *nations*, animadverted on by the laws of England, are, 1. Violation of *ſafe-conducts.* 2. Infringement of the rights of *embaſſadors*, Penalty, in both: arbitrary. 3. *Piracy.* Penalty: judgment of felony, without clergy.

Sect. VI. *Of high treaſon.* cxxviii.

(1.) Crimes and miſdemeanors more peculiarly offending the king and his government are, 1. *High treaſon.* 2. *Felonies* injurious to the prerogative. 3. *Præmunire.* 4. Other *miſpriſions* and *contempts.*

(2.) *High treaſon* may, according to the ſtatute of Edward III. be committed, 1. By *compaſſing* or *imagining* the death of the king, or queen-conſort, or their eldeſt ſon and heir; demonſtrated by ſome overt act. 2. By *violating* the king's companion, his eldeſt daughter, or the wife of his eldeſt ſon. 3. By ſome overt act of *levying* war againſt the king in his realm. 4. By *adherence* to the king's enemies. 5. By *counterfeiting* the king's great or privy *ſeal.* 6. By *counterfeiting* the king's *money*, or importing counterfeit money. 7 By *killing* the chancellor, treaſurer, or king's juſtices, in the execution of their offices.

(3.) *High treaſons*, created by ſubſequent ſtatutes, are ſuch as relate, 1. To *papiſts:* as, the repeated defence of the pope's juriſdiction; the coming from beyond ſea of a natural-born popiſh prieſt; the renouncing of allegiance, and reconciliation to the pope or other foreign power. 2. To the *coinage*, or other ſignatures of the king: as, counterfeiting (or, importing and uttering counterfeit) foreign coin, here current; forging the ſign manual, privy ſignet, or privy ſeal; falſifying, &c. the current coin. 3. To the *proteſtant ſucceſſion:* as, correſponding with, or remitting to, the late Pretender's ſons; endeavouring to impede the ſucceſſion; writing or printing, in defence of any Pretender's title, or in derogation of the act of ſettlement, or of the power of parliament to limit the deſcent of the crown.

(4.) The *puniſhment* of high treaſon, in *males*, is (generally) to be, 1. Drawn. 2. Hanged. 3. Embowelled alive. 4. Beheaded. 5. Quartered. 6. The head and quarters to be at the king's diſpoſal. But, in treaſons relating to the coin, only to be drawn, and hanged till dead. *Females*, in both caſes, are to be drawn, and burned alive

Sect. VII. *Of felonies injurious to the king's prerogative.*

(1.) Felony is that offence which occaſions the total forfeiture of lands or goods at common law; now uſually alſo puniſhable with death, by hanging; unleſs through the benefit of clergy.

(2.) *Felonies* injurious to the king's prerogative (of which ſome are within, others without, clergy) are, 1. Such as relate to the *coin:* as, the wilful uttering of counterfeit money, &c.; (to which head ſome inferior miſdemeanors affecting the coinage may be alſo referred). 2. Conſpiring or attempting to kill a *privy counſellor.* 3. Serving *foreign* ſtates, or enliſting ſoldiers for *foreign* ſervice. 4. Embezzling the king's *armour* or *ſtores.* 5. *Deſertion* from the king's *armies*, by land or ſea.

Sect. VIII. *Of præmunire.* cxxv.

(1.) Præmunire, in its original ſenſe, is the offence of adhering to the temporal power of the Pope, in derogation of the regal authority. Penalty: outlawry, forfeiture, and impriſonment: which hath ſince been extended to ſome offences of a different nature.

(2.) Among theſe are, 1. Importing Popiſh trinkets. 2. Contributing to the maintenance of Popiſh ſeminaries abroad, or Popiſh prieſts in England. 3. Moleſting the poſſeſſors of abbey-lands. 4. Acting as broker in an uſurious contract, for more than ten *per cent.* 5. Obtaining any ſtay of proceedings in ſuits for monopolies. 6. Obtaining an excluſive patent for gunpowder or arms. 7. Exertion of purveyance or pre-emption. 8. Aſſerting a legiſlative authority in both or either houſe of parliament. 9. Sending any ſubject a priſoner beyond ſea. 10. Refuſing the oaths of allegiance and ſupremacy. 11. Preaching, teaching, or adviſed ſpeaking, in defence of the right of any pretender to the crown, or in derogation of the power of parliament to limit the ſucceſſion. 12. Treating of other matters by the aſſembly of peers of Scotland, convened for electing their repreſentatives in parliament. 15. Unwarrantable undertakings by unlawful ſubſcriptions to public funds.

Sect. IX. *Of miſpriſions and contempts affecting the king and government.* cxxvi.

(1.) Miſpriſons and *contempts* are all ſuch high offences as are under the degree of capital.

(2.) Theſe are, 1. *Negative*, in concealing what ought to be revealed. 2. *Poſitive*, in committing what ought not to be done.

(3.) *Negative* miſpriſions are, 1. Miſpriſion of *treaſon.* Penalty: forfeiture and impriſonment. 2. Miſpriſon of *felony.* Penalty: fine and impriſonment. 3. Concealment of *treaſure trove.* Penalty: fine and impriſonment.

(4.) *Poſitive* miſpriſions or high miſdemeanors and contempts, are, 1. *Mal-adminiſtration* of public truſts, which includes the crime of *peculation.* Uſual penalties: baniſhment: fines; impriſonment; diſability. 2. Contempts againſt the king's *prerogative.* Penalty: fine, and impriſonment. 3. Contempt againſt his *perſon* and *government*. Penalty: fine, impriſonment, and infamous corporal puniſhment. 4. Contempts againſt his *title*. Penalties: fine, and impriſonment; or fine, and diſability. 5. Contempts againſt his *palaces*, or *courts* of juſtice. Penalties: fine, impriſonment; corporal puniſhment; loſs of right hand; forfeiture.

cxxxii. Sect. X. *Of offences againſt public juſtice.*

(1.) Crimes eſpecially affecting the *commonwealth* are offences, 1. Againſt the public *juſtice*. 2. Againſt the public *peace*. 3. Againſt the public *trade*. 4. Againſt the public *health*. 5. Againſt the public *police* or *economy*.

(2.) Offences againſt the public *juſtice*, are, 1. *Embezzling* or *vacating* records, and *perſonating* others in courts of juſtice. Penalty: judgment of felony, uſually without clergy. 2. *Compelling* priſoners to become *approvers*. Penalty: judgment of felony. 3. *Obſtructing* the execution of proceſs. 4. *Eſcapes*. 5. *Breach* of priſon. 6. *Reſcue*. Which four may (according to the circumſtances) be either felonies, or miſdemeanors puniſhable by fine and impriſonment. 7. *Returning* from *tranſportation*. This is felony, without clergy. 8. Taking *rewards* to *help* one to his ſtolen goods. Penalty: the ſame as for the theft. 9. *Receiving* ſtolen goods. Penalties: tranſportation; fine; and impriſonment.—10. *Theftbote*: 11. Common *barretry* and ſuing in a feigned name. 12. *Maintenance*. 13. *Champerty*. Penalty, in theſe four: fine, and impriſonment. 14. *Compounding* proſecutions on penal ſtatutes. Penalty: fine, pillory, and diſability. 15. *Conſpiracy*; and threats of accuſation in order to extort money, &c. Penalties: the villenous judgment; fine; impriſonment; pillory; whipping; tranſportation. 16. *Perjury*, and ſubornation thereof. Penalties: infamy; impriſonment; fine, or pillory; and, ſometimes, tranſportation or houſe of correction. 17. *Bribery*. Penalty: fine, and impriſonment. 18. *Embracery*. Penalty: infamy, fine, and impriſonment. 19. *Falſe verdict*. Penalty: the judgment in attaint. 20. *Negligence* of public officers, &c. Penalty: fine, and forfeiture of the office. 21. *Oppreſſion* by magiſtrates. 22. *Extortion* of officers. Penalty, in both: impriſonment, fine, and ſometimes forfeiture of the office.

cxxxiii. Sect. XI. *Of offences againſt the public peace.*

Offences againſt the public *peace* are, 1. *Riotous aſſemblies* to the number of *twelve*. 2. Appearing armed, or hunting in *diſguiſe*. 3. *Threatening* or *demanding* any valuable thing, by letter.—All theſe are felonies, without clergy. 4. Deſtroying of *turnpikes*, &c. Penalties: whipping; impriſonment; judgement of felony, with and without clergy.—5. *Affrays*. 6. *Riots*, *routs*, and *unlawful aſſemblies*. 7. Tumultuous *petitioning*. 8. Forcible *entry*, and *detainer*. Penalty, in all four: fine, and impriſonment. 9. Going unuſually *armed*. Penalty: forfeiture of arms, and impriſonment. 10. Spreading *falſe news*. Penalty: fine, and impriſonment. 11. Pretended *prophecies*. Penalties: fine; impriſonment; and forfeiture. 12. *Challenges* to fight. Penalty: fine, impriſonment, and ſometimes forfeiture. 13. *Libels*. Penalty: fine, impriſonment, and corporal puniſhment.

cxxxiv. Sect. XII. *Of offences againſt public trade.*

Offences againſt the public *trade*, are, 1. *Owling*. Penalties: fines; forfeiture; impriſonment; loſs of left hand; tranſportation; judgment of felony. 2. *Smuggling*. Penalties: fines; loſs of goods; judgment of felony, without clergy. 3. *Fraudulent bankruptcy*. Penalty: judgment of felony without clergy. 5. *Uſury*. Penalty: fine, and impriſonment. 5. *Cheating*. Penalties: fine; impriſonment; pillory; tumbril; whipping, or other corporal puniſhment, tranſportation.—6. *Foreſtalling*. 7. *Regrating*. 8. *Engroſſing*. Penalties, for all three; loſs of goods; fine; impriſonment; pillory. 9. *Monopolies*, and *combinations* to raiſe the price of commodities. Penalties: fines; impriſonment; pillory; loſs of ear; infamy; and, ſometimes, the pains of *præmunire*. 10. Exerciſing a *trade*, not having ſerved as an apprentice. Penalty: fine. 11. Tranſporting, or reſiding abroad, of *artificers*. Penalties: fine; impriſonment; forfeiture; incapacity; becoming aliens.

cxxxv. Sect. XIII. *Of offences againſt the public health, and public police or economy.*

(1.) Offences againſt the public *health*, are, 1. *Irregularity*, in the time of the *plague*, or of *quarantine*. Penalties: whipping; judgment of felony, with and without clergy. 2. Selling *unwholeſome proviſions*. Penalties: amercement; pillory; fine; impriſonment; abjuration of the town.

(2.) Offences againſt the public *police* and *economy* or domeſtic order of the kingdom, are, 1. Thoſe relating to *clandeſtine* and *irregular marriages*. Penalties: judgment of felony, with and without clergy. 2. *Bigamy*, or (more properly) *polygamy*. Penalty: judgment of felony.—3. *Wandering*, by *ſoldiers* or *mariners*. 4. *Remaining* in England, by *Egyptians*; or being in their *fellowſhip* one month. Both theſe are felonies, without clergy. 5. *Common nuiſances*, *1ſt*, by annoyances or purpreſtures in highways, bridges, and rivers; *2dly*, by offenſive trades and manufactures: *3dly*, by diſorderly houſes; *4thly*, by lotteries; *5thly*, by cottages; *6thly*, by fireworks; *7thy*, by eveſdropping. Penalty, in all; fine.—*8thy*, By common ſcolding. Penalty: the cucking ſtool. 6. *Idleneſs*, *diſorder*, *vagrancy*, and *incorrigible roguery*. Penalties: impriſonment; whipping; judgment of felony. 7. *Luxury*, in diet. Penalty, diſcretionary. 8. *Gaming*. Penalties: to gentlemen, fines; to others, fine and impriſonment: to cheating gameſters, fine, infamy, and the corporal pains of perjury. 9. *Deſtroying* the *game*. Penalties: fines, and corporal puniſhment.

cxxxvi. Sect. XIV. *Of homicide.*

(1.) Crimes eſpecially affecting *individuals* are, 1. Againſt their *perſons*. 2. Againſt their *habitations*. 3. Againſt their *property*.

(2.) Crimes againſt the *perſons* of individuals, are, 1. By *homicide*, or deſtroying life. 2. By other *corporal* injuries.

(3.) *Homicide* is, 1. *Juſtifiable.* 2. *Excuſable.* 3. *Felonious.*

(4.) Homicide is *juſtifiable*, 1. By neceſſity, and command of law. 2. By permiſſion of law; 1*ſt*, for the furtherance of public juſtice; 2*dly*, for prevention of ſome forcible felony.

(5.) Homicide is *excuſable.* 1. *Per infortunium*, or by miſ-adventure. 2. *Se defendendo*, or in ſelf-defence, by chance-medley. Penalty, in both: forfeiture of goods: which however is pardoned of courſe.

(6.) *Felonious* homicide is the killing of a human creature without juſtification or excuſe. This is, 1. Killing *one's ſelf.* 2. Killing *another.*

(7.) Killing *one's ſelf*, or *ſelf-murder*, is where one deliberately, or by any unlawful malicious act, puts an end to his own life. This is felony; puniſhed by ignominious burial, and forfeiture of goods and chattels.

(8.) Killing *another* is, 1. *Manſlaughter.* 2. *Murder.*

(9.) *Manſlaughter* is the unlawful killing of another, without malice, expreſs or implied. This is either, 1. Voluntary, upon a ſudden heat. 2. Involuntary, in the commiſſion of ſome unlawful act. Both are felony, but within clergy; except in the caſe of *ſtabbing.*

(10.) *Murder* is when a perſon, of ſound memory and diſcretion, unlawfully killeth any reaſonable creature, in being, and under the king's peace; with malice aforethought, either expreſs or implied. This is felony, without clergy; puniſhed with ſpeedy death, and hanging in chains, or diſſection.

(11.) *Petit treaſon* (being an aggravated degree of *murder*) is where the ſervant kills his maſter, the wife her huſband, or the eccleſiaſtic his ſuperior. Penalty: in men, to be drawn and hanged; in women, to be drawn and burned.

cxxxvii. SECT. XV. *Of offences againſt the perſons of individuals.*

CRIMES affecting the *perſons* of individuals, by other corporal injuries not amounting to homicide, are, 1. *Mayhem;* and alſo *ſhooting* at another. Penalties: fine; impriſonment; judgment of felony, without clergy. 2. Forcible *abduction*, and *marriage* or *defilement*, of an heireſs; which is felony: alſo, *ſtealing*, and *deflowering* or *marrying*, any woman-child under the age of *ſixteen* years; for which the penalty is impriſonment, fine, and temporary forfeiture of her lands.—3. *Rape*, and alſo *carnal knowledge*, of a woman-child under the age of *ten* years. 4. *Buggery*, with man or beaſt. Both theſe are felonies, without clergy.—5. *Aſſault.* 6. *Battery*; eſpecially of clergymen. 7. *Wounding.* Penalties, in all three: fine; impriſonment; and other corporal puniſhment. 8. *Falſe impriſonment.* Penalties: fine; impriſonment; and (in ſome atrocious caſes) the pains of *præmunire*, and incapacity of office or pardon. 9. *Kidnapping*, or forcibly ſtealing away the king's ſubjects. Penalty: fine; impriſonment; and pillory.

cxxxviii. SECT. XVI. *Of offences againſt the habitations of individuals.*

(1.) CRIMES, affecting the *habitations* of individuals are, 1. *Arſon.* 2. *Burglary.*

(2.) *Arſon* is the malicious and wilful burning of the houſe, or out-houſe, of another man. This is felony; in ſome caſes within, in others without, clergy.

(3.) *Burglary* is the breaking and entering, by night into a manſion-houſe; with intent to commit a felony. This is felony, without clergy.

SECT. XVII. *Of offences againſt private property.* cxxxix.

(1.) CRIMES affecting the private *property* of individuals are, 1. *Larceny.* 2. Malicious *Miſchief.* 3. *Forgery.*

(2.) *Larceny* is, 1. *Simple.* 2. *Mixed* or *compound.*

(3.) *Simple* larceny is the felonious taking, and carrying away, of the perſonal goods of another. And it is, 1. *Grand* larceny; being above the value of twelve pence. Which is felony; in ſome caſes, within, in others without, clergy. 2. *Petit* larceny; to the value of twelve pence or under. Which is alſo felony, but not capital; being puniſhed with whipping, or tranſportation.

(4.) *Mixed* or *compound* larceny, is that wherein the taking is accompanied with the aggravation of being, 1. From the *houſe.* 2. From the *perſon.*

(5.) Larcenies from the *houſe*, by day or night, are felonies without clergy, when they are, 1. Larcenies, above *twelve pence*, from a church; or by breaking a tent or booth in a market or fair, by day or night, the owner or his family being therein;—or by breaking a dwelling-houſe by day, any perſon being therein;—or from a dwelling-houſe by day, without breaking, any perſon therein being put in fear;—or from a dwelling-houſe by night, without breaking, the owner, or his family being therein and put in fear. 2. Larcenies, of *five ſhillings*, by breaking the dwelling-houſe, ſhop, or warehouſe by day, though no perſon be therein;—or, by privately ſtealing in any ſhop, warehouſe, coach-houſe, or ſtable, by day or night, without breaking, and though no perſon be therein. 3. Larcenies, of *forty ſhillings*, from a dwelling-houſe or its out-houſes, without breaking, and though no perſon be therein.

(6.) Larceny from the *perſon* is, 1. By *privately ſtealing*, from the perſon of another, above the value of twelve pence. 2. By *robbery;* or the felonious and forcible taking, from the perſon of another, in or near the highway, goods or money of any value, by putting him in fear. Theſe are both felonies without clergy. An attempt to rob is alſo felony.

(7.) Malicious *miſchief*, by deſtroying dikes, goods, cattle, ſhips, garments, fiſh-ponds, trees, woods, churches, chapels, meeting-houſes, houſes, out houſes, corn, hay, ſtraw, ſea or river banks, hop-binds, coal-mines (or engines thereunto belonging), or any fences for incloſures by act of parliament, is felony; and, in moſt caſes, without benefit of clergy.

(8.) *Forgery* is the fraudulent making or alteration of a writing, in prejudice of another's right. Penalties: fine; impriſonment; pillory; loſs of noſe and ears; forfeiture; judgment of felony, without clergy.

cxl. Sect. XVIII. *Of the means of preventing offences.*

(1.) Crimes and miſdemeanors may be *prevented*, by compelling ſuſpected perſons to give *ſecurity*; which is effected by binding them in a conditional recognizance to the king, taken in court, or by a magiſtrate.

(2.) Theſe recognizances may be conditioned, 1. To keep the *peace*. 2. To be of *good behaviour*.

(3.) They may be taken by any juſtice or conſervator of the peace, at his own diſcretion; or, at the requeſt of ſuch as are intitled to demand the ſame.

(4.) All perſons, who have given ſufficient cauſe to apprehend an intended breach of the peace, may be bound over to keep the *peace*; and all thoſe, that be not of good fame, may be bound to the *good behaviour*; and may, upon refuſal in either caſe, be committed to gaol.

cxli. Sect. XIX. *Of courts of criminal juriſdiction.*

(1.) In the method of *puniſhment* may be conſidered, 1. The ſeveral *courts* of criminal juriſdiction. 2. The ſeveral *proceedings* therein.

(2.) The criminal *courts* are, 1. Thoſe of a *public* and general juriſdiction throughout the realm. 2. Thoſe of a *private* and ſpecial juriſdiction.

(3.) *Public* criminal courts are, 1. The high court of parliament; which proceeds by impeachment. 2. The court of the lord high ſteward; and the oourt of the king in full parliament: for the trial of capitally indicted peers. 3. The court of king's bench. 4. The court of chivalry. 5. The court of admiralty, under the king's commiſſion. 6. The courts of oyer and terminer, and general gaol-delivery. 7. The court of quarter-ſeſſions of the peace. 8. The ſheriff's tourn. 9. The court leet. 10. The court of the coroner. 11. The court of the clerk of the market.

(4.) *Private* criminal courts are, 1. The court of the lord ſteward, &c. by ſtatute of Henry VII. 2. The court of the lord ſteward, &c. by ſtatute of Henry VIII. 3. The univerſity courts.

cxlii. Sect. XX. *Of ſummary convictions.*

(1.) Proceedings in criminal courts are, 1. *Summary*. 2. *Regular*.

(2.) *Summary* proceedings are ſuch, whereby a man may be convicted of divers offences, without any formal proceſs or jury, at the diſcretion of the judge or judges appointed by act of parliament, or common law.

(3.) Such are, 1. Trials of offences and frauds againſt the laws of *exciſe* and other branches of the king's *revenue*. 2. Convictions before *juſtices* of the *peace* upon a variety of minute offences, chiefly againſt the public police. 3. *Attachments* for contempts to the ſuperior courts of juſtice.

cxliii. Sect. XXI. *Of arreſts.*

(1.) Regular proceedings in the courts of common law, are, 1. *Arreſt*. 2. *Commitment* and *bail*. 3. *Proſecution*. 4. *Proceſs*. 5. *Arraignment*, and its incidents. 6. *Plea* and *iſſue*. 7. *Trial* and *conviction*. 8. *Clergy*. 9. *Judgment*. and its conſequences. 10. *Reverſal* of judgment. 11. *Reprieve* or *pardon*. 12. *Execution*.

(2.) An *arreſt* is the apprehending, or reſtraining, of one's perſon; in order to be forthcoming to anſwer a crime whereof one is accuſed or ſuſpected.

(3.) This may be done, 1. By warrant. 2. By an officer, without warrant. 3. By a private perſon, without warrant. 4. By hue and cry.

cxliv. Sect. XXII. *Of commitment and bail.*

(1.) Commitment is the confinement of one's perſon in priſon, for ſafe cuſtody, by warrant from proper authority; unleſs, in bailable offences, he puts in ſufficient *bail*, or ſecurity for his future appearance.

(2.) The magiſtrate is bound to take reaſonable bail, if offered; unleſs the offender be not bailable.

(3.) Such are, 1. Perſons accuſed of treaſon; or, 2. Of murder; or, 3. Of manſlaughter, by indictment; or if the priſoner was clearly the ſlayer. 4. Priſon-breakers, when committed for felony. 5. Outlaws. 6. Thoſe who have abjured the realm. 7. Approvers, and appellees. 8. Perſons taken with the mainour. 9. Perſons accuſed of arſon, 10. Excommunicated perſons.

(4.) The magiſtrate may, at his diſcretion, admit to bail, or otherwiſe, perſons not of good fame, charged with other felonies, whether as principals or as acceſſories.

(5.) If they be of good fame, he is bound to admit them to bail.

(6.) The court of king's bench, or its judges in time of vacation, may bail in any caſe whatſoever.

cxlv. Sect. XXIII. *Of the ſeveral modes of proſecution.*

(1.) Proſecution, or the manner of accuſing offenders, is either by a previous finding of a grand jury; as, 1. By *preſentment*. 2. By *indictment*. Or, without ſuch finding. 3. By *information*. 4. By *appeal*.

(2.) A *preſentment* is the notice taken by a grand jury of any offence, from their own knowledge or obſervation.

(3.) An *indictment* is a written accuſation of one or more perſons of a crime or miſdemeanor, preferred to, and preſented on oath by, a grand jury; expreſſing, with ſufficient certainty, the perſon, time, place, and offence.

(4.) An *information* is, 1. At the ſuit of the king and a ſubject, upon penal ſtatutes. 2. At the ſuit of the king only. Either, 1. Filed by the attorney general *ex officio*, for ſuch miſdemeanors as affect the king's perſon or government: or, 2. Filed by the maſter of the crown office (with leave of the court of king's bench) at the relation of ſome private ſubject, for other groſs and notorious miſdemeanors. All differing from indictments in this; that they are exhibited by the informer, or the king's officer; and not on the oath of a grand jury.

(5.) An *appeal* is an accuſation or ſuit, brought by one private ſubject againſt another, for larceny, rape, mayhem, arſon, or homicide; which the king cannot diſcharge or pardon, but the party alone can releaſe.

cxlvi. Sect. XXIV. *Of proceſs upon an indictment.*

(1.) Process to bring in an offender, when indicted in his abſence, is, in miſdemeanors, by *venire facias*, diſtreſs infinite, and *capias:* in capital crimes, by *capias* only: and, in both, by outlawry.

(2.) During this ſtage of proceedings, the indictment may be removed into the court of king's bench from any inferior juriſdiction, by writ of *certiorari facias:* and cognizance muſt be claimed in places of excluſive juriſdiction.

cxlvii. Sect. XXV. *Of arraignment, and its incidents.*

(1.) Arraignment is the calling of the priſoner to the bar of the court, to anſwer the matter of the indictment.

(2.) Incident hereunto are, 1. The ſtanding mute of the priſoner; for which, in petit treaſon, and felonies of death, he ſhall undergo the *peine fort & dure.* 2. His confeſſion; which is either *ſimple*, or by way of *approvement.*

cxlviii. Sect. XXVI. *Of plea, and iſſue.*

(1.) The *plea*, or defenſive matter alleged by the priſoner, may be, 1. A plea to the juriſdiction. 2. A demurrer in point of law. 3. A plea in abatement. 4. A ſpecial plea in bar; which is, 1ſt, *Auterfoits acquit;* 2dly, *Auterfoits convict;* 3dly, *Auterfoits attaint;* 4thly, A pardon. 5. The general iſſue, not guilty.

(2.) Hereupon *iſſue* is joined by the clerk of the arraigns, on behalf of the king.

cxlix. Sect. XXVII. *Of trial, and conviction.*

(1.) Trials of offences, by the laws of England, were and are, 1. By *ordeal*, of either fire or water. 2. By the *corſned.* Both theſe have been long aboliſhed. 3. By *battle*, in appeals and improvements. 4. By the *peers* of Great Britain. 5. By *jury.*

(2.) The method and proceſs of trial by *jury* is, 1. The impannelling of the jury. 2. Challenges; 1ſt, for cauſe; 2dly, peremptory. 3. *Tales de circumſtantibus.* 4. The oath of the jury. 5. The evidence. 6. The verdict, either general or ſpecial.

(3.) *Conviction* is when the priſoner pleads, or is found guilty: whereupon, in felonies, the proſecutor is intitled to, 1. His expences. 2. Reſtitution of his goods.

cl. Sect. XXVIII. *Of the benefit of clergy.*

(1.) Clergy, or the benefit thereof, was originally derived from the uſurped juriſdiction of the Popiſh eccleſiaſtics; but hath ſince been new-modelled by ſeveral ſtatutes.

(2.) It is an exemption of the clergy from any other ſecular puniſhment for felony, than impriſonment for a year, at the court's diſcretion; and it is extended likewiſe, abſolutely, to lay peers, for the firſt offence; and to all lay-commoners, for the firſt offence alſo, upon condition of branding, impriſonment, or tranſportation.

(3.) All felonies are intitled to the benefit of clergy, except ſuch as are now ouſted by particular ſtatutes.

(4.) Felons, on receiving the benefit of clergy, (though they forfeit their goods to the crown), are diſcharged of all clergyable felonies before committed, and reſtored in all capacities and credits.

Sect. XXIX. *Of judgment, and its conſequences.* cli.

(1.) Judgment (unleſs any matter be offered in arreſt thereof) follows upon conviction; being the pronouncing of that puniſhment which is expreſsly ordained by law.

(2.) *Attainder* of a criminal is the immediate conſequence, 1. Of having judgment of death pronounced upon him. 2. Of outlawry for a capital offence.

(3.) The conſequences of attainder are, 1. *Forfeiture* to the king. 2. *Corruption of blood.*

(4.) *Forfeiture* to the king, is, 1. Of real eſtates, upon attainder;—in high treaſon, abſolutely, till the death of the late Pretender's ſons;—in felonies, for the king's year, day, and waſte;—in miſpriſion of treaſon, aſſaults on a judge, or battery ſitting the courts; during the life of the offender. 2. Of perſonal eſtates, upon conviction; in all treaſon, miſpriſion of treaſon, felony, excuſable homicide, petit larceny, ſtanding mute upon arraignment, the above-named contempts of the king's courts, and flight.

(5.) *Corruption* of *blood* is an utter extinction of all inheritable quality therein: ſo that, after the king's forfeiture is firſt ſatisfied, the criminal's lands eſcheat to the lord of the fee; and he can never afterwards inherit, be inherited, or have any inheritance derived through him.

Sect. XXX. *Of reverſal of judgment.* clii

(1.) Judgments, and their conſequences, may be *avoided*, 1. By *falſifying*, or *reverſing*, the attainder. 2. By *reprieve*, or *pardon.*

(2.) Attainders may be *falſified*, or *reverſed.* 1. Without a writ of error; for matter *dehors* the record. 2. By writ of error; for miſtakes in the judgment, or record. 3. By act of parliament; for favour.

(3.) When an *outlawry* is reverſed, the party is reſtored to the ſame plight as if he had appeared upon the *capias.* When a *judgment*, on conviction, is reverſed, the party ſtands as if never accuſed.

Sect. XXXI. *Of reprieve, and pardon.* cliii.

(1.) A reprieve is a temporary ſuſpenſion of the judgment, 1. *Ex arbitrio judicis.* 2. *Ex neceſſitate legis;* for pregnancy, inſanity, or the trial of identity of perſon, which muſt always be tried *inſtanter.*

(2.) A pardon is a permanent avoider of the judgment by the king's majeſty, in offences againſt his crown and dignity; drawn in due form of law, allowed in open court, and thereby making the offender a new man.

(3) The king cannot pardon; 1. Impriſonment of the ſubject beyond the ſeas. 2. Offences proſecuted by appeal. 3. Common nuiſances. 4. Offences againſt popular or penal ſtatutes, after information brought by a ſubject. Nor is his pardon pleable to an impeachment by the commons in parliament.

Sect. XXXII. *Of Execution*

(1.) Execution is the completion of human puniſhment, and muſt be ſtrictly performed in the manner which the law directs.

(2.) The warrant for execution is ſometimes under the hand and ſeal of the judge; ſometimes by writ from the king; ſometimes by rule of court; but commonly by the judge's ſigning the calendar of priſoners, with their ſeparate judgments in the margin.

Part III. The LAW of SCOTLAND.

GENERAL OBSERVATIONS.

cliv. Municipal law.

1. THE municipal law of Scotland, as of moſt other countries, conſiſts partly of ſtatutory or written law, which has the expreſs authority of the legiſlative power; partly of cuſtomary or unwritten law, which derives force from its preſumed or tacit conſent.

Statutory law. Acts of parliament.

2. Under the ſtatutory or written law is comprehended, (1.) The acts of parliament: not only thoſe which were made in the reign of James I. of Scotland, and from thence down to the union with England in 1707, but ſuch of the Britiſh ſtatutes enacted ſince the union as concerned this part of the united kingdom.

Regiam Majeſtatem.

3. The remains of the ancient written law were publiſhed by Sir John Skene clerk regiſter, in the beginning of the laſt century, by licence of parliament. The books of *Regiam Majeſtatem*, to which the whole collection owes its title, ſeem to be a ſyſtem of Scots law, written by a private lawyer at the command of David I.; and though no expreſs confirmation of that treatiſe by the legiſlature appears, yet it is admitted to have been the ancient law of the kingdom by expreſs ſtatutes. The borough laws, which were alſo enacted by the ſame King David, and the ſtatutes of William, Alexander II. David II. and the three Roberts, are univerſally allowed to be genuine. The parliaments have once and again appointed commiſſions to reviſe and amend the *Regiam Majeſtatem*, and the other ancient books of the law, and to make their report: but, as no report appears to have been made, nor conſequently any ratification by parliament, none of theſe remains are received, as of proper authority, in the courts; yet they are of excellent uſe in proving and illuſtrating the moſt ancient cuſtoms.

Acts of ſederunt.

4. The written law comprehends, (2.) The acts of ſederunt, which are ordinances for regulating the forms of proceeding before the court of ſeſſion in the adminiſtration of juſtice, made by the judges, who have a delegated power from the legiſlature for that purpoſe. Some of theſe acts dip upon matter of right, which declare what the judges apprehend to be the law of Scotland, and what they are to obſerve afterwards as a rule of judgment.

Authority of the civil and canon laws.

5. The civil, or Roman and canon laws, though they are not perhaps to be deemed proper parts of the written law, have undoubtedly had the greateſt influence in Scotland. The powers exerciſed by ſovereigns and judges have been juſtified upon no other ground, than that they were conformable to the civil or canon laws; and a ſpecial ſtatute was judged neceſſary, upon the reformation, to reſcind ſuch of their conſtitutions as were repugnant to the Proteſtant doctrine. From that period, the canon law has been little reſpected, except in queſtions of tithes, patronages, and ſome few more articles of eccleſiaſtical right: but the Roman continues to have great authority in all caſes where it is not derogated from by ſtatute or cuſtom, and where the genius of the law allows it to be applied.

Cuſtomary or common law.

6. The unwritten or cuſtomary law, is that which, without being expreſsly enacted by ſtatute, derives its force from the tacit conſent of king and people; which conſent is preſumed from the ancient cuſtom of the community. Cuſtom, as it is equally founded in the will of the lawgiver with written law, has therefore the ſame effects: hence, as one ſtatute may be explained or repealed by another, ſo a ſtatute may be explained by the uniform practice of the community, and even go into diſuſe by a poſterior contrary cuſtom. But this power of cuſtom to derogate from prior ſtatutes is generally confined by lawyers to ſtatutes concerning private right, and does not extend to thoſe which regard public policy.

Deciſions of the ſeſſion.

7. An uniform tract of the judments or deciſions of the court of ſeſſion is commonly conſidered as part of the cuſtomary law; and without doubt, where a particular cuſtom is thereby fixed or proved, ſuch cuſtom of itſelf conſtitutes law: but deciſions, though they bind the parties litigating, have not, in their own nature, the authority of law in ſimilar caſes; yet, where they continue uniform, great weight is juſtly laid on them. Neither can the judgments of the houſe of peers of Great Britain reach farther than to the parties in the appeal, ſince in theſe the peers act as judges, not as lawgivers.

Judgments of the houſe of peers.

Promulgation of laws.

8. Though the laws of nature are ſufficiently publiſhed by the internal ſuggeſtion of natural light, civil laws cannot be conſidered as a rule for the conduct of life, till they are notified to thoſe whoſe conduct they are to regulate. The *Scots* acts of parliament were, by moſt ancient cuſtom, proclaimed in all the different ſhires, boroughs, and baron-courts, of the kingdom. But after the ſtatutes came to be printed, that cuſtom was gradually neglected; and at laſt, the publication of the laws, at the market-croſs of Edinburgh, was declared ſufficient; and they became obligatory 40 days thereafter. Britiſh ſtatutes are deemed ſufficiently notified, without formal promulgation; either becauſe the printing is truly a publication; or becauſe

every ſubject is, by a maxim of the Engliſh law, party to them, as being preſent in parliament, either by himſelf or his repreſentative. After a law is publiſhed, no pretence of ignorance can excuſe the breach of it.

9. As laws are given for the rule of our conduct, they can regulate future caſes only; for paſt actions being out of our power, can admit of no rule. Declaratory laws form no exception to this; for a ſtatute, where it is declaratory of a former law, does no more than interpret its meaning; and it is included in the notion of interpretation, that it muſt draw back to the date of the law interpreted.

Interpretation of laws.

10. By the rules of interpreting ſtatute-law received in Scotland, an argument may be uſed from the title to the act itſelf, *a rubro ad nigrum*; at leaſt, where the rubric has been either originally framed, or afterwards adopted by the legiſlature. The preamble or narrative, which recites the inconveniences that had ariſen from the former law; and the cauſes inducing the enactment, may alſo lead a judge to the general meaning of the ſtatute. But the chief weight is to be laid on the ſtatutory words.

11. Laws, being directed to the unlearned as well as the learned, ought to be conſtrued in their moſt obvious meaning, and not explained away by ſubtle diſtinctions; and no law is to ſuffer a figurative interpretation, where the proper ſenſe of the words is as commodious, and equally fitted to the ſubject of the ſtatute. Laws ought to be explained ſo as to exclude abſurdities, and in the ſenſe which appears moſt agreeable to former laws, to the intention of the lawgiver, and to the general frame and ſtructure of the conſtitution. In prohibitory laws, where the right of acting is taken from a perſon, ſolely for the private advantage of another, the conſent of him, in whoſe behalf the law was made, ſhall ſupport the act done in breach of it; but the conſent of parties immediately intereſted has no effect in matters which regard the public utility of a ſtate. Where the words of a ſtatute are capable but of one meaning, the ſtatute muſt be obſerved, however hard it may bear on particular perſons. Nevertheleſs, as no human ſyſtem of laws can comprehend all poſſible caſes, more may ſometimes be meant by the lawgiver than is expreſſed; and hence certain ſtatutes, where extenſion is not plainly excluded, may be extended beyond the letter, to ſimilar and omitted caſes: others are to be confined to the ſtatutory words.

Strict.

12. A ſtrict interpretation is to be applied, (1.) To correctory ſtatutes, which repeal or reſtrict former laws; and to ſtatutes which enact heavy penalties, or reſtrain the natural liberties of mankind. (2.) Laws, made on occaſion of preſent exigencies in a ſtate, ought not to be drawn to ſimilar caſes, after the preſſure is over. (3) Where ſtatutes, eſtabliſh certain ſolemnities as requiſite to deeds, ſuch ſolemnities are not ſuppliable by equivalents for ſolemnities loſe their nature, when they are not performed ſpecifically. (4.) A ſtatute, which enumerates ſpecial caſes, is, with difficulty, to be extended to caſes not expreſſed; but, where a law does not deſcend to particulars, there is greater reaſon to extend it to ſimilar caſes. (5.) Statutes, which carry a diſpenſation or privilege to particular perſons or ſocieties, ſuffer a ſtrict interpretation; becauſe they derogate from the general law, and imply a burden upon the reſt of the community. But at no rate can a privilege be explained to the prejudice of thoſe in whoſe behalf it was granted. As the only foundation of cuſtomary law is uſage, which conſiſts in fact, ſuch law can go no farther than the particular uſage has gone.

Ample.

13. All ſtatutes, concerning matters ſpecially favoured by law, receive an ample interpretation; as laws for the encouragement of commerce, or of any uſeful public undertaking, for making effectual the wills of dying perſons, for reſtraining fraud, for the ſecurity of creditors, &c. A ſtatute, though its ſubject-matter ſhould not be a favourite of the law, may be extended to ſimilar caſes, which did not exiſt when the ſtatute was made; and for which, therefore, it was not in the power of the lawgiver to provide.

14. Every ſtatute, however unfavourable, muſt receive the interpretation neceſſary to give it effect: and, on the other hand, in the extenſion of favourable laws, ſcope muſt not be given to the imagination, in diſcovering remote reſemblances; the extenſion muſt be limited to the caſes immediately ſimilar. Where there is ground to conclude that the legiſlature has omitted a caſe out of the ſtatute purpoſely, the ſtatute cannot be extended to that caſe, let it be ever ſo ſimilar to the caſes expreſſed.

15. The objects of the laws of Scotland, according to Mr Erſkine, one of the lateſt writers on the ſubject, are, Perſons, Things, and Actions.

CHAP. I.

Of PERSONS.

AMONG perſons, judges, who are inveſted with juriſdiction, deſerve the firſt conſideration.

SECT. I. *Of juriſdiction and judges in general.*

clvi.

Juriſdiction.

JURISDICTION is a power conferred upon a judge or magiſtrate, to take cogniſance of and decide cauſes according to law, and to carry his ſentences into execution. That tract of ground, or diſtrict, within which a judge has the right of juriſdiction is called his *territory*: and every act of juriſdiction exerciſed by a judge without his territory, either by pronouncing ſentence, or carrying it into execution, is null.

King the fountain of juriſdiction

2. The ſupreme power, which has the right of enacting laws, falls naturally to have the right of erecting courts, and appointing judges, who may apply theſe laws to particular caſes; but, in Scotland, this right has been always intruſted with the crown, as having the executive power of the ſtate.

Diſtinctions of juriſdictions.

3 Juriſdiction is either ſupreme, inferior, or mixed. That juriſdiction is ſupreme, from which there lies no appeal to a higher court. Inferior courts are thoſe whoſe ſentences are ſubject to the review of the ſupreme courts, and whoſe juriſdiction is confined to a particular territory. Mixed juriſdiction participates of the nature both of the ſupreme and inferior: thus the judge of the high court of admiralty, and the commiſſaries of Edinburgh, have an univerſal juriſdiction over Scotland, and they can review the decrees of inferior admirals and commiſſaries; but ſince their own decrees are ſubject to the review of the courts of ſeſſion or juſticiary, they are, in that reſpect, inferior courts.

4. Juriſdiction is either civil or criminal: by the firſt, queſtions of private right are decided; by the other, crimes are puniſhed. But, in all juriſdiction, though

merely civil, there is a power inherent in the judge to puniſh either corporally, or by a pecuniary fine, thoſe who offend during the proceedings of the court, or who ſhall afterwards obſtruct the execution of the ſentence.

5. Juriſdiction is either privative or cumulative. Privative juriſdiction, is that which belongs only to one court, to the excluſion of all others. Cumulative, otherwiſe called *concurrent*, is that which may be exerciſed by any one of two or more courts, in the ſame cauſe. In civil cumulative juriſdiction, the private purſuer has the right of election before which of the courts he ſhall ſue; but as, in criminal queſtions which are proſecuted by a public officer of court, a colliſion of juriſdiction might happen, through each of the judges claiming the exerciſe of their right, that judge, by whoſe warrant the delinquent is firſt cited or apprehended (which is the firſt ſtep of juriſdiction), acquires thereby *(jure præventionis)* the excluſive right of judging in the cauſe.

6. All rights of juriſdiction, being originally granted in conſideration of the fitneſs of the grantee, were therefore perſonal, and died with himſelf. But, upon the introduction of the feudal ſyſtem, certain juriſdictions were annexed to lands, and deſcended to heirs, as well as the lands to which they were annexed; but now all heritable juriſdictions, except thoſe of admiralty and a ſmall pittance reſerved to barons, are either aboliſhed, or reſumed and annexed to the crown.

7. Juriſdiction, is either proper or delegated. Proper juriſdiction, is that which belongs to a judge or magiſtrate himſelf, in virtue of his office. Delegated, is that which is communicated by the judge to another who acts in his name, called a *depute* or *deputy*. Where a deputy appoints one under him, he is called a *ſubſtitute*. No grant of juriſdiction, which is an office requiring perſonal qualifications, can be delegated by the grantee to another, without an expreſs power in the grant.

Civil juriſdiction, wherein founded.

8. Civil juriſdiction is founded, 1. *Ratione domicilii*, if the defender has his domicile within the judge's territory. A domicile is the dwelling place where a perſon lives with an intention to remain; and cuſtom has fixed it as a rule, that reſidence for 40 days founds juriſdiction. If one has no fixed dwelling place, *e. g.* a ſoldier, or a travelling merchant, a perſonal citation againſt him within the territory is ſufficient to found the judge's juriſdiction over him, even in civil queſtions. As the defender is not obliged to appear before a court to which he is not ſubject, the purſuer muſt follow the defender's domicile.

9. It is founded, 2. *Ratione rei ſitæ*, if the ſubject in queſtion lie within the territory. If that ſubject be immoveable, the judge, whoſe juriſdiction is founded in this way, is the ſole judge competent, excluding the judge of the domicile.

Letters of ſupplement

10. Where one, who has not his domicile within the territory, is to be ſued before an inferior court *ratione rei ſitæ*, the court of ſeſſion muſt be applied to, whoſe juriſdiction is univerſal, and who, of courſe, grant letters of ſupplement to cite the defender to appear before the inferior judge. Where the party to be ſued reſides in another kingdom, and has an eſtate in this, the court of ſeſſion is the only proper court, as the *commune forum* to all perſons reſiding abroad: and the defender, if his eſtate be heritable, is conſidered as lawfully ſummoned to that court, by a citation at the market-croſs of Edinburgh, and pier and ſhore of Leith: but where a ſtranger, not a native of Scotland, has only a moveable eſtate in the kingdom, he is deemed to be ſo little ſubject to the juriſdiction of their courts, that action cannot be brought againſt him till his effects be firſt attached by an arreſtment *juriſdictionis fundandæ cauſa;* which is laid on by a warrant iſſuing from the ſupreme courts of ſeſſion, or admiralty, or from that within whoſe territory the ſubject is ſituated, at the ſuit of the creditor.

Arreſtment of ſtrangers.

11. A judge may, in ſpecial caſes, arreſt or ſecure the perſons of ſuch as have neither domicile nor eſtate within his territory, even for civil debts. Thus, on the border between Scotland and England, warrants are granted of courſe by the judge-ordinary of either ſide, againſt thoſe who have their domicile upon the oppoſite ſide, for arreſting their perſons, till they give caution *judicio ſiſti:* and even the perſons of citizens or natives may be ſo ſecured, where there is juſt reaſon to ſuſpect that they are *in meditatione fugæ*, i. e. that they intend ſuddenly to withdraw from the kingdom; upon which ſuſpicion, the creditor who applies for the warrant muſt make oath. An inhabitant of a borough-royal, who has furniſhed one who lives without the borough in meat, clothes, or other merchandize, and who has no ſecurity for it but his own account-book, may arreſt his debtor, till he give ſecurity *judicio ſiſti*.

Grounds of declinature.

12. A judge may be declined, *i. e.* his juriſdiction diſowned judicially, 1. *Ratione cauſæ*, i. e. from his incompetency to the ſpecial cauſe brought before him. 2. *Ratione ſuſpecti judicis;* where either the judge himſelf, or his near kinſman, has an intereſt in the ſuit. No judge can vote in the cauſe of his father, brother, or ſon, either by conſanguinity or affinity; nor in the cauſe of his uncle or nephew by conſanguinity. 3. *Ratione privilegii;* where the party is by privilege exempted from their juriſdiction.

Prorogated juriſdiction

13. Prorogated juriſdiction *(juriſdictio in conſentientes)* that which is, by the conſent of parties, conferred upon a judge, who, without ſuch conſent, would be incompetent. Where a judge is incompetent, every ſtep he takes muſt be null, till his juriſdiction be made competent by the party's actual ſubmiſſion to it. It is otherwiſe where the judge is competent, but may be declined by the party upon privilege.

14. In order to prorogation, the judge muſt have juriſdiction, ſuch as may be prorogated. Hence, prorogation cannot be admitted where the judge's juriſdiction is excluded by ſtatute. Yet where the cauſe is of the ſame nature with thoſe to which the judge is competent, though law may have confined his juriſdiction within a certain ſum, parties may prorogate it above that ſum unleſs where prorogation is prohibited. Prorogation is not admitted in the king's cauſes; for the intereſt of the crown cannot be hurt by the negligence of its officers.

Oaths of judges.

15. All judges muſt at their admiſſion ſwear, 1. The oath of allegiance, and ſubſcribe the aſſurance; 2. The oath of abjuration; 3. The oath of ſupremacy; laſtly, The oath *de fideli adminiſtratione*.

Letters of advocation.

16. A party who has either properly declined the juriſdiction of the judge before whom he had been cited, or who thinks himſelf aggrieved by any proceed-

ings in the cauſe, may, before decree, apply to the court of ſeſſion to iſſue letters of advocation for calling the action from before the inferior court to themſelves. The grounds, therefore, upon which a party may pray for letters of advocation, are incompetency and iniquity. Under incompetency, is comprehended not only defect of juriſdiction, but all the grounds of declining a juriſdiction, in itſelf competent, ariſing either from ſuſpicion of the judge, or privilege in the parties. A judge is ſaid to commit iniquity, when he either delays juſtice, or pronounces ſentence, in the exerciſe of his juriſdiction, contrary to law.

Advocation how limited.

17. That the court of ſeſſion may not waſte their time in trifles, no cauſe for a ſum below twelve pounds Sterling can be advocated to the court of ſeſſion from the inferior judge competent; but if an inferior judge ſhall proceed upon a cauſe to which he is incompetent, the cauſe may be carried from him by advocation, let the ſubject be ever ſo inconſiderable.

clvii. SECT. II. *Of the ſupreme judges and courts of Scotland.*

King, and parliament.

1. THE king, who is the fountain of juriſdiction, might by the conſtitution have judged in all cauſes, either in his own perſon, or by thoſe whom he was pleaſed to veſt with juriſdiction.

2. The parliament of Scotland, as the court of the laſt reſort, had the right of reviewing the ſentences of all the ſupreme courts.

Parliament of Great Britain.

3. By the treaty of union, 1707, the parliaments of Scotland and England are united into one parliament of Great Britain. From this period, the Britiſh houſe of peers, as coming in place of the Scots parliament, is become the court of the laſt reſort, to which appeals lie from all the ſupreme courts of Scotland: but that court has no original juriſdiction in civil matters, in which they judge only upon appeal. By *art.* 22. of that treaty, the Scots ſhare of the repreſentation in the houſe of peers is fixed to 16 Scots peers elective; and in the houſe of commons, to 45 commoners, of which 30 are elected by the freeholders of counties, and 15 by the royal boroughs. The Scots privy council was alſo thereupon aboliſhed, and ſunk into that of Great Britain, which for the future is declared to have no other powers than the Engliſh privy council had at the time of the union.

Court of ſeſſion.

4. A court was erected in 1425, conſiſting of certain perſons to be named by the king, out of the three eſtates of parliament, which was veſted with the juriſdiction formerly lodged in the council, and got the name of the *ſeſſion*, becauſe it was ordained to hold annually a certain number of ſeſſions at the places to be ſpecially appointed by the king. This court had a juriſdiction, cumulative with the judge ordinary, in ſpuilzies, and other poſſeſſory actions, and in debts; but they had no cogniſance in queſtions of property of heritable ſubjects. No appeal lay from its judgments to the parliament. The judges of this court ſerved by rotation, and were changed from time to time, after having ſat 40 days; and became ſo negligent in the adminiſtration of juſtice, that it was at laſt thought neceſſary to transfer the juriſdiction of this court to a council to be named by the king, called the *daily council*.

College of juſtice.

5. The preſent model of the court of ſeſſion, or college of juſtice, was formed in the reign of James V. The judges thereof, who were veſted with an univerſal civil juriſdiction, conſiſting originally of ſeven churchmen, ſeven laymen, and a preſident, whom it behoved to be a prelate; but ſpiritual judges were in 1584 partly, and in 1640 totally, prohibited. The judges of ſeſſion have been always received by warrants from the crown. Anciently his majeſty ſeems to have transferred to the court itſelf the right of chooſing their own preſident; and in ſederunt recorded June 26. 1593, the king condeſcended to preſent to the lords, upon every vacancy in the bench, a liſt of three perſons, out of which they were to chooſe one. But his majeſty ſoon reſumed the exerciſe of both rights, which continued with the crown till the uſurpation; when it was ordained, that the king ſhould name the judges of the ſeſſion, by the advice of parliament. After the reſtoration, the nomination was again declared to be ſolely in the ſovereign.

Judges, by whom named.

Their qualifications and trial.

6. Though judges may, in the general caſe, be named at the age of 21 years, the lords of ſeſſion muſt be at leaſt 25. No perſon can be named lord of ſeſſion, who has not ſerved as an advocate or principal clerk of ſeſſion for five years, or as a writer to the ſignet for ten: and in the caſe of a writer to the ſignet, he muſt undergo the ordinary trials upon the Roman law, and be found qualified two years before he can be named. Upon a vacancy in the bench, the king preſents the ſucceſſor by a letter addreſſed to the lords, wherein he requires them to try and admit the perſon preſented. The powers given to them to reject the preſentee upon trial are taken away, and a bare liberty to remonſtrate ſubſtituted in its place.

7. Beſides the 15 ordinary judges, the king was allowed to name three or four lords of his great council, who might ſit and vote with them. Theſe extraordinary lords were ſuppreſſed in the reign of Geo. I.

Privileges of the college of juſtice.

8. The appellation of the *college of juſtice* is not confined to the judges, who are diſtinguiſhed by the name of *ſenators*; but comprehends advocates, clerks of ſeſſion, writers to the ſignet, and others, as deſcribed, *Act S.* 23d Feb. 1687. Where, therefore, the college of juſtice is intitled to any privilege, it extends to all the members of the college. They are exempted from watching, warding, and other ſervices within borough; and from the payment of miniſters ſtipends, and of all cuſtoms, &c. impoſed upon goods carried to or from the city of Edinburgh. Part of theſe privileges and immunities were lately called in queſtion by the city of Edinburgh; but they were found by the court of ſeſſion (affirmed upon appeal) to be in full force.

Juriſdiction of the ſeſſion.

9. Though the juriſdiction of the ſeſſion be properly limited to civil cauſes, the judges have always ſuſtained themſelves as competent to the crime of falſehood. Where the falſehood deſerves death or demembration, they, after finding the crime proved, remit the criminal to the court of juſticiary. Special ſtatute has given to the court of ſeſſion juriſdiction in contraventions of law-burrows, deforcements, and breach of arreſtment; and they have been in uſe to judge in battery *pendente lite*, and in uſury.

10. In certain civil cauſes, the juriſdiction of the ſeſſion is excluſive of all inferior juriſdictions; as in declarators of property, and other competitions of heritable

table rights, provings of the tenor *ceſſiones bonorum*, reſtitution of minors, reductions of decrees or of writings, ſales of the eſtates of minors or bankrupts, *&c.* In a ſecond claſs of cauſes, that juriſdiction can be only exerciſed in the way of review, after the cauſe is brought from the inferior court; as in maritime and conſiſtorial cauſes, which muſt be purſued in the firſt inſtance before the admiral or commiſſary; and in actions below twelve pounds Sterling, which muſt be commenced before the judge-ordinary. In all civil actions, which fall under neither of theſe claſſes, the juriſdiction of the ſeſſion is concurrent, even in the firſt inſtance, with that of the judge-ordinary. The ſeſſion may proceed as a court of equity by the rules of conſcience, in abating the rigour of law, and giving aid in proper caſes to ſuch as in a court of law can have no remedy: and this power is inherent in the ſupreme court of every country, where ſeparate courts are not eſtabliſhed for law and for equity.

This court formerly met upon the 12th day of June and roſe upon the 11th day of Auguſt for the ſummer ſeſſion; but now, in conſequence of an act paſſed in the ſeſſion of parliament 1790, it meets on the 12th of May and riſes on the 11th of July for the ſummer ſeſſion; the winter ſederunt ſtill remaining as formerly, *viz.* from the 12th of November to the 11th of March incluſive.

Juſticiary court.

11. The ſupreme criminal judge was ſtyled the Juſticiar; and he had anciently an univerſal civil juriſdiction, even in matters of heritage. He was obliged to hold two juſtice courts or ayres yearly at Edinburgh or Peebles, where all the freeholders of the kingdom were obliged to attend. Beſides this univerſal court, ſpecial juſtice-ayres were held in all the different ſhires in the kingdom twice in the year. Theſe laſt having gone into diſuſe, eight deputies were appointed, two for every quarter of the kingdom, who ſhould make their circuits over the whole in April and October.

12. The office of deputies was ſuppreſſed in 1672; and five lords of ſeſſion were added, as commiſſioners of juſticiary, to the juſtice-general and juſtice-clerk. The juſtice-general, if preſent, is conſtant preſident of the court, and in his abſence the juſtice-clerk. The kingdom is divided into three diſtricts, and two of the judges are appointed to hold circuits in certain boroughs of each diſtrict twice in the year; one judge may proceed to buſineſs in the abſence of his colleague. In trials before this court the evidence was always taken down in writing till the act 23d Geo. III. was paſſed; by which the judges may try and determine all cauſes by the verdict of an aſſize upon examining the witneſſes *viva voce* without reducing the teſtimony into writing, unleſs it ſhall appear more expedient to proceed in the former way, which they have it in their power to do. This act was at firſt temporary, but is now made perpetual by 27th Geo. III. cap. 18.

13. By an old ſtatute, the crimes of robbery, rape, murder, and wilful fire raiſing, (the four pleas of the crown), are ſaid to be reſerved to the king's court of juſticiary; but the only crime in which, *de praxi*, the juriſdiction of juſticiary became at laſt excluſive of all inferior criminal juriſdiction, was that of high treaſon. The court of juſticiary, when ſitting at Edinburgh, has a power of advocating cauſes from all inferior criminal judges, and of ſuſpending their ſentences.

14. The circuit-court can alſo judge on all criminal cauſes which do not infer death or demembration, upon appeal from any inferior court within their diſtrict; and has a ſupreme civil juriſdiction, by way of appeal, in all cauſes not exceeding twelve pounds Sterling, in which their decrees are not ſubject to review; but no appeal is to lie to the circuit, till the cauſe be finally determined in the inferior court.

Court of exchequer.

15. The court of exchequer, as the king's chamberlain court, judged in all queſtions of the revenue. In purſuance of the treaty of Union, that court was aboliſhed, and a new court erected, conſiſting of the Lord High Treaſurer of Great Britain, and a chief Baron, with four other Barons of Exchequer; which Barons are to be made of ſerjeants at law, Engliſh barriſters, or Scots advocates of five years ſtanding. This court has a privative juriſdiction conferred upon it, as to the duties of cuſtoms, exciſe, or other revenues appertaining to the king or prince of Scotland, and as to all honours and eſtates that may accrue to the crown; in which matters, they are to judge by the forms of proceeding uſed in the Engliſh court of exchequer, under the following limitations; that no debt due to the crown ſhall affect the debtor's real eſtate in any other manner than ſuch eſtate may be affected by the laws of Scotland, and that the validity of the crown's titles to any honours or lands ſhall continue to be tried by the court of ſeſſion. The barons have the powers of the Scots court transferred to them, of paſſing the accounts of ſheriffs, or other officers who have the execution of writs iſſuing from, or returnable to, the court of exchequer, and of receiving reſignations, and paſſing ſignatures of charters, gifts of caſualties, &c. But though all theſe muſt paſs in exchequer, it is the court of ſeſſion only who can judge of their preference after they are completed.

Admiralty court.

16. The juriſdiction of the admiral in maritime cauſes was of old concurrent with that of the ſeſſion. The high-admiral is declared the king's juſtice-general upon the ſeas, on freſh water within flood-mark, and in all harbours and creeks. His civil juriſdiction extends to all maritime cauſes; and ſo comprehends queſtions of charter-parties, freights, ſalvages, bottomries, &c. He exerciſes this ſupreme juriſdiction by a delegate, the judge of the high court of admiralty; and he may alſo name inferior deputies, whoſe juriſdiction is limited to particular diſtricts, and whoſe ſentences are ſubject to the review of the high court. In cauſes which are declared to fall under the admiral's cognizance, his juriſdiction is ſole; in ſo much, that the ſeſſion itſelf, though it may review his decrees by ſuſpenſion or reduction, cannot carry a maritime queſtion from him by advocation. The admiral has acquired, by uſage, a juriſdiction in mercantile cauſes, even where they are not ſtrictly maritime, cumulative with that of the judge-ordinary.

Signet.

17. All the ſupreme courts have ſeals or ſignets, proper to their ſeveral juriſdictions. The courts of ſeſſion and juſticiary uſed formerly the ſame ſignet, which was called the king's, becauſe the writs iſſuing from thence run in the king's name; and though the juſticiary got at laſt a ſeparate ſignet for itſelf, yet that of the ſeſſion ſtill retains the appellation of the *king's ſignet*. In this office are ſealed ſummonſes for citation, letters of executorial diligence, or for ſtaying or prohibiting of dili-

gence, and generally whatever paſſes by the warrant of the ſeſſion, and is to be executed by the officers of the court. All theſe muſt, before ſealing, be ſigned by the writers or clerks of the ſignet: But letters of diligence, where they are granted in a depending proceſs, merely for probation, though they paſs by the ſignet, muſt be ſubſcribed by a clerk of ſeſſion. The clerks of the ſignet alſo prepare and ſubſcribe all ſignatures of charters, or other royal grants, which paſs in exchequer.

clviii. SECT. III. *Of the inferior judges and courts of Scotland.*

Sheriff.

SHERIFF (from *reeve*, governor, and *ſheer* to cut or divide), is the judge-ordinary conſtituted by the crown over a particular diviſion or county. The ſheriff's juriſdiction, both civil and criminal, was, in ancient times, nearly as ample within his own territory as that of the ſupreme courts of ſeſſion and juſticiary was over the whole kingdom.

2. His civil juriſdiction now extends to all actions upon contracts, or other perſonal obligations; forthcomings, poindings of the ground, mails and duties; and to all poſſeſſory actions, as removings, ejections, ſpuilzies, &c.; to all brieves iſſuing from the chancery, as of inqueſt, terce, diviſion, tutory, &c.; and even to adjudications of land eſtates, when proceeding on the renunciation of the apparent heir. His preſent criminal juriſdiction extends to certain capital crimes, as theft, and even murder, though it be one of the pleas of the crown; and he is competent to moſt queſtions of public police, and has a cumulative juriſdiction with juſtices of the peace in all riots and breaches of the peace.

3. Sheriffs have a miniſterial power, in virtue of which they return juries, in order to the trial of cauſes that require juries. The writs for electing members of parliament have been, ſince the union, directed to the ſheriffs, who, after they are executed, return them to the crown-office from whence they iſſued. They alſo execute writs iſſuing from the court of exchequer; and in general, take care of all eſtates, duties, or caſualties that fall to the crown within their territory, for which they muſt account to the exchequer.

Lord of regality.

4. A lord of regality was a magiſtrate who had a grant of lands from the ſovereign, with royal juriſdiction annexed thereto. His civil juriſdiction was equal to that of a ſheriff; his criminal extended to the four pleas of the crown. He had a right to repledge or reclaim all criminals, ſubject to his juriſdiction, from any other competent court, though it were the juſticiary itſelf, to his own. He had alſo right, according to the moſt common opinion, to the ſingle eſcheat of all denounced perſons reſiding within his juriſdiction, even though ſuch privilege had not been expreſſed in the grant of regality.

Stewart,

5. The ſtewart was the magiſtrate appointed by the king over ſuch regality lands as happened to fall to the crown by forfeiture, &c. and therefore the ſtewart's juriſdiction was equal to that of a regality. The two ſtewartries of Kirkcudbright, and of Orkney and Shetland, make ſhires or counties by themſelves, and ſend each a repreſentative to parliament.

Bailie.

6. Where lands not erected into a regality fell into the king's hands, he appointed a bailie over them, whoſe juriſdiction was equal to that of a ſheriff.

7. By the late juriſdiction-act, 20 Geo. II. all heritable regalities and bailieries, and all ſuch heritable ſheriffſhips and ſtewartries as were only parts of a ſhire, are diſſolved; and the powers formerly veſted in them are made to devolve upon ſuch of the king's courts as theſe powers would have belonged to if the juriſdictions diſſolved had never been granted. All ſheriffſhips and ſtewartries that were no part of a ſhire, where they had been granted, either heritably or for life, are reſumed and annexed to the crown. No high ſheriff or ſtewart can hereafter judge perſonally in any cauſe. One ſheriff or ſtewart-depute is to be appointed by the king in every ſhire, who muſt be an advocate of three years ſtanding; and whoſe office as ſheriff or ſtewart-depute is now by 28 Geo. II. held *ad vitam aut culpam*.

Prince of Scotland.

8. The appendage, or patrimony, of the prince of Scotland, has been long erected into a regality-juriſdiction, called the Principality. It is perſonal to the king's eldeſt ſon, upon whoſe death or ſucceſſion it returns to the crown. The prince has, or may have, his own chancery, from which his writs iſſue, and may name his own chamberlain and other officers for receiving and managing his revenue. The vaſſals of the princes are intitled to elect, or to be elected, members of parliament for counties, equally with thoſe who hold of the crown.

9. Juſtices of the peace are magiſtrates named by the ſovereign over the ſeveral counties of the kingdom, for the ſpecial purpoſe of preſerving the public peace. Anciently their power reached little farther than to bind over diſorderly perſons for their appearance before the privy council or juſticiary; afterwards they were authoriſed to judge in breaches of the peace, and in moſt of the laws concerning public policy. They may compel workmen or labourers to ſerve for a reaſonable fee, and they can condemn maſters in the wages due to their ſervants. They have power to judge in queſtions of highways, and to call out the tenants with their cottars and ſervants to perform ſix days work yearly for upholding them. It has been lately, however, found by the court of ſeſſion, that juſtices have no juriſdiction whatever in common actions for debt. So that it now ſeems fixed, that they are incompetent in ſuch actions, except where they are declared competent by ſpecial ſtatute.

10. Since the union, the juſtices of the peace, over and above the powers committed to them by the laws of Scotland, are authoriſed to exerciſe whatever belonged to the office of an Engliſh juſtice, in relation to the public peace. From that time, the Scots and the Engliſh commiſſions have run in the ſame ſtyle, which contain powers to inquire into and judge in all capital crimes, witchcrafts, felonies, and ſeveral others ſpecially enumerated; with this limitation ſubjoined, *of which juſtices of the peace may lawfully inquire*. Two juſtices can conſtitute a court. Special ſtatute has given the cognizance of ſeveral matters of exciſe to the juſtices, in which their ſentences are final. As to which, and the powers thereby veſted in them, the reader muſt of neceſſity be referred to the exciſe laws; it not falling within the plan of this work, to enter into ſo very minute a detail as that would prove.

Boroughs.

11. A borough is a body-corporate, made up of the inhabitants of a certain tract of ground erected by the ſovereign, with juriſdiction annexed to it. Bo-

roughs are erected, either to be holden of the ſovereign himſelf, which is the general caſe of royal boroughs; or of the ſuperior of the lands erected, as boroughs of regality and barony. Boroughs royal have power, by their charters, to chooſe annually certain office-bearers or magiſtrates; and in boroughs of regality and barony, the nomination of magiſtrates is, by their charter, lodged ſometimes in the inhabitants, ſometimes in the ſuperior. Bailies of boroughs have juriſdiction in matters of debt, ſervices, and queſtions of poſſeſſion betwixt the inhabitants. The criminal juriſdiction extends to petty riots, and reckleſs fire-raiſing. The dean of guild is that magiſtrate of a royal borough who is head of the merchant-company; he has the cognizance of mercantile cauſes within borough; and the inſpection of buildings, that they encroach neither on private property, nor on the public ſtreets; and he may direct inſufficient houſes to be pulled down. His juriſdiction has no dependence on the court of the borough, or bailie-court.

Barons.

12. A baron, in the large ſenſe of that word, is one who holds his lands immediately of the crown; and, as ſuch, had, by the ancient conſtitution, right to a ſeat in parliament, however ſmall his freehold might have been. The leſſer barons were exempted from the burden of attending the ſervice of parliament. This exemption grew inſenſibly into an utter diſability in all the leſſer barons from ſitting in parliament, without election by the county; though no ſtatute is to be found expreſsly excluding them.

13. To conſtitute a baron in the ſtrict law-ſenſe, his lands muſt have been erected, or at leaſt confirmed, by the king, *in liberam baroniam;* and ſuch baron had a certain juriſdiction, both civil and criminal, which he might have exerciſed, either in his own perſon, or by his bailie.

14. By the late juriſdiction-act, the civil juriſdiction of a baron is reduced to the power of recovering, from his vaſſals and tenants, the rents of his lands, and of condemning them in mill-ſervices; and of judging in cauſes where the debt and damages do not exceed 40 s. Sterling. His criminal juriſdiction is, by the ſame ſtatute, limited to aſſaults, batteries, and other ſmaller offences, which may be puniſhed by a fine not exceeding 20 s. Sterling, or by ſetting the offender in the ſtocks in the day-time not above three hours; the fine to be levied by poinding, or one month's impriſonment. The juriſdiction formerly competent to proprietors of mines, and coal or ſalt works, over their workmen, is reſerved; and alſo that which was competent to proprietors who had the right of fairs or markets, for correcting the diſorders that might happen during their continuance; provided they ſhall exerciſe no juriſdiction inferring the loſs of life or dememberation.

Conſtabularies.

15. The high conſtable of Scotland had no fixed territorial juriſdiction, but followed the court; and had, jointly with the mariſchal, the cognizance of all crimes committed within two leagues of it. All other conſtabularies were dependent on him: theſe had caſtles, and ſometimes boroughs, ſubject to their juriſdiction, as Dundee, Montroſe, &c. and among other powers, now little known, they had the right of exerciſing criminal juriſdiction within their reſpective territories during the continuance of fairs. By the late juriſdiction-act, all juriſdictions of conſtabulary are diſſolved, except that of high-conſtable.

Lyon king at arms.

16. The office of the Lyon King of arms was chiefly miniſterial, to denounce war, proclaim peace, carry public meſſages, &c. But he has alſo a right of juriſdiction, whereby he can puniſh all who uſurp arms contrary to the law of arms, and deprive or ſuſpend meſſengers, heralds, or purſuivants, (who are officers named by himſelf); but he has no cognizance of the damage ariſing to the private party through the meſſenger's fault. Meſſengers are ſubſervient to the ſupreme courts of ſeſſion and juſticiary; and their proper buſineſs is to execute all the king's letters either in civil or criminal cauſes. They muſt find caution for the proper diſcharge of their duty *qua* meſſengers; and in caſe of any malverſation, or neglect, by which damage ariſes to their employers, their ſureties may be recurred upon for indemnification. Theſe ſureties, however, are not anſwerable for the conduct of the meſſenger in any other capacity but *qua* ſuch; and therefore, if a meſſenger is authoriſed to uplift payment from a debtor, and fails to account to his employer, the cautioner is not liable; his obligation extending only to the regular and proper duties of the office in executing the diligence, or the like.

Sentence-money.

17. The judges had, for a long time, no other ſalaries or appointments than what aroſe from the ſentences they pronounced. The criminal judges applied to their own uſe the fines or iſſues of their ſeveral courts; and regalities had a right to the ſingle eſcheat of all perſons denounced, who reſided within their juriſdiction; and the civil judges got a certain proportion of the ſum contained in the decree pronounced. But theſe were all prohibited upon regular ſalaries being ſettled upon them.

Sect. V. *Of eccleſiaſtical perſons.*

clix,

The pope:

The Pope, or biſhop of Rome, was long acknowledged, over the weſtern part of Chriſtendom, for the head of the Chriſtian church. The papal juriſdiction was aboliſhed in Scotland *anno* 1560. The king was, by act 1669, declared to have ſupreme authority over all perſons, and in all cauſes eccleſiaſtical; but this act was repealed by 1690, as inconſiſtent with Preſbyterian church-government, which was then upon the point of being eſtabliſhed.

Clergy,

2. Before the reformation from Popery, the clergy was divided into ſecular and regular. The ſecular had a particular tract of ground given them in charge, within which they exerciſed the paſtoral office of biſhop, preſbyter, or other church-officer. The regular clergy had no cure of ſouls; but were tied down to reſidence in their abbacies, priories, or other monaſteries: and they got the name of *regular*, from the rules of mortification to which they were bound, according to the inſtitution of their ſeveral orders. Upon the vacancy of any benefice, whether ſecular or regular, commendators were frequently appointed to levy the fruits, as factors or ſtewards during the vacancy. The Pope alone could give the higher benefices *in commendam;* and at laſt, from the plenitude of his power, he came to name commendators for life, and without any obli-

gation to account. After the reformation, ſeveral abbacies and priories were given by James VI. *in perpetuam commendam*, to laics.

3. Upon aboliſhing the Pope's authority, the regular clergy were totally ſuppreſſed; and, in place of all the different degrees which diſtinguiſhed the ſecular clergy, they had at firſt only parochial preſbyters or miniſters, and ſuperintendants, who had the overſight of the church within a certain diſtrict: ſoon thereaſter the church-government became epiſcopal by archbiſhops, biſhops, &c.; and after ſome intermediate turns, is now preſbyterian by kirk-ſeſſions, preſbyteries, ſynods, and general aſſemblies.

4. Prelate, in the ſtatutes, ſignifies a biſhop, abbot, or other dignified clergyman, who in virtue of his office had a ſeat in parliament. Every biſhop had his chapter, which conſiſted of a certain number of the miniſters of the dioceſe, by whoſe aſſiſtance he managed the affairs of the church within that diſtrict. The nomination of biſhops to vacant ſees has been in the crown ſince 1540, though under the appearance of continuing the ancient right of election, which was in the chapter. The confirmation by the crown under the great ſeal, of the chapter's election, conferred a right to the ſpirituality of the benefice; and a ſecond grant, upon the conſecration of the biſhop-elect, gave a title to the temporality; but this ſecond grant fell ſoon into diſuſe.

Patronage.

5. He who founded or endowed a church was intitled to the right of patronage thereof, or *advocatio eccleſiæ*; whereby, among other privileges, he might preſent a churchman to the cure, in caſe of a vacancy. The preſentee, after he was received into the church, had a right to the benefice *proprio jure*; and if the church was parochial, he was called a *parſon*. The Pope claimed the right of patronage of every kirk to which no third party could ſhew a ſpecial title; and, ſince the reformation, the crown, as coming in place of the Pope, is conſidered as univerſal patron, where no right of patronage appears in a ſubject. Where two churches are united, which had different patrons, each patron preſents by turns.

6. Gentlemen of eſtates frequently founded colleges or collegiate churches; the head of which got the name of *provoſt*, under whom were certain prebendaries, or canons, who had their ſeveral ſtalls in the church, where they ſung maſſes. Others of leſſer fortunes founded chaplainries, which were donations granted for the ſinging of maſſes for deceaſed friends at particular altars in a church. Though all theſe were ſuppreſſed upon the reformation, their founders continued patrons of the endowments; out of which they were allowed to provide burſars, to be educated in any of the univerſities.

7. Where a fund is gifted for the eſtabliſhment of a ſecond miniſter in a pariſh where the cure is thought too heavy for one, the patronage of ſuch benefice does not belong to the donor, but to him who was patron of the church, unleſs either where the donor has reſerved to himſelf the right of patronage in the donation, or where he and his ſucceſſors have been in the conſtant uſe of preſenting the ſecond miniſter, without challenge from the patron. The right of preſenting incumbents was by 1690, *c.* 23. taken from patrons, and veſted in the heritors and elders of the pariſh, and payment to be made by the heritors to the patron of 600 merks; but it was again reſtored to patrons, 10 *An. c.* 12. with the exception of the preſentation ſold in purſuance of the former act.

Patrons.

8. Patrons were not ſimply adminiſtrators of the church; for they held the fruits of the vacant benefice as their own, for ſome time after the reformation. But that right is now no more than a truſt in the patron, who muſt apply them to pious uſes whithin the pariſh at the ſight of the heritors, yearly as they fall due. If he fail, he loſes his right of adminiſtering the vacant ſtipend for that and the next vacancy. The king, who is exempted from this rule, may apply the vacant ſtipend of his churches to any pious uſe, though not within the pariſh. If one ſhould be ordained to a church, in oppoſition to the preſentee, the patron, whoſe civil right cannot be affected by any ſentence of a church-court, may retain the ſtipend as vacant. Patrons are to this day intitled to a ſeat and burial-place in the churches of which they are patrons, and to the right of all the teinds of the pariſh not heritably diſponed.

9. That kirks may not continue too long vacant, the patron muſt preſent to the preſbytery (formerly to the biſhop), a fit perſon for ſupplying the cure, within ſix months from his knowledge of the vacancy, otherwiſe the right of preſentation accrues to the preſbytery *jure devoluto*. Upon preſentation by the patron, the biſhop collated or conferred the benefice upon the preſentee by a writing, in which he appointed certain miniſters of the dioceſe to induce or inſtitute him into the church; which induction completed his right, and was performed by their placing him in the pulpit, and delivering to him the bible and keys of the church. The biſhop collated to the churches of which himſelf was patron, *pleno jure*, or without preſentation; which he alſo did in menſal churches, whoſe patronages were ſunk, by the churches being appropriated to him, as part of his patrimony. Since the revolution, a judicial act of admiſſion by the preſbytery, proceeding either upon a preſentation, or upon a call from the heritors and elders, or upon their own *jus devolutum*, completes the miniſter's right to the benefice.

Proviſion for the reformed clergy.

10. Soon after the reformation, the Popiſh churchmen were prevailed upon to reſign in the ſoverign's hands a third of their benefices; which was appropriated, in the firſt place, for the ſubſiſtence of the reformed clergy. To make this fund effectual, particular localities were aſſigned in every benefice, to the extent of a third, called the *aſſumption of thirds*; and for the farther ſupport of miniſters, Queen Mary made a grant in their favour of all the ſmall benefices not exceeding 300 merks. Biſhops, by the act which reſtored them to the whole of their benefices, were obliged to maintain the miniſters within their dioceſes, out of the thirds; and in like maner, the laic titulars, who got grants of the teinds, became bound, by their acceptation thereof, to provide the kirks within their erections in competent ſtipends.

Commiſſion for planting kirks, valuing teinds, &c.

11. But all thoſe expedients for the maintenance of the clergy having proved ineffectual, a commiſſion of parliament was appointed in the reign of James VI. for planting kirks, and modifying ſtipends to miniſters out of the teinds; and afterwards ſeveral other commiſſions were appointed, with the more ample powers

of dividing large pariſhes, erecting new ones, &c. all of which were, in 1707, transferred to the court of ſeſſion, with this limitation, that no pariſh ſhould be disjoined, nor new church erected, nor old one removed to a new place, without the conſent of three-fourths of the heritors, computing the votes, not by their numbers, but by the valuation of their rents within the pariſh. The judges of ſeſſion, when ſitting in that court, are conſidered as a commiſſion of parliament, and have their proper clerks, macers, and other officers of court, as ſuch.

Stipends.

12. The loweſt ſtipend that could be modified to a miniſter by the firſt commiſſion, was 500 merks, or five chalders of victual, unleſs where the whole teinds of the pariſh did not extend ſo far: and the higheſt was 1000 merks, or ten chalders. The parliament 1633 raiſed the *minimum* to eight chalders of victual, and proportionably in ſilver; but as neither the commiſſion appointed by that act, nor any of the ſubſequent ones, was limited as to the *maximum*, the commiſſioners have been in uſe to augment ſtipends conſiderably above the old *maximum*, where there is ſufficiency of free teinds, and the cure is burdenſome, or living expenſive.

13. Where a certain quantity of ſtipend is modified to a miniſter out of the teinds of a pariſh, without proportioning that ſtipend among the ſeveral heritors, the decree is called a *decree of modification:* but where the commiſſioners alſo fix the particular proportions payable by each heritor, it is a decree of *modification and locality*. Where a ſtipend is only modified, it is ſecured on the whole teinds of the pariſh, ſo that the miniſter can inſiſt againſt any one heritor to the full extent of his teinds; ſuch heritor being always intitled to relief againſt the reſt for what he ſhall have paid above his juſt ſhare: but where the ſtipend is alſo localled, each heritor is liable in no more than his own proportion.

Manſe.

14. Few of the reformed miniſters were, at firſt, provided with dwelling-houſes; moſt of the Popiſh clergy having, upon the firſt appearance of the reformation, let their manſes in feu, or in long tack: miniſters therefore got a right, in 1563, to as much of theſe manſes as would ſerve them, notwithſtanding ſuch feus or tacks. Where there was no parſon's nor vicar's manſe, one was to be built by the heritors, at the ſight of the biſhop, (now the preſbytery), the charge not exceeding L. 1000 Scots, nor below 500 merks. Under a manſe are comprehended ſtable, barn, and byre, with a garden; for all which it is uſual to allow half an acre of ground.

15. Every incumbent is intitled at his entry to have his manſe put in good condition; for which purpoſe, the preſbtery may appoint a viſitation by tradeſmen, and order eſtimates to be laid before them of the ſums neceſſary for the repairing, which they may proportion among the heritors according to their valuations. The preſbytery, after the manſe is made ſufficient, ought, upon application of the heritors, to declare it a free manſe; which lays the incumbent under an obligation to uphold it in good condition during his incumbency, otherwiſe he or his executors ſhall be liable in damages; but they are not bound to make up the loſs ariſing from the neceſſary decay of the building by the waſte of time.

Glebe, and

16. All miniſters where there is any landward or country pariſh, are, over and above their ſtipend, intitled to a glebe, which comprehends four acres of arable land, or ſixteen ſowms of paſture-ground where there is no arable land (a ſowm is what will graze ten ſheep or one cow); and it is to be deſigned or marked by the biſhop or preſbytery out of ſuch kirklands within the pariſh as lie neareſt to the kirk, and, in default of kirklands, out of temporal lands.

17. A right of relief is competent to the heritors, whoſe lands are ſet off for the manſe or glebe, againſt the other heritors of the pariſh. Manſes and glebes, being once regularly deſigned, cannot be feued or ſold by the incumbent in prejudice of his ſucceſſors, which is in practice extended even to the caſe where ſuch alienation evidently apppears profitable to the benefice.

Graſs.

18. Miniſters, beſide their glebe, are intitled to graſs for a horſe and two cows. And if the lands, out of which the graſs may be deſigned, either lie at a diſtance, or are not fit for paſture, the heritors are to pay to the miniſter L. 20 Scots yearly as an equivalent. Miniſters have alſo freedom of foggage, paſturage, fuel, feal, divot, loaning, and free iſh and entry, according to uſe and wont: but what theſe privileges are, muſt be determined by the local cuſtom of the ſeveral pariſhes.

Terms of payment of ſtipends.

19. The legal terms at which ſtipends become due to miniſters are Whitſunday and Michaelmas. If the incumbent be admitted to his church before Whitſunday (till which time the corns are not preſumed to be fully ſown), he has a right to that whole year's ſtipend; and, if he is received after Whitſunday, and before Michaelmas, he is intitled to the half of that year; becauſe, though the corns were ſown before his entry, he was admitted before the term at which they are preſumed to be reaped. By the ſame reaſon, if he dies or is tranſported before Whitſunday, he has right to no part of that year; if before Michaelmas, to the half, and if not till after Michaelmas, to the whole.

Annat or ann.

20. After the miniſter's death, his executors have right to the annat; which, in the ſenſe of the cannon law, was a right reſerved to the Pope, of the firſt year's fruits of every benefice. Upon a threatened invaſion from England *anno* 1547, the annat was given by the parliament, notwithſtanding this right in the Pope, to the executors of ſuch churchmen as ſhould fall in battle in defence of their country: but the word *annat* or *ann*, as it is now underſtood, is the right which law gives to the executors of miniſters, of half a year's benefice over and above what was due to the miniſter himſelf for his incumbency.

21. The executors of a miniſter need make up no title to the ann by confirmation: neither is the right aſſignable by the miniſter, or affectable with his debts; for it never belonged to him, but is a mere gratuity given by law to thoſe whom it is preſumed the deceaſed could not ſufficiently provide; and law has given it expreſly to *executors:* and if it were to be governed by the rules of ſucceſſion in executory, the widow, in caſe of no children, would get one half, the other would go to the next of kin; and where there are children, ſhe would be intitled to a third, and the other two thirds would fall equally among the children. But the court of ſeſſion, probably led by the general

practice, have in this laſt caſe divided the ann into two equal parts, of which one goes to the widow, and the other among the children *in capita*.

Juriſdiction of biſhops.

22. From the great confidence that was, in the firſt ages of Chriſtianity, repoſed in churchmen, dying perſons frequently committed to them the care of their eſtates, and of their orphan children; but theſe were ſimply rights of truſt, not of juriſdiction. The clergy ſoon had the addreſs to eſtabliſh to themſelves a proper juriſdiction, not confined to points of eccleſiaſtical right, but extending to queſtions that had no concern with the church. They judged not only in teinds, patronages, teſtaments, breach of vow, ſcandal, &c. but in queſtions of marriage and divorce, becauſe marriage was a ſacrament; in tochers, becauſe theſe were given in conſideration of marriage: in all queſtions where an oath intervened, on pretence that oaths were a part of religious worſhip, &c. As churchmen came, by the means of this extenſive juriſdiction, to be diverted from their proper functions, they committed the exerciſe of it to their officials or commiſſaries: hence the commiſſary-court was called the *Biſhop's Court*, and *Curia Chriſtianitatis*; it was alſo ſtyled the *Conſiſtorial Court*; from *conſiſtory*, a name firſt given to the court of appeals of the Roman emperors, and afterwards to the courts of judicature held by churchmen.

Commiſſary.

23. At the reformation, all epiſcopal juriſdiction, exerciſed under the authority of the biſhop of Rome, was aboliſhed. As the courſe of juſtice in conſiſtorial cauſes was thereby ſtopped, Q. Mary, beſides naming a commiſſary for every dioceſe, did, by a ſpecial grant, eſtabliſh a new commiſſary-court at Edinburgh, conſiſting of four judges or commiſſaries. This court is veſted with a double juriſdiction; one dioceſan, which is exerciſed in the ſpecial territory contained in the grant, *viz.* the counties of Edinburgh, Haddington, Linlithgow, Peebles, and a great part of Stirlingſhire; and another univerſal, by which the judges confirm the teſtaments of all who die in foreign parts, and may reduce the decrees of all inferior commiſſaries, provided the reduction be purſued within a year after the decree. Biſhops, upon their re-eſtabliſhment in the reign of James VI. were reſtored to the right of naming their ſeveral commiſſaries.

24. As the clergy, in times of Popery, aſſumed a juriſdiction independent of the civil power or any ſecular court, their ſentences could be reviewed only by the Pope, or judges delegated by him; ſo that, with regard to the courts of Scotland, their juriſdiction was ſupreme. But, by an act 1560, the appeals from the biſhops courts that were then depending before the Roman conſiſtories, were ordained to be decided by the court of ſeſſion: and by a poſterior act, 1609, the ſeſſion is declared the king's great conſiſtory, with power to review all ſentences pronounced by the commiſſaries. Nevertheleſs, ſince that court had no inherent juriſdiction in conſiſtorial cauſes prior to this ſtatute, and ſince the ſtatute gives them a power of judging only by way of advocation, they have not, to this day, any proper conſiſtorial juriſdiction in the firſt inſtance; neither do they pronounce ſentence in any conſiſtorial cauſe brought from the commiſſaries, but remit it back to them with inſtructions. By the practice immediately ſubſequent to the act before quoted, they did not admit advocations from the inferior commiſſaries, till the cauſe was firſt brought before the commiſſaries of Edinburgh; but the practice is now in diſuſe.

25. The commiſſaries retain to this day an excluſive power of judging in declarators of marriage, and of the nullity of marriage; in actions of divorce and of non-adherence, of adultery, baſtardy, and confirmation of teſtaments; becauſe all theſe matters are ſtill conſidered to be properly conſiſtorial. Inferior commiſſaries are not competent to queſtions of divorce, under which are comprehended queſtions of baſtardy and adherence, when they have a connection with the lawfulneſs of marriage, or with adultery.

26. Commiſſaries have now no power to pronounce decrees in abſence for any ſum above L. 40 Scots, except in cauſes properly conſiſtorial: but they may authenticate tutorial and curatorial inventories; and all bonds, contracts, &c. which contain a clauſe for regiſtration in the books of any judge competent, and proteſts on bills, may be regiſtered in their books.

Sect. VI. *Of marriage.*

clx.

Mariage.

Persons, when conſidered in a private capacity, are chiefly diſtinguiſhed by their mutual relations; as huſband and wife, tutor and minor, father and child, maſter and ſervant. The relation of huſband and wife is conſtituted by marriage; which is the conjunction of man and wife, vowing to live inſeparably till death.

2. Marriage is truly a contract, and ſo requires the conſent of parties. Idiots, therefore, and furious perſons, cannot marry. As no perſon is preſumed capable of conſent within the years of pupillarity, which, by law, laſts till the age of 14 in males, and 12 in females, marriage cannot be contracted by pupils; but if the married pair ſhall cohabit after puberty, ſuch acquieſcence gives force to the marriage. Marriage is fully perfected by conſent; which, without conſummation, founds all the conjugal rights and duties. The conſent requiſite to marriage muſt be *de præſenti*. A promiſe of marriage (*ſtipulatio ſponſalitia*) may be reſiled from, as long as matters are entire; but if any thing be done by one of the parties, whereby a prejudice ariſes from the non-performance, the party reſiling is liable in damages to the other. The canoniſts, and after them the courts of juſtice, explain a *copula* ſubſequent to a promiſe of marriage into actual marriage.

Form of celebration.

3. It is not neceſſary, that marriage ſhould be celebrated by a clergyman. The conſent of parties may be declared before any magiſtate, or ſimply before witneſſes; and though no formal conſent ſhould appear, marriage is preſumed from the cohabitation, or living together at bed and board, of a man and woman who are generally computed huſband and wife. One's acknowledgement of his marriage to the midwife whom he called to his wife, and to the miniſter who baptized his child, was found ſufficient preſumptive evidence of marriage, without the aid either of cohabitation, or of *habite and repute*. The father's conſent was, by the Roman law, eſſential to the marriage of children *in familia*: but, by the law of Scotland, children may enter into marriage, without the knowledge, and even againſt the remonſtrances, of a father.

Forbidden degrees.

Other grounds of nullity.

4. Marriage is forbidden within certain degrees of blood. By the law of Moſes (*Leviticus* xviii.), which by the act 1567. c. 15. has been adopted here ſeconds in blood, and all remoter degrees, may all lawfully marry. By ſeconds in blood are meant firſt couſins. Marriage in the direct line is forbidden *in infinitum*; as it is alſo in the collateral line in the ſpecial caſe where one of the parties is *loco parentes* to the other, as grand-uncle, great grand-uncle, &c. with reſpect to his grand niece, &c. The ſame degrees that are prohibited in conſanguinity, are prohibited in affinity: which is the tie ariſing from marriage, betwixt one of the married pair, and the blood relations of the other. Marriage alſo, where either of the parties is naturally unfit for generation, or ſtands already married to a third perſon, is *ipſo jure* null.

Proclamation of banns.

5. To prevent bigamy and inceſtuous marriages, the church has introduced proclamation of banns; which is the ceremony of publiſhing the names and deſignations of thoſe who intend to intermarry, in the churches where the bride and bridegroom reſide, after the congregation is aſſembled for divine ſervice; that all perſons who know any objection to the marriage may offer it. When the order of the church is obſerved, the marriage is called *regular*; when otherwiſe, *clandeſtine*. Marriage is valid when entered into in either of theſe ways; but when clandeſtine, there are certain penalties impoſed upon the parties as well as the celebrator and witneſſes.

Communion of goods.

6. By marriage, a ſociety is created between the married pair, which draws after it a mutual communication of their civil intereſts, in as far as is neceſſary for maintaining it. As the ſociety laſts only for the joint lives of the *ſocii*; therefore rights that have the nature of a perpetuity, which the law ſtyles *heritable*, are not brought under the partnerſhip or communion of goods; as a land-eſtate, or bonds bearing a yearly intereſt: it is only moveable ſubjects, or the fruits produced by heritable ſubjects during the marriage, that become common to man and wife.

Jus mariti.

7. The huſband, as the head of the wife, has the ſole right of managing the goods in communion: which is called *jus mariti*. This right is ſo abſolute, that it bears but little reſemblance to a right of adminiſtering a common ſubject. For the huſband can, in virtue thereof, ſell, or even gift, at his pleaſure, the whole goods falling under communion; and his creditors may affect them for the payment of his proper debts: ſo that the *jus mariti* carries all the characters of an aſſignation, by the wife to her huſband, of her moveable eſtate. It ariſes *ipſo jure* from the marriage; and therefore needs no other conſtitution. But a ſtranger may convey an eſtate to a wife, ſo as it ſhall not be ſubject to the huſband's adminiſtration; or the huſband himſelf may, in the marriage-contract, renounce his *jus mariti* in all or any part of his wife's moveable eſtate.

Paraphernalia.

8. From this right are excepted paraphernal goods, which, as the word is underſtood in law, comprehends the wife's wearing apparel, and the ornaments proper to her perſon; as necklaces, ear-rings, breaſt or arm jewels, buckles, &c. Theſe are neither alienable by the huſband, nor affectable by his creditors. Things of promiſcuous uſe to huſband and wife, as plate, medals, &c. may become paraphernal, by the huſband's giving them to the wife, at or before marriage; but they are paraphernal only in regard to that huſband who gave them as ſuch, and are eſteemed common moveables, if the wife, whoſe *paraphernalia* they were, be afterwards married to a ſecond huſband; unleſs he ſhall in the ſame manner appropriate them to her.

Burdens affecting the *jus mariti*.

9. The right of the huſband to the wife's moveable eſtate, is burdened with the moveable debts contracted by her before marriage: and as his right is univerſal, ſo alſo is his burden; for it reaches to her whole moveable debts, though they ſhould far exceed her moveable eſtate. Yet the huſband is not conſidered as the true debtor in his wife's debts. In all actions for payment, ſhe is the proper defender: the huſband is only cited for his intereſt, that is, as curator to her, and adminiſtrator of the ſociety-goods. As ſoon therefore as the marriage is diſſolved, and the ſociety-goods thereby ſuffer a diviſion, the huſband is no farther concerned in the ſhare belonging to his deceaſed wife; and conſequently is no longer liable to pay her debts, which muſt be recovered from her repreſentatives, or her ſeparate eſtate.

How extended againſt the huſband.

10. This obligation upon the huſband is, however, perpetuated againſt him (1.) Where his proper eſtate, real or perſonal, has been affected, during the marriage, by complete legal diligence; in which caſe, the huſband muſt, by the common rules of law, relieve his property from the burden with which it ſtands charged: but the utmoſt diligence againſt his perſon is not ſufficient to perpetuate the obligation; nor even incomplete diligence againſt his eſtate. (2.) The huſband continues liable, even after the wife's death, in ſo far as he is *lucratus* or profited by her eſtate: Still, however, the law does not conſider a huſband who has got but a moderate tocher with the wife as *lucratus* by the marriage; it is the exceſs only which it conſiders as *lucrum*, and that muſt be eſtimated by the quality of the parties and their condition of life.—As he was at no time the proper debtor in his wife's moveable debts; therefore, though he ſhould be *lucratus*, he is, after the diſſolution, only liable for them *ſubſidiarie*, i. e. if her own ſeparate eſtate is not ſufficient to pay them off.

11. Where the wife is debtor in that ſort of debt, which, if it had been due to her, would have excluded the *jus mariti*, *e. g.* in bonds bearing intereſt, which, as we ſhall afterwards ſee (clxiii. 4.), continues heritable as to the rights of huſband and wife, notwithſtanding of the enactment of the ſtatute 1661, which renders them moveable in certain other reſpects, the huſband is liable only for the bygone intereſts, and thoſe that may grow upon the debt during the marriage; becauſe his obligation for her debts muſt be commenſurated to the intereſt he has in her eſtate. It is the huſband alone who is liable in perſonal diligence for his wife's debts, while the marriage ſubſiſts: the wife, who is the proper debtor, is free from all perſonal execution upon them while ſhe is *veſtita viro*.

The huſband is the wife's curator.

12. The huſband by marriage becomes the perpetual curator of the wife. From this right it ariſes, 1. That no ſuit can proceed againſt the wife till the huſband be cited for his intereſt. 2. All deeds, done by a wife without the huſband's conſent, are null; neither can ſhe ſue in any action without the huſband's

concurrence. Yet where the huſband refuſes, or by reaſon of forfeiture, &c. cannot concur; or where the action is to be brought againſt the huſband himſelf, for performing his part of the marriage articles; the judge will authoriſe her to ſue in her own name. The effects ariſing from this curatorial power diſcover themſelves even before marriage upon the publication of banns; after which the bride, being no longer *ſui juris*, can contract no debt, nor do any deed, either to the prejudice of her future huſband, nor even to her own. But in order to this, it is neceſſary that the banns ſhall have been publiſhed in the bride's pariſh-church as well as in that of her huſband.

Separate alimony.

13. If the huſband ſhould either withdraw from his wife, or turn her out of doors; or if, continuing in family with her, he ſhould by ſevere treatment endanger her life; the commiſſaries will authoriſe a ſeparation *a menſa et thoro*, and give a ſeparate alimony to the wife, ſuitable to her huſband's eſtate, from the time of ſuch ſeparation until either a reconciliation or a ſentence of divorce.

What obligations of the wife valid.

14. Certain obligations of the wife are valid, notwithſtanding her being *ſub cura mariti; ex. gr.* obligations ariſing from delict; for wives have no privilege to commit crimes. But if the puniſhment reſolves into a pecuniary mulct, the execution of it muſt, from her incapacity to fulfil, be ſuſpended till the diſſolution of the marriage, unleſs the wife has a ſeparate eſtate exempted from the *jus mariti*.

15. Obligations ariſing from contract, affect either the perſon or the eſtate. The law has been ſo careful to protect wives while *ſub cura mariti*, that all perſonal obligations granted by a wife, though with the huſband's conſent, as bonds, bills, &c. are null; with the following exceptions: (1.) Where the wife gets a ſeparate *peculium* or ſtock, either from her father or a ſtranger, for her own or her children's alimony, ſhe may grant perſonal obligations in relation to ſuch ſtock: and by ſtronger reaſon, perſonal obligations granted by a wife are good, when her perſon is actually withdrawn from the huſband's power by a judicial ſeparation. (2.) A wife's perſonal obligation, granted in the form of a deed *inter vivos*, is valid, if it is not to take effect till her death. (3.) Where the wife is by the huſband *præpoſita negotiis*, intruſted with the management either of a particular branch of buſineſs or of his whole affairs, all the contracts ſhe enters into in the exerciſe of her *præpoſitura* are effectual, even though they be not reduced to writing, but ſhould ariſe merely *ex re*, from furniſhings made to her: but ſuch obligations have no force againſt the wife; it is the huſband only, by whoſe commiſſion ſhe acts, who is thereby obliged.

16. A wife, while ſhe remains in family with her huſband, is conſidered as *præpoſita negotiis domeſticis*; and conſequently may provide things proper for the family; for the price whereof the huſband is liable, tho' they ſhould be miſapplied, or though the huſband ſhould have given her money to provide them elſewhere. A huſband who ſuſpects that his wife may hurt his fortune by high living, may uſe the remedy of inhibition againſt her; by which all perſons are interpelled from contracting with her, or giving her credit. After the completing of this diligence, whereby the *præpoſitura* falls, the wife cannot bind the huſband, unleſs for ſuch reaſonable furniſhings as he cannot inſtruct that he provided her with *aliunde*. As every man, and conſequently every huſband, has a right to remove his managers at pleaſure, inhibition may paſs at the ſuit of the huſband againſt the wife, though he ſhould not offer to juſtify that meaſure by an actual proof of the extravagance or profuſion of her temper.

Inhibition againſt a wife.

Rights affecting her eſtate.

17. As to rights granted by the wife affecting her eſtate; ſhe has no moveable eſtate, except her *paraphernalia*; and theſe ſhe may alien or impignorate, with conſent of the huſband. She can, without the huſband, bequeath by teſtament her ſhare of the goods in communion; but ſhe cannot diſpoſe of them *inter vivos*; for ſhe herſelf has no proper right to them while the marriage ſubſiſts. A wife can lawfully oblige herſelf, in relation to her heritable eſtate, with conſent of her huſband: for though her perſon is in ſome ſenſe ſunk by the marriage, ſhe continues capable of holding a real eſtate; and in ſuch obligations her eſtate is conſidered, and not her perſon. A huſband, though he be curator to his wife, can by his acceptance or intervention, authoriſe rights granted by her in his own favour: for a huſband's curatory differs in this reſpect from the curatory of minors, for it is not merely intended for the wife's advantage, but is conſidered as a mutual benefit to both.

Donations revocable and irrevocable.

18. All donations, whether by the wife to the huſband, or by the huſband to the wife, are revocable by the donor; but if the donor dies without revocation, the right becomes abſolute. Where the donation is not pure, it is not ſubject to revocation: thus, a grant made by the huſband, in conſequence of the natural obligation that lies upon him to provide for his wife, is not revocable, unleſs in ſo far as it exceeds the meaſure of a rational ſettlement; neither are remuneratory grants revocable, where mutual grants are made in conſideration of each other, except where an onerous cauſe is ſimulated, or where what is given *hinc inde* bears no proportion to each other. All voluntary contracts of ſeparation, by which the wife is provided in an yearly alimony, are effectual as to the time paſt, but revocable either by the huſband or wife.

Ratification by wives.

19. As wives are in the ſtrongeſt degree ſubject to the influence of their huſbands, third parties, in whoſe favours they had made grants, were frequently vexed with actions of reduction, as if the grant had been extorted from the wife through the force or fear of the huſband. To ſecure the grantees againſt this danger, ratifications were introduced, whereby the wife, appearing before a judge, declares upon oath, her huſband not preſent, that ſhe was not induced to grant the deed *ex vi aut metu*. A wife's ratification is not abſolutely neceſſary for ſecuring the grantee: law indeed allows the wife to bring reduction of any deed ſhe has not ratified, upon the head of force or fear; of which, if ſhe bring ſufficient evidence, the deed will be ſet aſide; but if ſhe fails in the proof, it will remain effectual to the receiver.

Diſſolution of marriage.

20. Marriage, like other contracts, might, by the Roman law, be diſſolved by the contrary conſent of parties; but, by the law of Scotland, it cannot be diſſolved till death, except by divorce, proceeding either upon the head of adultery or of wilful deſertion.

21. Marriage is diſſolved by death, either *within* year and day from its being contracted, or *after* year

and day. If it is diſſolved within year and day, all rights granted in conſideration of the marriage (unleſs guarded againſt in the contract) become void, and things return to the ſame condition in which they ſtood before the marriage; with this reſtriction, that the huſband is conſidered as a *bona ſide* poſſeſſor, in relation to what he has conſumed upon the faith of his right; but he is liable to repay the tocher, without any deduction, in conſideration of his family-expence during the marriage. If things cannot be reſtored on both ſides, equity hinders the reſtoring of one party and not the other. In a caſe which was lately before the court of ſeſſion, it was determined, after a long hearing in preſence, that where a marriage had been diſſolved within the year without a living child, by the death of the huſband, the widow was intitled to be alimented out of an eſtate of which he died poſſeſſed, though there were no conventional proviſions ſtipulated in favour of the wife.

22. Upon the diſſolution of a marriage, after year and day, the ſurviving huſband becomes the irrevocable proprietor of the tocher; and the wife, when ſhe ſurvives, is intitled to her jointure, or to her legal proviſions. She has alſo right to mournings, ſuitable to the huſband's quality; and to alimony from the day of his death till the term at which her liferent proviſion, either legal or conventional, commences. If a living child be procreated of the marriage, the marriage has the ſame effect as if it had ſubſiſted beyond the year. A day is adjected to the year, *in majorem evidentiam*, that it may clearly appear that the year itſelf is elapſed; and therefore, the running of any part of the day, after the year, has the ſame effect as if the whole were elapſed. The legal right of courteſy competent to the ſurviving huſband is explained below, N° clxx. 28.

Divorce.

23. Divorce is ſuch a ſeparation of married perſons, during their lives, as looſes them from the nuptial tie, and leaves them at freedom to intermarry with others. But neither adultery, nor wilful deſertion, are grounds which muſt neceſſarily diſſolve marriage; they are only handles, which the injured party may take hold of to be free. Cohabitation, therefore, by the injured party, after being in the knowledge of the acts of adultery, inplies a paſſing from the injury; and no divorce can proceed, which is carried on by colluſion betwixt the parties leſt contrary to the firſt inſtitution of marriage, they might diſengage themſelves by their own conſent, and though, after divorce, the guilty perſon, as well as the innocent, may contract ſecond marriages; yet, in the caſe of divorce upon adultery, marriage is by ſpecial ſtatute (1600. c 20.) prohibited betwixt the two adulterers.

24. Where either party has deſerted from the other for four years together, that other may ſue for adherence. If this has no effect, the church is to proceed, firſt by admonition, then by excommunication; all which previous ſteps are declared to be a ſufficient ground for purſuing a divorce. *De praxi*, the commiſſaries pronounce ſentence in the adherence, after one year's deſertion; but four years muſt intervene between the firſt deſertion and the decree of divorce.

25. The legal effects of divorce on the head of deſertion are, that the offending huſband ſhall reſtore the tocher, and forfeit to the wife all her proviſions, legal and conventional; and, on the other hand, the offending wife ſhall forfeit to the huſband her tocher, and all the rights that would have belonged to her in the caſe of her ſurvivance. This was alſo eſteemed the rule in divorces upon adultery. But by a deciſion of the court of ſeſſion 1662, founded on a tract of ancient deciſions recovered from the records, the offending huſband was allowed to retain the tocher.

SECT. VII. *Of Minors, and their tutors and curators.* clxi.

Pupillarity, &c.

1. THE ſtages of life principally diſtinguiſhed in law are, *pupillarity*, *puberty* or *minority*, and *majority*. A child is under pupillarity, from the birth to 14 years of age if a male, and till 12 if a female. Minority begins where pupillarity ends, and continues till majority; which, by the law of Scotland, is the age of 21 years complete, both in males and females: but minority, in a large ſenſe, includes all under age, whether pupils or *puberes*. Becauſe pupils cannot in any degree act for themſelves, and minors ſeldom with diſcretion, pupils are put by law under the power of tutors, and minors may put themſelves under the direction of curators. Tutory is a power and faculty to govern the perſon, and adminiſter the eſtate, of a pupil. Tutors are either *nominate*, *of law*, or *dative*.

Tutors.

2. A tutor nominate is he who is named by a father, in his teſtament or other writing, to a lawful child. Such tutor is not obliged to give caution for the faithful diſcharge of his office; becauſe his fidelity is preſumed to have been ſufficiently known to the father.

3. If there be no nomination by the father, or if the tutors nominate do not accept, or if the nomination falls by death or otherwiſe, there is place for a *tutor of law*. This ſort of tutory devolves upon the next agnate; by which we underſtand he who is neareſt related by the father, though females intervene.

Agnates.

4. Where there are two or more agnates equally near to the pupil, he who is intitled to the pupil's legal ſucceſſion falls to be preferred to the others. But as the law ſuſpects that he may not be over careful to preſerve a life which ſtands in the way of his own intereſt, this ſort of tutor is excluded from the cuſtody of the pupil's perſon; which is commonly committed to the mother, while a widow, until the pupil be ſeven years old; and, in default of the mother, to the next cognate, i. e. the nigheſt relation by the mother. The tutor of law muſt (by act 1474) be at leaſt 25 years of age. He is ſerved or declared by a jury of ſworn men, who are called upon a brief iſſuing from the chancery, which is directed to any judge having juriſdiction. He muſt give ſecurity before he enters upon the management.

5. If no tutor of law demands the office, any perſon, even a ſtranger, may apply for a tutory-*dative*. But becauſe a tutor in law ought to be allowed a competent time to deliberate whether he will ſerve or not, no tutory-dative can be given till the elapſing of a year from the time at which the tutor of law had firſt a right to ſerve. It is the king alone, as the father of his country, who gives tutors dative, by his court of exchequer; and by act 1672, no gift of tutory can paſs in exchequer, without the citation or conſent of

the next of kin to the pupil, both by the father and mother, nor till the tutor give ſecurity, recorded in the books of exchequer. There is no room for a tutor of law, or tutor-dative, while a tutor-nominate can be hoped for: and tutors of law, or dative, even after they have begun to act, may be excluded by the tutor-nominate, as ſoon as he offers to accept, unleſs he has expreſsly renounced the office. If a pupil be without tutors of any kind, the court of ſeſſion will, at the ſuit of any kinſman, name a factor (ſteward) for the management of the pupil's eſtate.

Judicial factor.

Curators.

6. After the years of pupillarity are over, the minor is conſidered as capable of acting by himſelf, if he has confidence enough of his own capacity and prudence. The only two caſes in which curators are impoſed upon minors are, (1.) Where they are named by the father, in a ſtate of health. (2.) Where the father is himſelf alive; for a father is *ipſo jure*, without any ſervice, adminiſtrator, that is, both tutor and curator of law, to his children, in relation to whatever eſtate may fall to them during their minority. This right in the father does not extend to grandchildren, nor to ſuch even of his immediate children as are foriſfamiliated. Neither has it place in ſubjects which are left by a ſtranger to the minor, excluſive of the father's adminiſtration. If the minor chooſes to be under the direction of curators, he muſt raiſe and execute a ſummons, citing at leaſt two of his next of kin to appear before his own judge-ordinary, upon nine days warning (by act 1555.) At the day and place of appearance, he offers to the judge a liſt of thoſe whom he intends for his curators: ſuch of them as reſolve to undertake the office muſt ſign their acceptance, and give caution; upon which an act of curatory is extracted.

7. Theſe curators are ſtyled *ad negotia*; to diſtinguiſh them from another ſort called curators *ad lites*; who are authoriſed by the judge to concur with a pupil or minor in actions of law, either where he is without tutors and curators, or where his tutors and curators are parties to the ſuit. This ſort is not obliged to give caution, becauſe they have no intermeddling with the minor's eſtate: they are appointed for a ſpecial purpoſe; and when that is over, their office is at an end. Women are capable of being tutors and curators under the following reſtrictions: (1.) The office of a female tutor or curator falls by her marriage, even though the nomination ſhould provide otherwiſe; for ſhe is no longer *ſui juris*, and capable of courſe of having another under her power. (2.) No woman can be tutor of law. Papiſts are (by act 1700) declared incapable of tutory or curatory. Where the minor has more tutors and curators than one, who are called in the nomination to the *joint* management, they muſt *all* concur in every act of adminiſtration; where a certain number is named for a quorum, *that number* muſt concur: where any one is named *ſine quo non*, no act is valid without that one's ſpecial concurrence. But if they are named without any of theſe limitations, the concurrence of *the majority* of nominees then alive is ſufficient.

Who debarred from tutory and curatory.

Difference between tutory and curatory.

8. In this, tutory differs from curatory, that as pupils are incapable of conſent, they have no perſon capable of acting; which defect the tutor ſupplies: but a minor *pubes* can act for himſelf. Hence, the tutor ſubſcribes alone all deeds of adminiſtration: but in curatory, it is the minor who ſubcribes as the proper party; the curator does no more than conſent. Hence alſo, the perſons of pupils are under the power either of their tutors or of their neareſt cognates; but the minor, after pupillarity, has the diſpoſal of his own perſon, and may reſide where he pleaſes In moſt other particulars, the nature, the powers, and the duties of the two offices coincide. Both tutors and curators muſt, previous to their adminiſtration, make a judicial inventory, ſubſcribed by them and the next of kin, before the minor's judge-ordinary, of his whole eſtate perſonal and real; of which, one ſubſcribed duplicate is to be kept by the tutors or curators themſelves; another, by the next of kin on the father's ſide; and a third, by the next of kin on the mother's. If any eſtate belonging to the minor ſhall afterwards come to their knowledge, they muſt add it to the inventory within two months after their attaining poſſeſſion thereof. Should they neglect this the minor's debtors are not obliged to make payment to them: they may be removed from their offices as ſuſpected; and they are intitled to no allowance for the ſums diſburſed by them in the minors affairs (act 1672), except the expence laid out upon the minor's entertainment, upon his lands and houſes, and upon compleating his titles.

Judicial inventories.

Powers of tutors and curators.

9. Tutors and curators cannot grant leaſes of the minor's lands, to endure longer than their own offices; nor under the former rental, without either a warrant from the court of ſeſſion, or ſome apparent neceſſity.

10. They have power to ſell the minor's moveables; but cannot ſell their pupil's land-eſtate, without the authority of a judge, yet this reſtraint reaches not to ſuch alienations as the pupil could by law be compelled to grant, *e. g.* to renunciations of wadſets upon redemption by the reverſer; for in ſuch caſe, the very tenor of his own right lays him under the obligation; nor to the renewal of charters to heirs; but the charter muſt contain no new right in favour of the heir. The alienation, however, of heritage by a minor with the conſent of his curators, is valid.

11. Tutors and curators cannot, contrary to the nature of their truſt, authoriſe the minor to do any deed for their own benefit; nor can they acquire any debt affecting the minor's eſtate; and, where a tutor or curator makes ſuch accquiſition, in his own name, for a leſs ſum than the right is intitled to draw, the benefit thereof accrues to the minor. It ſeems, however, that ſuch purchaſe would be conſidered as valid, provided it were *bona fide* acquired at a public ſale; for in ſuch caſe it occurs that the tutor or curator is in fact meliorating the ſituation of his ward by enhancing the value of his property by a fair competition. In general, it ſeems to be the genius and ſpirit of the law, that tutors and curators ſhall do every thing in their power towards the faithful and proper diſcharge of their reſpective offices.

Their obligations.

12. By the Roman law, tutory and curatory, being *munera publica*, might be forced upon every one who had not a relevant ground of excuſe: but, with us, the perſons named to theſe offices may either accept or decline: and where a father, in *liege pouſti* (when in a ſtate of health), names certain perſons both as tutors aud curators to his children, though they have acted

as tutors, they may decline the office of curatory. Tutors and curators having once accepted, are liable *in diligence*, that is, are accountable for the conſequences of their neglect in any part of their duty from the time of their acceptance. They are accountable *ſinguli in ſolidum*, i. e. every one of them is anſwerable, not only for his own diligence, but for that of his co-tutors; and any one may be ſued without citing the reſt; but he who is condemned in the whole, has action of relief againſt his co-tutors.

13. From this obligation to diligence, we may except, (1.) Fathers or adminiſtrators in law, who, from the preſumption that they act to the beſt of their power for their children, are liable only for actual intromiſſions. (2.) Tutors and curators named by the father in conſequence of the act 1696, with the ſpecial proviſos, that they ſhall be liable barely for intromiſſions, not for omiſſions; and that each of them ſhall be liable only for himſelf, and not *in ſolidum* for the co-tutors: but this power of exemption from diligence is limited to the eſtate deſcending from the father himſelf. Tutors or curators are not intitled to any ſalary or allowance for pains, unleſs a ſalary has been expreſsly contained in the teſtator's nomination; for their office is preſumed gratuitous.

14. Though no perſon is obliged to accept the office of tutor or curator; yet having once accepted, he cannot throw it up or renounce it without ſufficient cauſe; but, if he ſhould be guilty of miſapplying the minor's money, or fail in any other part of his duty, he may be removed at the ſuit of the minor's next in kin, or by a co-tutor or co-curator. Where the miſconduct proceeds merely from indolence or inattention, the court, in place of removing the tutor, either join a curator with him, or, if he be a tutor nominate, they oblige him to give caution for his paſt and future management

How tutory and curatory expire.

15. The offices of tutory and curatory expire alſo by the pupil's attaining the age of puberty, or the minor's attaining the age of 21 years complete; and by the death either of the minor, or of his tutor and curator. Curatory alſo expires by the marriage of a female minor, who becomes thereby under the coverture of her own huſband. After expiry of the office, reciprocal actions lie at the inſtance both of the tutors and curators, and of the minor. That at the inſtance of the minor is called *actio tutelæ directa*, by which he can compel the tutors to account; that at the inſtance of the tutors, *actio tutelæ contraria*, by which the minor can be compelled to repay what has been profitably expended during the adminiſtration: but this laſt does not lie till after accounting to the minor; for till then the tutors are preſumed *intus habere* to have effects in their own hands for anſwering their diſburſements.

Effect of deeds by minors.

16. Deeds either by pupils, or by minors having curators without their conſent, are null; but they oblige the granters, in as far as relates to ſums profitably applied to their uſe. A minor under curators can indeed make a teſtament by himſelf; but whatever is executed in the form of a deed *inter vivos*, requires the curator's conſent. Deeds by a minor who has no curators, are as effectual as if he had had curators, and ſigned them with their conſent; he may even alien his heritage, without the interpoſition of a judge.

Reſtitution.

17. Minors may be reſtored againſt all deeds granted in their minority, that are hurtful to them. Deeds, in themſelves void, need not the remedy of reſtitution; but where hurtful deeds are granted by a tutor in his pupil's affairs, or by a minor who has no curators, as theſe deeds ſubſiſt in law, reſtitution is neceſſary: and even where a minor, having curators, executes a deed hurtful to himſelf with their conſent, he has not only action againſt the curators, but he has the benefit of reſtitution againſt the deed itſelf. The minor cannot be reſtored, if he does not raiſe and execute a ſummons for reducing the deed, *ex capite minorennitatis et læſionis*, before he be 25 years old. Theſe four years, between the age of 21 and 25, called *quadriennium utile*, are indulged to the minor, that he may have a reaſonable time, from that period, when he is firſt preſumed to have the perfect uſe of his reaſon, to conſider with himſelf what deeds done in his minority have been truly prejudicial to him.

Its requiſites.

18. Queſtions of reſtitution are proper to the court of ſeſſion. Two things muſt be proved by the minor, in order to the reduction of the deed: (1.) That he was minor when it was ſigned; (2.) That he is hurt or leſed by the deed. This leſion muſt not proceed merely from accident; for the privilege of reſtitution was not intended to exempt minors from the common misfortunes of life; it muſt be owing to the imprudence or negligence of the minor, or his curator.

How excluded.

19. A minor cannot be reſtored againſt his own delict or fraud; *e. g.* if he ſhould induce one to bargain with him by ſaying he was major. (2.) Reſtitution is excluded, if the minor, at any time after majority, has approved of the deed, either by a formal ratification, or tacitly by payment of intereſt, or by other acts inferring approbation. (3.) A minor, who has taken himſelf to buſineſs, as a merchant-ſhopkeeper, &c. cannot be reſtored againſt any deed granted by him in the courſe of that buſineſs, eſpecially if he was *proximus majorennitati* at ſigning the deed. (4.) According to the more common opinion, a minor cannot be reſtored in a queſtion againſt a minor, unleſs ſome groſs unfairneſs ſhall be qualified in the bargain.

How tranſmitted to the heir.

20. The privilege of reſtitution does not always die with the minor himſelf. (1.) If a minor ſucceeds to a minor, the time allowed for reſtitution is governed by the minority of the heir, not of the anceſtor. (2.) If a minor ſucceeds to a major, who was not full 25, the privilege continues with the heir during his minority; but he cannot avail himſelf of the *anni utiles*, except in ſo far as they were unexpired at the anceſtor's death. (3.) If a major ſucceeds to a minor, he has only the *quadriennium utile* after the minor's death; and if he ſucceeds to a major dying within the *quadriennium*, no more of it can be profitable to him than what remained when the anceſtor died.

Minor non tenetur placitare.

21. No minor can be compelled to ſtate himſelf as a defender, in any action, whereby his heritable eſtate flowing from aſcendants may be evicted from him, by one pretending a preferable right.

22. This privilege is intended merely to ſave minors from the neceſſity of diſputing upon queſtions of preference. It does not therefore take place, (1.) where the action is purſued on the father's falſehood or delict. (2.) Upon his obligation to convey heritage. (3.) On his liquid bond for a ſum of money, though ſuch action ſhould have the effect to carry off the minor's

eſtate by adjudication. (4.) Nor in actions purſued by the minor's ſuperior, upon feudal caſualties. (5.) This privilege cannot be pleaded in bar of an action which had been firſt brought againſt the father, and is only continued againſt the minor; nor where the father was not in the peaceable poſſeſſion of the heritable ſubject at his death. Before the minor can plead it, he muſt be ſerved heir to his father. The perſons of pupils are by ſaid act 1696 protected from impriſonment on civil debts.

Curators of idiots and furious perſons.

23. Curators are given, not only to minors, but in general to every one who, either through defect of judgment, or unfitneſs of diſpoſition, is incapable of rightly managing his own affairs. Of the firſt ſort, are idiots and furious perſons. Idiots, or *fatui*, are entirely deprived of the faculty of reaſon. The diſtemper of the furious perſon does not conſiſt in the defect of reaſon; but in an overheated imagination, which obſtructs the application of reaſon to the purpoſes of life. Curators may be alſo granted to lunatics; and even to perſons dumb and deaf, though they are of ſound judgement, where it appears that they cannot exert it in the management of buſineſs. Every perſon, who is come of age, and is capable of acting rationally, has a natural right to conduct his own affairs. The only regular way, therefore, of appointing this ſort of curators, is by a jury ſummoned upon a brief from the chancery; which is not, like the brief of common tutory, directed to any judge-ordinary, but to the judge of the ſpecial territory where the perſon alleged to be fatuous or furious reſides; that, if he is truly of ſound judgement, he may have an opportunity to oppoſe it: and for this reaſon, he ought to be made a party to the brief. The curatory of idiots and furious perſons belongs to the neareſt agnate; but a father is preferred to the curatory of his fatuous ſon, and the huſband to that of his fatuous wife, before the agnate.

24. A clauſe is inſerted in the brief, for inquiring how long the fatuous or furious perſon has been in that condition; and the verdict to be pronounced by the inqueſt has a retroſpective effect; for it is declared a ſufficient ground, without further evidence, for reducing all deeds granted after the period at which it appeared by the proof that the fatuity or furioſity began. But, as fatuous and furious perſons are, by their very ſtate, incapable of being obliged, all deeds done by them may be declared void, upon proper evidence of their fatuity at the time of ſigning, though they ſhould never have been cognoſced idiots by an inqueſt.

25. We have ſome few inſtances of the ſovereign's giving curators to idiots, where the next agnate did not claim; but ſuch gifts are truly deviations from the law, ſince they paſs without any inquiry into the ſtate of the perſon upon whom the curatory is impoſed. Hence the curator of law to an idiot, ſerving *quandocunque*, is preferred, as ſoon as he offers himſelf, before the curator-dative. This ſort of curatory does not determine by the lucid intervals of the perſon *ſub cura;* but it expires by his death, or perfect return to a ſound judgement; which laſt ought regularly to be declared by the ſentence of a judge.

Interdiction.

26. Perſons, let them be ever ſo profuſe, or liable to be impoſed upon, if they have the exerciſe of reaſon, can effectually oblige themſelves, till they are fettered by law. This may be done by *Interdiction*, which is a legal reſtraint laid upon ſuch perſons from ſigning any deed to their own prejudice, without the conſent of their curators or interdictors.

27. There could be no interdiction, by the ancient practice, without a previous inquiry into the perſon's condition. But as there were few who could bear the ſhame that attends judicial interdiction, however neceſſary the reſtraint might have been, voluntary interdiction has received the countenance of law; which is generally executed in the form of a bond, whereby the granter obliges himſelf to do no deed that may affect his eſtate, without the conſent of certain friends therein mentioned. Though the reaſons inductive of the bond ſhould be but gently touched in the recital, the interdiction ſtands good. Voluntary interdiction, tho' it be impoſed by the ſole act of the perſon interdicted, cannot be recalled at his pleaſure: but it may be taken off, (1.) By a ſentence of the court of ſeſſion, declaring, either that there was, from the beginning, no ſufficient ground for the reſtraint; or that the party is, ſince the date of the bond, become *rei ſui providus.* (2.) It falls, even without the authority of the lords, by the joint act of the perſon interdicted, and his interdictors, concurring to take it off. (3.) Where the bond of interdiction requires a certain number as a quorum, the reſtraint ceaſes, if the interdictors ſhall by death be reduced to a leſſer number.

28. Judicial interdiction is impoſed by a ſentence of the court of ſeſſion. It commonly proceeds on an action brought by a near kinſman to the party; and ſometimes from the *nobile officium* or the court, when they perceive, during the pendency of a ſuit, that any of the litigants is, from the facility of his temper, ſubject to impoſition. This ſort muſt be taken off by the authority of the ſame court that impoſed it.

Regiſtration of interdictions.

29. An interdiction need not be ſerved againſt the perſon interdicted; but it muſt be executed, or publiſhed by a meſſenger, at the market croſs of the juriſdiction where he reſides, by publicly reading the interdiction there, after three oyeſſes made for convocating the lieges. A copy of this execution muſt be affixed to the croſs; and thereafter, the interdiction, with its execution, muſt (by the act 1581) be regiſtered in the books both of the juriſdiction where the perſon interdicted reſides and where his lands lie, or (by the act 1600) in the general regiſter of the ſeſſion, within 40 days from the publication. An interdiction, before it is regiſtered, has no effect againſt third parties, tho' they ſhould be in the private knowledge of it; but it operates againſt the interdictors themſelves, as ſoon as it is delivered to them.

Effects.

30. An interdiction, duly regiſtered, has this effect, that all deeds done thereafter, by the perſon interdicted, without the conſent of his interdictors, affecting his heritable eſtate, are ſubject to reduction. Regiſtration in the general regiſter ſecures all his lands from alienation, wherever they lie; but where the interdiction is recorded in the regiſter of a particular ſhire, it covers no lands except thoſe ſituated in that ſhire. But perſons interdicted have full power to diſpoſe of their moveables, not only by teſtament, but by preſent deeds of alienation: And creditors, in perſonal bonds granted after interdiction, may uſe all execution againſt their debtor's perſon and moveable eſtate: ſuch bonds being only ſubject to reduction in ſo far as di-

ligence againſt the heritable eſtate may proceed upon them.

31. All onerous or rational deeds granted by the perſon interdicted, are as effectual, even without the conſent of the interdictors, as if the granter had been laid under no reſtraint; but he cannot alter the ſucceſſion of his heritable eſtate, by any ſettlement, let it be ever ſo rational. No deed, granted with conſent of the interdictors, is reducible, though the ſtrongeſt leſion or prejudice to the granter ſhould appear: the only remedy competent, in ſuch caſe, is an action by the granter againſt his interdictors, for making up to him what he has loſt through their undue conſent. It is no part of the duty of interdictors, to receive ſums or manage any eſtate; they are given merely *ad auctoritatem præſtandam*, to interpoſe their authority to reaſonable deeds: and ſo are accountable for nothing but their fraud or fault, in conſenting to deeds hurtful to the perſon under their care.

Office of interdictors.

Lawful children.

32. The law concerning the ſtate of children falls next to be explained. Children are either born in wedlock, or out of it. All children born in lawful marriage or wedlock, are preſumed to be begotten by the perſon to whom the woman is married: and conſequently to be lawful children. This preſumption is ſo ſtrongly founded, that it cannot be defeated but by direct evidence that the mother's huſband could not be the father of the child, *e. g.* where he is impotent, or was abſent from the wife till within ſix lunar months of the birth. The canoniſts indeed maintain, that the concurring teſtimony of the huſband and wife, that the child was not procreated by the huſband, is ſufficient to elude this legal preſumption for legitimacy: but it is an agreed point, that no regard is to be paid to ſuch teſtimony, if it be made after they have owned the child to be theirs. A father has the abſolute right of diſpoſing of his childrens perſon, of directing their education, and of moderate chaſtiſement; and even after they become *puberes*, he may compel them to live in family with him, and to contribute their labour and induſtry, while they continue there, towards his ſervice. A child who gets a ſeparate ſtock from the father for carrying on any trade or employment, even though he ſhould continue in the father's houſe, may be ſaid to be emancipated or forisfamiliated, in ſo far as concerns that ſtock; for the profits ariſing from it are his own. Forisfamiliation, when taken in this ſenſe, is alſo inferred by the child's marriage, or by his living in a ſeparate houſe, with his father's permiſſion or good-will. Children, after their full age of twenty-one years, become according to the general opinion, their own maſters; and from that period are bound to the father only by the natural ties of duty, affection, and gratitude. The mutual obligations between parents and children to maintain each other, are explained afterwards, N° clxxii. 4.

Baſtards.

33. Children born out of wedlock, are ſtyled natural children, or baſtards. Baſtards may be legitimated or made lawful, (1.) By the ſubſequent intermarriage of the mother of the child with the father. And this ſort of legitimation intitles the child to all the rights of lawful children. The ſubſequent marriage, which produces legitimation, is conſidered by the law to have been entered into when the child legitimated was begotten; and hence, if it be a male, he excludes, by his right of primogeniture, the ſons procreated after the marriage, from the ſucceſſion of the father's heritage, though theſe ſons were lawful children from the birth. Hence, alſo, thoſe children only can be thus legitimated, who are begotten of a woman whom the father might at that period have lawfully married. (2.) Baſtards are legitimated by letters of legitimation from the ſovereign. N° clxxxii. 3.

Servants.

34. As to the powers of maſters over their ſervants: All ſervants now enjoy the ſame rights and privileges with other ſubjects, unleſs in ſo far as they are tied down by their engagements of ſervice. Servants are either neceſſary or voluntary. Neceſſary are thoſe whom law obliges to work without wages, of whom immediately. Voluntary ſervants engage without compulſion, either for mere ſubſiſtence, or alſo for wages. Thoſe who earn their bread in this way, if they ſhould ſtand off from engaging, may be compelled to it by the juſtices of the peace, who have power to fix the rate of their wages.

Colliers and ſalters.

35. Colliers, coal-bearers, ſalters, and other perſons neceſſary to collieries and ſalt-works, as they are particularly deſcribed by act 1661, were formerly tied down to perpetual ſervice at the works to which they had once entered. Upon a ſale of the works, the right of their ſervice was transferred to the new proprietor. All perſons were prohibited to receive them into their ſervice, without a teſtimonial from their laſt maſter; and if they deſerted to another work, and were redemanded within a year thereafter, he who had received them was obliged to return them within twenty-four hours, under a penalty. But though the proprietor ſhould neglect to require the deſerter within the year, he did not, by that ſhort preſcription, loſe his property in him. Colliers, &c. where the colliery to which they were reſtricted was either given up, or not ſufficient for their maintenance, might lawfully engage with others; but if that work ſhould be again ſet a-going, the proprietor might reclaim them back to it.

Reſtraints lately taken off.

36. But by 15 *Geo.* III. *c.* 28. theſe reſtraints, the only remaining veſtiges of ſlavery in the law of Scotland, are abrogated; and, after the 1ſt July 1775, all colliers, coal-bearers, and ſalters, are declared to be upon the ſame footing with other ſervants or labourers. The act ſubjects thoſe who were bound prior to the 1ſt July 1775, to a certain number of years ſervice for their freedom, according to the age of the perſon.

The poor.

37. The poor make the loweſt claſs or order of perſons. Indigent children may be compelled to ſerve any of the king's ſubjects without wages, till their age of thirty years. Vagrants and ſturdy beggars may be alſo compelled to ſerve any manufacturer. And becauſe few perſons were willing to receive them into their ſervice, public work-houſes are ordained to be built for ſetting them to work. The poor who cannot work, muſt be maintained by the pariſhes in which they were born; and where the place of their nativity is not known, that burden falls upon the pariſhes where they have had their moſt common reſort, for the three years immediately preceding their being apprehended or their applying for the public charity. Where the contributions collected at the churches to which they belong are not ſufficient for their maintenance, they are

to receive badges from the miniſter and kirk-ſeſſion, in virtue of which they may aſk alms at the dwelling houſes of the inhabitants of the pariſh.

CHAP. II.

Of THINGS.

THE things, or ſubjects, to which perſons have right, are the ſecond object of law.

clxii. SECT. I. *Of the diviſion of rights, and the ſeveral ways by which a right may be acquired.*

Property.

THE right of enjoying and diſpoſing of a ſubject at one's pleaſure, is called property. Proprietors are reſtrained by law from uſing their property emulouſly to their neighbour's prejudice. Every ſtate or ſovereign has a power over private property, called, by ſome lawyers, *dominium eminens*, in virtue of which, the proprietor may be compelled to ſell his property for an adequate price, where an evident utility on the part of the public demands it.

Things incapable of appropriation.

2. Certain things are by nature itſelf incapable of appropriation; as the air, the light, the ocean, &c.: none of which can be brought under the power of any one perſon, though their uſe be common to all. Others are by law exempted from private commerce, in reſpect of the uſes to which they are deſtined. Of this laſt kind are (1.) *Res publicæ*, as navigable rivers, highways, bridges, &c.: the right of which is veſted in the king, chiefly for the benefit of his people, and they are called *regalia*. (2.) *Res univerſitatis*, things which belong in property to a particular corporation or ſociety, and whoſe uſe is common to every individual in it, but both property and uſe are ſubject to the regulations of the ſociety; as town-houſes, corporation-halls, market-places, church-yards, &c. The lands or other revenue belonging to the corporation do not fall under this claſs, but are *juris privati, quoad* the corporation.

Ways of acquiring property.

3. Property may be acquired, either by *occupation* or *acceſſion*; and transferred by *tradition* or *preſcription*: but preſcription being alſo a way of loſing property, falls to be explained under a ſeparate title. OCCUPATION, or occupancy, is the appropriating of things which have no owner, by apprehending them, or ſeizing their poſſeſſion. This was the original method of acquiring property: and continued, under certain reſtrictions, the doctrine of the Roman law, *Quod nullius eſt, fit occupantis*: but it can have no room in the feudal plan, by which the king is looked upon as the original proprietor of all the lands within his dominions.

4. Even in that ſort of moveable goods, which are preſumed to have once had an owner, this rule obtains by the law of Scotland, *Quod nullius eſt, fit domini regis*. Thus, the right of treaſure hid under ground is not acquired by occupation, but accrues to the king. Thus alſo, where one finds ſtrayed cattle or other moveables, which have been loſt by the former owner, the finder acquires no right in them, but muſt give public notice thereof; and if, within year and day after ſuch notice, the proprietor does not claim his goods, they fall to the king, ſheriff, or other perſon to whom the king has made a grant of ſuch eſcheats.

5. In that ſort of moveables which never had an owner, as wild-beaſts, fowls, fiſhes, or pearls found on the ſhore, the original law takes place, that he who firſt apprehends, becomes proprietor; in ſo much, that tho' the right of hunting, fowling, and fiſhing, be reſtrained by ſtatute, under certain penalties, yet all game, even what is catched in contravention of the law, becomes the property of the catcher (unleſs where the confiſcation thereof is made part of the penalty), the contravener being obnoxious, however, to the penal enactment of the ſtatutes in conſequence of his tranſgreſſion. It was not for a long time a fixed point whether a perſon, though poſſeſſed of the valued rent by law intitling him to kill game, could hunt upon another perſon's grounds without conſent: but it was lately found by the court of ſeſſion, and affirmed upon appeal, that he could not; it being repugnant to the idea of property, that any perſon, however qualified, ſhould have it in his power to traverſe and hunt upon another's grounds without conſent of the proprietor. Although certain things become the property of the firſt occupant, yet there are others which fall not under this rule. Thus, whales thrown in or killed on the coaſts, belong neither to thoſe who kill them, nor to the proprietor of the grounds on which they are caſt; but to the king, providing they are ſo large that they cannot be drawn up by a wane with ſix oxen.

Acceſſion.

6. ACCESSION is that way of acquiring property, by which, in two things which have a connection with or dependence on one another, the property of the principal thing draws after it the property of its acceſſory. Thus the owner of a cow becomes the owner of the calf; a houſe belongs to the owner of the ground on which it ſtands,t hough built with materials belonging to and at the charge of another; trees taking root in our ground, though planted by another, become ours. Thus, alſo, the inſenſible addition made to one's ground by what a river waſhes from other grounds (which is called *alluvio*), accrues to the maſter of the ground which receives the addition: but where it happened that a large piece of ground was diſjoined and annexed to another perſon's by the force of a river or any other accident, and which was by the Romans called *avulſio*, they conſidered the owner's right of property ſtill to ſubſiſt, § 21. *Inſt. de rer. divis*; and it is probable that, in a ſimilar caſe, courts would countenance the diſtinction. The Romans excepted from this rule the caſe of paintings drawn on another man's board or canvas, in conſideration of the excellency of the art; which exception the practice has for a like reaſon extended to ſimilar caſes.

Specification.

7. Under acceſſion is comprehended SPECIFICATION; by which is meant, a perſon's making a new ſpecies or ſubject, from materials belonging to another. Where the new ſpecies can be again reduced to the matter of which it was made, law conſiders the former maſs as ſtill exiſting; and therefore, the new ſpecies, as an acceſſory to the former ſubject, belongs to the proprietor of that ſubject: but where the thing made cannot be ſo reduced, as in the caſe of wine, which cannot be again turned into grapes, there is no place for the *fictio juris*; and therefore the workmanſhip, draws after it the property of the materials. But the perſon who thus carries the property from the other is bound to

indemnify him according to the true value; and in caſe it was done *mala fide*, he may be made liable in the *pretium affectionis* or utmoſt value.

Commixtion,

8. Though the new ſpecies ſhould be produced from the COMMIXTION or confuſion of different ſubſtances belonging to different proprietors, the ſame rule holds; but where the mixture is made by the common conſent of the owner, ſuch conſent makes the whole a common property, according to the ſhares that each proprietor had formerly in the ſeveral ſubjects. Where things of the ſame ſort are mixed without the conſent of the proprietors, which cannot again be ſeparated, *e. g.* two hogſheads of wine, the whole likewiſe becomes a common property; but, in the after-diviſion, regard ought to be had to the different quality of the wines: if the things ſo mixed admit of a ſeparation, *e. g.* two flocks of ſheep, the property continues diſtinct.

Tradition.

2. Property is carried from one to another by TRADITION; which is the delivery of poſſeſſion by the proprietor, with an intention to transfer the property to the receiver. Two things are therefore requiſite, in order to the tranſmitting of property in this way: (1.). The intention or conſent of the former owner to transfer it on ſome proper title of alienation, as ſale, exchange, gift, &c. (2.) The actual delivery in purſuance of that intention. The firſt is called the *cauſa*, the other the *modus transferendi dominii*: which laſt is ſo neceſſary to the acquiring of property, that he who gets the laſt right, with the firſt tradition, is preferred, according to the rule, *Traditionibus, non nudis pactis transferuntur rerum dominia.*

10. Tradition is either real, where the *ipſa corpora* of moveables are put into the hands of the receiver; or ſymbolical, which is uſed where the thing is incapable of real delivery, or even when actual delivery is only inconvenient. Where the poſſeſſion or cuſtody of the ſubject has been before with him to whom the property is to be transferred, there is no room for tradition.

Poſſeſſion; natural, civil, and

11. Poſſeſſion, which is eſſential both to the acquiſition and enjoyment of property, is defined, the detention of a thing, with a deſign or *animus* in the detainer of holding it as his own. It cannot be acquired by the ſole act of the mind, without real detention; but, being once acquired, it may be continued *ſolo animo.* Poſſeſſion is either natural, or civil. Natural poſſeſſion is, when one poſſeſſes by himſelf: thus, we poſſeſs lands by cultivating them and reaping their fruits, houſes by inhabiting them, moveables by detaining them in our hands. Civil poſſeſſion is our holding the thing, either by the ſole act of the mind, or by the hands of another who holds it in our name: thus, the owner of a thing lent poſſeſſes it by the borrower: the proprietor of lands, by his tackſman, truſtee, or ſteward, &c. The ſame ſubject cannot be poſſeſſed entirely, or *in ſolidum*, by two different perſons at one and the ſame time: and therefore poſſeſſion by an act of the mind ceaſes, as ſoon as the natural poſſeſſion is ſo taken up by another, that the former poſſeſſor is not ſuffered to re-enter. Yet two perſons may, in the judgment of law, poſſeſs the ſame ſubject, at the ſame time, on different rights: thus, in the caſe of a pledge, the creditor poſſeſſes it in his own name, in virtue of the right of impignoration; while the proprietor is conſidered as poſſeſſing, in and through the creditor, in ſo far as is neceſſary for ſupporting his right of property. The ſame doctrine holds in life renters, tackſmen, and, generally, in every caſe where there are rights affecting a ſubject diſtinct from the property.

bona fide.

12. A *bona fide* poſſeſſor is he who, though he is not really proprietor of the ſubject, yet believes himſelf proprietor on probable grounds. A *mala fide* poſſeſſor is he who knows, or is preſumed to know, that what he poſſeſſes is the property of another. A poſſeſſor *bona fide* acquired right, by the Roman law, to the fruits of the ſubject poſſeſſed, that had been reaped and conſumed by himſelf, while he believed the ſubjects his own. By our cuſtoms, perception alone, without conſumption, ſecures the poſſeſſor: nay, if he has ſown the ground, while his *bona fides* continued, he is intitled to reap the crop, *propter curam et culturam.* But this doctrine does not reach to civil fruits, *e. g.* the intereſt of money, which the *bona fide* receiver muſt reſtore, together with the principal, to the owner.

13. *bona fides* neceſſarily ceaſeth by the *conſcientia rei alienæ* in the poſſeſſor, whether ſuch conſciouſneſs ſhould proceed from legal interpellation, or private knowledge. *Mala fides* is ſometimes induced by the true owner's bringing his action againſt the poſſeſſor, ſometimes not till litiſconteſtation, and, in caſes uncommonly favourable, not till ſentence be pronounced againſt the poſſeſſor.

Effects of poſſeſſion.

14. The property of moveable ſubjects is preſumed by the bare act of poſſeſſion, until the contrary be proved; but poſſeſſion of an immoveable ſubject, though for a century of years together, if there is no ſeiſin, does not create even a preſumptive right to it: *Nulla ſaſina, nulla terra.* Such ſubject is conſidered as caduciary, and ſo accrues to the ſovereign. Where the property of a ſubject is conteſted, the lawful poſſeſſor is intitled to continue his poſſeſſion, till the point of right be diſcuſſed; and, if he has loſt it by force or ſtealth, the judge will, upon ſummary application, immediately reſtore it to him.

15. Where a poſſeſſor has ſeveral rights in his perſon, affecting the ſubject poſſeſſed, the general rule is, that he may aſcribe his poſſeſſion to which of them he pleaſes; but one cannot aſcribe his poſſeſſion to a title other than that on which it commenced, in prejudice of him from whom his title flowed.

SECT. II. *Of heritable and moveable rights.*

clxiii.

FOR the better underſtanding the doctrine of this title, it muſt be known, that by the law of Scotland, and indeed of moſt nations of Europe ſince the introduction of feus, wherever there are two or more in the ſame degree of conſanguinity to one who dies inteſtate, and who are not all females, ſuch rights belonging to the deceaſed as are either properly feudal, or have any reſemblance to feudal rights, deſcend wholly to one of them, who is conſidered as his proper heir; the others, who have the name of next of kin or executors, muſt be contented with that portion of the eſtate which is of a more periſhable nature. Hence has ariſen the diviſion of rights to be explained under this title; the ſubjects deſcending to the heir, are ſtyled *heritable*; and thoſe that fall to the next of kin *moveable.*

2. All rights of, or affecting lands, under which are

comprehended houſes, mills, fiſhings, teinds; and all rights of ſubjects that are *fundo annexa*, whether completed by ſeiſin or not, are heritable *ex ſua natura*. On the other hand, every thing that moves itſelf or can be moved, and in general whatever is not united to land, is moveable: as houſehold-furniture, corns, cattle, caſh, arrears of rent and of intereſt, even though they ſhould be due on a right of annualrent: for though the arrears laſt mentioned are ſecured on land, yet being preſently payable, they are conſidered as caſh.

Diviſion of rights into heritable and moveable.

3. Debts, *(nomina debitorum)*, when due by bill, promiſſary note, or account, are moveable. When conſtituted by bond, they do not all fall under any one head; but are divided into heritable and moveable, by the following rules. All debts conſtituted by bond bearing an obligation to infeſt the creditor in any heritable ſubject in ſecurity of the principal ſum and annualrent, or annualrent only, are heritable; for they not only carry a yearly profit, but are ſecured upon land.

4. Bonds merely perſonal, though bearing a clauſe of intereſt, are, by act 1661, declared to be moveable as to ſucceſſion; *i. e.* they go, not to the heir, but to the next of kin or executors: but they are heritable with reſpect to the fiſk, and to the rights of huſband and wife; that is, though, by the general rule, moveable rights fall under the communion of goods conſequent upon marriage, and the moveables of denounced perſons fall to the crown or fiſk by ſingle eſcheat, yet ſuch bonds do neither, but are heritable in both reſpects.

5. Bonds taken payable to heirs and aſſignees, ſecluding executors, are heritable in all reſpects, from the deſtination of the creditor. But a bond, which is made payable to heirs, without mention of executors, deſcends, not to the proper heir in heritage, though heirs are mentioned in the bond, but to the executor; for the word *heir*, which is a generic term, points out him who is to ſucceed by law in the right; and the executor, being the heir *in mobilibus*, is conſidered as the perſon to whom ſuch bond is taken payable. But where a bond is taken to heirs-male, or to a ſeries of heirs, one after another, ſuch bond is heritable, becauſe its deſtination neceſſarily excludes executors.

How moveable rights become heritable.

6. Subjects originally moveable become heritable, (1.) By the proprietor's deſtination. Thus, a jewel, or any other moveable ſubject, may be provided to the heir, from the right competent to every proprietor to ſettle his property on whom he pleaſes. (2.) Moveable rights may become heritable, by the ſupervening of an heritable ſecurity: Thus, a ſum due by a perſonal bond becomes heritable, by the creditor's accepting an heritable right for ſecuring it, or by adjudging upon it.

7. Heritable rights do not become moveable by acceſſory moveable ſecurities; the heritable right being in ſuch caſe the *jus nobilius*, which draws the other after it.

Rights partly heritable, partly moveable.

8. Certain ſubjects partake, in different reſpects of the nature both of heritable and moveable. Perſonal bonds are, by the above cited act 1661, moveable in reſpect of ſucceſſion; but heritable as to the fiſk, and the rights of huſband and wife. All bonds, whether merely perſonal, or even heritable, on which no ſeiſin has followed, may be affected at the ſuit of creditors, either by adjudication, which is a diligence proper to heritage; or by arreſtment, which is peculiar to moveables. Bonds ſecluding executors, though they deſcend to the creditor's heir, are payable by the debtor's executors, without relief againſt the heir; ſince the debtor's ſucceſſion cannot be affected by the deſtination of the creditor.

What period makes a ſubject heritable or moveable.

9. All queſtions, whether a right be heritable or moveable, muſt be determined according to the condition of the ſubject at the time of the anceſtor's death. If it was heritable at that period, it muſt belong to the heir; if moveable, it muſt fall to the executor, without regard to any alterations that may have affected the ſubject in the intermediate period between the anceſtor's death and the competition.

I. HERITABLE RIGHTS.

SECT. III. *Of the conſtitution of heritable rights by charter and ſeiſin.* clxiv.

Origin of the feudal law.

HERITABLE rights are governed by the feudal law, which owed its origin, or at leaſt its firſt improvements, to the Longobards; whoſe kings, upon having penetrated into Italy, the better to preſerve their conqueſts, made grants to their principal commanders of great part of the conquered provinces, to be again ſubdivided by them among the lower officers, under the conditions of fidelity and military ſervice.

2. The feudal conſtitutions and uſages were firſt reduced into writing about the year 1150, by two lawyers of Milan, under the title of *Conſuetudines Feudorum*. None of the German emperors appear to have expreſsly confirmed this collection by their authority; but it is generally agreed, that it had their tacit approbation, and was conſidered as the cuſtomary feudal law of all the countries ſubject to the empire. No other country has ever acknowledged theſe books for their law; but each ſtate has formed to itſelf ſuch a ſyſtem of feudal rules, as beſt agreed with the genius of its own conſtitution. In feudal queſtions, therefore, we are governed, in the firſt place, by our own ſtatutes and cuſtoms; where theſe fail us, we have regard to the practice of neighbouring countries, if the genius of their law appears to be the ſame with ours; and ſhould the queſtion ſtill remain doubtful, we may have recourſe to thoſe written books of the feus, as to the original plan on which all feudal ſyſtems have proceeded.

Definition of feus.

3. This military grant got the name, firſt of *beneficium*, and afterwards of *feudum*; and was defined a gratuitous right to the property of lands, made under the conditions of fealty and military ſervice, to be performed to the granter by the receiver; the radical right of the lands ſtill remaining in the granter. Under lands, in this definition, are comprehended all rights or ſubjects ſo connected with land, that they are deemed a part thereof; as houſes, mills, fiſhings, juriſdictions, patronages, &c. Though feus in their original nature were gratuitous, they ſoon became the ſubject of commerce; ſervices of a civil or religious kind were frequently ſubſtituted in place of military; and now, of a long time, ſervices of every kind have been entirely diſpenſed

Superiors and vaſſals.

penſed with in certain feudal tenures. He who makes the grant is called the *ſuperior*, and he who receives it the *vaſſal*. The ſubject of the *grant* is commonly called the *feu*; though that word is at other times, in law, uſed to ſignify one particular tenure. (See Sect. iv. 2.). The intereſt retained by the ſuperior in the feu is ſtyled *dominium directum*, or the ſuperiority; and the intereſt acquired by the vaſſal, *dominium utile*, or the property. The word *fee* is promiſcuouſly applied to both.

Allodial goods.

4. Allodial goods are oppoſed to feus; by which are underſtood goods enjoyed by the owner, independent of a ſuperior. All moveable goods are allodial; lands only are ſo when they are given without the condition of fealty or homage. By the feudal ſyſtem, the ſovereign, who is the fountain of feudal rights, reſerves to himſelf the ſuperiority of all the lands of which he makes the grant; ſo that, in Britain, no lands are allodial, except thoſe of the king's own property, the ſuperiorities which the king obſerves in the property-lands of his ſubjects, and manſes and glebes, the right of which is completed by the preſbytery's deſignation, without any feudal grant.

Who can grant feudal rights.

5. Every perſon who is in the right of an immoveable ſubject, provided he has the free adminiſtration of his eſtate, and is not debarred by ſtatute, or by the nature of his right, may diſpoſe of it to another. Nay, a vaſſal, though he has only the *dominium utile*, can ſubfeu his property to a ſubvaſſal by a ſubaltern right, and thereby raiſe a new *dominium directum* in himſelf, ſubordinate to that which is in his ſuperior; and ſo *in infinitum*. The vaſſal who thus ſubfeus is called the ſubvaſſal's immediate ſuperior, and the vaſſal's ſuperior is the ſubvaſſal's mediate ſuperior.

Who can receive them.

6. All perſons who are not diſabled by law, may acquire and enjoy feudal rights. Papiſts cannot purchaſe a land-eſtate by any voluntary deed. Aliens, who owe allegiance to a foreign prince, cannot hold a fuedal right without naturalization: and therefore, where ſuch privilege was intended to be given to favoured nations or perſons, ſtatutes of naturalization were neceſſary, either general or ſpecial, or at leaſt, letters of naturalization by the ſovereign.

What ſubjects can be granted in feu.

7. Every heritable ſubject, capable of commerce, may be granted in feu. From this general rule are excepted, 1. The annexed property of the crown, which is not alienable without a previous diſſolution in parliament. 2. Tailzied lands, which are deviſed under condition that they ſhall not be aliened. 3. An eſtate *in hæreditate jacente* cannot be effectually aliened by the heir-apparent (*i. e.* not entered); but ſuch alienation becomes effectual upon his entry, the ſupervening right accruing in that caſe to the purchaſer; which is a rule applicable to the alienation of all ſubjects not belonging to the vender at the time of the ſale.

Feudal charter.

1. The feudal right, or, as it is called, *inveſtiture*, is conſtituted by charter and ſeiſin. By the charter, we underſtand that writing which contains the grant of the feudal ſubject to the vaſſal, whether it be executed in the proper form of a charter, or of a diſpoſition. Charters by ſubject-ſuperiors are granted, either, 1. *A me de ſuperiore meo*, when they are to be holden, not of the granter himſelf, but of his ſuperior. This ſort is called a *public holding*, becauſe vaſſals were in ancient times publicly received in the ſuperior's court before the *pares curiæ* or co-vaſſals. Or, 2. *De me*, where the lands are to be holden of the granter. Theſe were called ſometimes *baſe rights*, from *bas, lower*: and ſometimes *private*, becauſe, before the eſtabliſhment of the records, they were eaſily concealed from third parties; the nature of all which will be more fully explained, Sect. vii. An original charter is that by which the fee is firſt granted: A charter by progreſs is a renewed diſpoſition of that fee to the heir or aſſignee of the vaſſal. All doubtful clauſes in charters by progreſs ought to be conſtrued agreeably to the original grant; and all clauſes in the original charter are underſtood to be implied in the charters by progreſs, if there be no expreſs alteration.

Its conſtituent parts.

9. The firſt clauſe in an original charter, which follows immediately after the name and deſignation of the granter, is the narrative or recital, which expreſſes the cauſes inductive of the grant. If the grant be made for a valuable conſideration, it is ſaid to be *onerous*; if for love and favour, *gratuitous*. In the diſpoſitive clauſe of a charter, the ſubjects made over are deſcribed either by ſpecial boundaries or march-ſtones, (which is called a *bounding charter*), or by ſuch other characters as may ſufficiently diſtinguiſh them. A charter regularly carries right to no ſubjects but what are contained in this clauſe, though they ſhould be mentioned in ſome other clauſe of the charter. It has been however found, that a right to ſalmon-fiſhing was carried by a clauſe *cum piſcariis* in the *tenendas* of a charter, the ſame having been followed with poſſeſſion.

10. The clauſe of *tenendas* (from its firſt words *tenendas prædictas terras*) expreſſes the particular tenure by which the lands are to be holden. The clauſe of *reddendo* (from the words *reddendo inde annuatim*) ſpecifies the particular duty or ſervice which the vaſſal is to pay or perform to the ſuperior.

Warrandice.

11. The clauſe of *warrandice* is that by which the granter obliges himſelf that the right conveyed ſhall be effectual to the receiver. Warrandice is either *perſonal* or *real*. *Perſonal* warrandice, where the granter is only bound perſonally, is either, 1. *Simple*, that he ſhall grant no deed in prejudice of the right; and this ſort, which is confined to future deeds, is implied even in donations. 2. Warrandice *from fact and deed*, by which the granter warrants that the right neither has been, nor ſhall be, hurt by any fact of his. Or, 3. *Abſolute* warrandice *contra omnes mortales*, whereby the right is warranted againſt all legal defects in it which may carry it off from the receiver either wholly or in part. Where a ſale of lands proceeds upon an *onerous* cauſe, the granter is liable in abſolute warrandice, though no warrandice be expreſſed; but in aſſignations to debts or decrees, no higher warrandice than from fact and deed is implied.

12. Gratuitous grants by the crown imply no warrandice; and though warrandice ſhould be expreſſed, the clauſe is ineffectual, from a preſumption that it has crept in by the negligence of the crown's officers. But where the crown makes a grant, not *jure coronæ*, but for an adequate price, the ſovereign is in the ſame caſe with his ſubjects.

Effects of warrandice.

13. Abſolute warrandice, in caſe of eviction, affords

an action to the grantee againſt the granter, for making up to him all that he ſhall have ſuffered through the defect of the right; and not ſimply for his indemnification, by the granter's repayment of the price to him. But as warrandice is penal, and conſequently *ſtricti juris*, it is not eaſily preſumed, nor is it incurred from every light ſervitude that may affect the ſubject; far leſs does it extend to burdens which may affect the ſubject poſterior to the grant, nor to thoſe impoſed by public ſtatute, whether before or after, unleſs ſpecially warranted.

Real warrandice.

14. *Real* warrandice is either, 1. *Expreſs*, whereby, in ſecurity of the lands principally conveyed, other lands, called *warrandice-lands*, are alſo made over, to which the receiver may have recourſe in caſe the principal lands be evicted. Or, 2. *Tacit*, which is conſtituted by the exchange or excambion of one piece of ground with another; for, if the lands exchanged are carried off from either of the parties, the law itſelf, without any paction, gives that party immediate recourſe upon his own firſt lands, given in exchange for the lands evicted.

Excambion.

Precept of ſeiſin.

15. The charter concludes with a *precept of ſeiſin*, which is the command of the ſuperior granter of the right to his bailie, for giving ſeiſin or poſſeſſion to the vaſſal, or his attorney, by delivering to him the proper ſymbols. Any perſon, whoſe name may be inſerted in the blank left in the precept for that purpoſe, can execute the precept as bailie; and whoever has the precept of ſeiſin in his hands, is preſumed to have a power of attorney from the vaſſal for receiving poſſeſſion in his name.

Inſtrument of ſeiſin.

16. A ſeiſin is the inſtrument or atteſtation of a notary, that poſſeſſion was actually given by the ſuperior or his bailie, to the vaſſal or his attorney; which is conſidered as ſo neceſſary a ſolemnity, as not to be ſuppliable, either by a proof of natural poſſeſſion, or even of the ſpecial fact that the vaſſal was duly entered to the poſſeſſion by the ſuperior's bailie.

Symbols uſed in ſeiſins.

17. The ſymbols by which the delivery of poſſeſſion is expreſſed, are, for lands, earth, and ſtone; for rights of annualrent payable forth of land, it is alſo earth and ſtone with the addition of a penny money; for parſonage tiends, a ſheaf of corn; for juriſdictions, the book of the court; for patronages, a pſalm-book, and the keys of the church; for fiſhings, net and coble; for mills, clap and happer, &c. The ſeiſin muſt be taken upon the ground of the lands, except where there is a ſpecial diſpenſation in the charter from the crown.

Regiſtration of ſeiſins.

18. All ſeiſins muſt be regiſtered within 60 days after their date, either in the general regiſter of ſeiſins at Edinburgh, or in the regiſter of the particular ſhire appointed by the act 1617; which, it muſt be obſerved, is not, in every caſe, the ſhire within which the lands lie. Burgage ſeiſins are ordained to be regiſtered in the books of the borough.

19. Unregiſtered ſeiſins are ineffectual againſt third parties, but they are valid againſt the granters and their heirs. Seiſins regularly recorded, are preferable, not according to their own dates, but the dates of their regiſtration.

One ſeiſin ſerves in contiguous and in united tenements.

20. Seiſin neceſſarily ſuppoſes a ſuperior by whom it is given; the right therefore which the ſovereign, who acknowledges no ſuperior, has over the whole lands of Scotland, is conſtituted *jure coronæ* without ſeiſin. In ſeveral parcels of land that lie contiguous to one another, one ſeiſin ſerves for all, unleſs the right of the ſeveral parcels be either holden of different ſuperiors, or derived from different authors, or enjoyed by different tenures under the ſame ſuperior. In diſcontiguous lands, a ſeparate ſeiſin muſt be taken on every parcel, unleſs the ſovereign has united them into one tenandry by a charter of union; in which caſe, if there is no ſpecial place expreſſed, a ſeiſin taken on any part of the united lands will ſerve for the whole, even though they be ſituated in different ſhires. The only effect of union is, to give the diſcontiguous lands the ſame quality as if they had been contiguous or naturally united; union, therefore, does not take off the neceſſity of ſeparate ſeiſins, in lands holden by different tenures, or the rights of which flow from different ſuperiors, theſe being incapable of natural union.

Barony implies union.

21. The privilege of barony carries a higher right than union does, and conſequently includes union in it as the leſſer degree. This right of barony can neither be given, nor tranſmitted, unleſs by the crown; but the quality of ſimple union, being once conferred on lands by the ſovereign, may be communicated by the vaſſal or ſubvaſſal. Though part of the lands united or erected into a barony be ſold by the vaſſal to be holden *a me*, the whole union is not thereby diſſolved; what remains unſold retains the quality.

A charter becomes real only after ſeiſin.

22. A charter, not perfected by ſeiſin, is a right merely perſonal, which does not transfer the property (ſee N° clxxiii. 1.); and a ſeiſin of itſelf bears no faith without its warrant: It is the charter and ſeiſin joined together that conſtitutes the feudal right, and ſecures the receiver againſt the effect of all poſterior ſeiſins even though the charters on which they proceed ſhould be prior to his.

All burdens muſt be inſerted in the inveſtiture.

23. No quality which is deſigned as a lien or real burden on a feudal right, can be effectual againſt ſingular ſucceſſors if it be not inſerted in the inveſtiture. If the creditors in the burden are not particularly mentioned, the burden is not real; for no perpetual unknown incumberance can be created upon lands. Where the right itſelf is granted with the burden of the ſum therein mentioned, or where it is declared void if the ſum be not paid againſt a day certain; the burden is real; but where the receiver is ſimply obliged by his acceptance to make payment, the clauſe is effectual only againſt him and his heirs.

Sect. IV. *Of the ſeveral kinds of holding.* clxv.

Feudal ſubjects are chiefly diſtinguiſhed by their different manners of holding, which were either *ward*, *blanch*, *feu*, or *burgage*. *Ward-holding*, (which is now aboliſhed by 20 *Geo. II. c.* 50) was that which was granted for military ſervice. Its proper *reddendo* was *ſervices*, or *ſervices uſed and wont*; by which laſt was meant the performance of ſervice whenever the ſuperior's occaſions required it. As all feudal rights were originally held by this tenure, ward-holding was *in dubio* preſumed. Hence, though the *reddendo* had contained ſome ſpecial ſervice or yearly duty, the holding was preſumed ward, if another holding was not particularly expreſſed.

Ward-holding.

Feu-holding.

2. *Feu*-holding is that whereby the vaſſal is obliged

to pay to the ſuperior a yearly rent in money or grain, and ſometimes alſo in ſervices proper to a farm, as ploughing, reaping, carriages for the ſuperior's uſe, &c. *nomine feudi firmæ*. This kind of tenure was introduced for the encouragement of agriculture, the improvement of which was conſiderably obſtructed by the vaſſal's obligation to military ſervice. It appears to have been a tenure known in Scotland as far back as *leges burgorum*.

Blanch-holding.

3. *Blanch*-holding is that whereby the vaſſal is to pay to the ſuperior an eluſory yearly duty, as a penny money, a roſe, a pair of gilt ſpurs, &c. merely in acknowledgment of the ſuperiority, *nomine albæ firmæ*. This duty, where it is a thing of yearly growth, if it be not demanded within the year, cannot be exacted thereafter; and where the words *ſi petatur tantum* are ſubjoined to the *reddendo*, they imply a releaſe to the vaſſal, whatever the quality of the duty may be, if it is not aſked within the year.

Burgage-holding.

4. *Burgage*-holding is that, by which boroughs-royal hold of the ſovereign the lands which are contained in their charters of erection. This, in the opinion of *Craig*, does not conſtitute a ſeparate tenure, but is a ſpecies of ward-holding; with this ſpecialty, that the vaſſal is not a private perſon, but a community: and indeed, watching and warding, which is the uſual ſervice contained in the *reddendo* of ſuch charters, might be properly enough ſaid, ſome centuries ago, to have been of the military kind. As the royal borough is the king's vaſſal, all burgage-holders hold immediately of the crown: the magiſtrates, therefore, when they receive the reſignations of the particular burgeſſes, and give ſeiſin to them, act, not as ſuperiors, but as the king's bailies ſpecially authoriſed thereto.

Mortification.

5. Feudal ſubjects, granted to churches, monaſteries, or other ſocieties for religious or charitable uſes, are ſaid to be mortified, or granted *ad manum mortuam*; either becauſe all caſualties muſt neceſſarily be loſt to the ſuperior, where the vaſſal is a corporation, which never dies; or becauſe the property of theſe ſubjects is granted to a dead hand, which cannot transfer it to another. In lands mortified in times of Popery to the church, whether granted to prelates for the behoof of the church, or *in puram eleemoſynam*; the only ſervices preſtable by the vaſſals were prayers, and ſinging of maſſes for the ſouls of the deceaſed, which approaches nearer to blanch-holding than ward. The purpoſes of ſuch grants having been, upon the reformation, declared ſuperſtitious, the lands mortified were annexed to the crown; but mortifications to univerſities, hoſpitals, &c. were not affected by that annexation; and lands may, at this day, be mortified to any lawful purpoſe, either by blanch or by feu holding. But as the ſuperior muſt loſe all the caſualties of ſuperiority in the caſe of mortifications to churches, univerſities, &c. which being conſidered as a corporation, never dies; therefore lands cannot be mortified without the ſuperior's conſent. *Craig, lib.* 1. *dieg.* 11. § 21.

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Sect. V. *Of the caſualties due to the ſuperior.*

Fixed rights of ſuperiority.

The right of the ſuperior continues unimpaired, notwithſtanding the feudal grant, unleſs in ſo far as the *dominium utile*, or property, is conveyed to his vaſſal. The ſuperiority carries a right to the ſervices and annual duties contained in the *reddendo* of the vaſſal's charter. The duty payable by the vaſſal is a *debitum fundi*, *i. e.* it is recoverable, not only by a perſonal action againſt himſelf, but by a real action againſt the lands.

Caſual rights.

2. Beſides the conſtant fixed rights of ſuperiority, there are others, which, becauſe they depend upon uncertain events, are called *caſualties*.

Ward-holding.

3. The caſualties proper to a ward-holding, while that tenure ſubſiſted, were *ward*, *recognition*, and *marriage*, which it is now unneceſſary to explain, as by the late ſtatutes 20 and 25 Geo. II. for aboliſhing ward-holdings, the tenure of the lands holding ward of the crown or prince is turned into *blanch*, for payment of one penny Scots yearly, *ſi, petatur tantum*; and the tenure of thoſe holden of ſubjects into *feu*, for payment of ſuch yearly feu-duty in money, victual, or cattle, in place of all ſervices, as ſhould be fixed by the court of ſeſſion. And accordingly that court, by act of ſederunt Feb. 8. 1749, laid down rules for aſcertaining the extent of theſe feu-duties. A full hiſtory of their caſualties, and of the effects conſequent upon their falling to the ſuperior, will be found in Erſkine's large Inſtitute, B. 2. T. 5. § 5. *et ſequen*; to which the reader is referred.

Feu-holding.

4. The only caſualty, or rather forfeiture, proper to feu-holding, is the loſs or tinſel of the feu-right, by the neglect of payment of the feu-duty for two full years. Yet where there is no conventional irritancy in the feu-right, the vaſſal is allowed to purge the legal irritancy at the bar; that is, he may prevent the forfeiture, by making payment before ſentence: but where the legal irritancy is fortified by a conventional, he is not allowed to purge, unleſs where he can give a good reaſon for the delay of payment.

Non-entry.

5. The caſualties common to all holdings are, *non-entry*, *relief*, *liferent-eſcheat*, *diſclamation*, and *purpreſture*. NON-ENTRY is that caſualty which ariſes to the ſuperior out of the rents of the feudal ſubject, through the heir's neglecting to renew the inveſtiture after his anceſtor's death. The ſuperior is intitled to this caſualty, not only where the heir has not obtained himſelf infeſt, but where his retour or infeſtment is ſet aſide upon nullities. The heir, from the death of the anceſtor, till he be cited by the ſuperior in a proceſs of general declarator of non-entry, loſes only the retoured duties of his lands, (ſee next parag.); and he forfeited theſe, though his delay ſhould not argue any contempt of the ſuperior, becauſe the caſualty is conſidered to fall, as a condition implied in the feudal right, and not as a penalty of tranſgreſſion; but reaſonable excuſes are now admitted to liberate even from the retoured duties before citation.

Retoured duties.

6. For underſtanding the nature of retoured duties, it muſt be known, that there was anciently a general valuation of all the lands of Scotland, deſigned both for regulating the proportion of public ſubſidies, and for aſcertaining the quantity of non-entry and relief-duties payable to the ſuperior; which appears, by a contract between K. R. Bruce and his ſubjects *anno* 1327, preſerved in the library of the Faculty of Advocates, to have been ſettled at leaſt as far back as the reign of Alexander III. This valuation became in the

Old and new extents.

Valued rent.

courſe of time, by the improvement of agriculture, and perhaps alſo by the heightening of the nominal value of the money, from the reign of Robert I. downwards to that of James III. much too low a ſtandard for the ſuperior's caſualties: wherefore, in all ſervices of heirs, the inqueſt came at laſt to take proof likewiſe of the preſent value of the lands contained in the brief *(quantum nunc valent)*, in order to fix theſe caſualties. The firſt was called the *old*, and the other the *new*, *extent*. Though both extents were ordained to be ſpecified in all retours made to the chancery upon brieves of inqueſt; yet by the appellation of retoured duties in a queſtion concerning caſualties, the new extent is always underſtood. The old extent continued the rule for levying public ſubſidies, till a tax was impoſed by new proportions, by ſeveral acts made during the uſurpation. By two acts of Cromwell's parliament, held at Weſtminſter in 1656, impoſing taxations on Scotland, the rates laid upon the ſeveral counties are preciſely fixed. The ſubſidy granted by the act of convention 1667 was levied on the ſeveral counties, nearly in the ſame proportions that were fixed by the uſurper in 1656; and the ſums to which each county was ſubjected were ſubdivided among the individual landholders in that county, according to the valuations already ſettled, or that ſhould be ſettled by the commiſſioners appointed to carry that act into execution. The rent fixed by theſe valuations is commonly called the *valued rent;* according to which the land-tax, and moſt of the other public burdens, have been levied ſince that time.

7. In feu-holdings, the feu-duty is retoured as the rent, becauſe the feu-duty is preſumed to be, and truly was at firſt, the rent. The ſuperior therefore of a feu-holding gets no non-entry, before citation in the general declarator; for he would have been intitled to the yearly feu-duty, though the fee had been full, *i. e.* though there had been a vaſſal infeſt in the lands. The ſuperior of teinds gets the fifth part of the retoured duty as non-entry, becauſe the law conſiders teinds to be worth a fifth part of the rent. In rights of annualrent which are holden of the granter, the annualrenter becomes his debtor's vaſſal; and the annualrent contained in the right is retoured to the blanch or other duty contained in the right before declarator.

8. It is becauſe the retoured duty is the preſumed rent, that the non-entry is governed by it. If therefore no retour of the lands in non-entry can be produced, nor any evidence brought of the retoured duty, the ſuperior is intitled to the real, or at leaſt to the valued, rent, even before citation. In lands formerly holden ward of the King, the heir, in place of the retoured duties, is ſubjected only to the annual payment of one *per. cent.* of the valued rent.

9. The heir, after he is cited by the ſuperior in the action of general declarator, is ſubjected to the full rents till his entry, becauſe his neglect is leſs excuſable after citation. The decree of declarator, proceeding on this action, intitles the ſuperior to the poſſeſſion, and gives him right to the rents downward from the citation. As this ſort of non-entry is properly penal, the law has always reſtricted it to the retoured duties, if the heir had a probable excuſe for not entering.

In what caſes non-entry is not due.

10. Non-entry does not obtain in burgage-holdings, becauſe the incorporation of inhabitants holds the whole incorporated ſubjects of the King; and there can be no non-entry due in lands granted to communities, becauſe there the vaſſal never dies. This covers the right of particulars from non-entry: for if non-entry be excluded with regard to the whole, it cannot obtain with regard to any part. It is alſo excluded, as to a third of the lands, by the terce, during the widow's life; and as to the whole of them, by the courteſy during the life of the huſband. But it is not excluded by a precept of ſeiſin granted to the heir till ſeiſin be taken thereupon.

Relief.

11. RELIEF is the caſualty which intitles the ſuperior to an acknowledgment or conſideration from the heir for receiving him as vaſſal. It is called *relief*, becauſe, by the entry of the heir, his fee is relieved out of the hands of the ſuperior. It is not due in feu-holdings flowing from ſubjects, unleſs where it is expreſſed in the charter by a ſpecial clauſe for doubling the feu-duty at the entry of an heir; but, in feu-rights holden of the crown, it is due, though there ſhould be no ſuch clauſe in the charter. The ſuperior can recover this caſualty, either by a poinding of the ground, as a *debitum fundi*, or by a perſonal action againſt the heir. In blanch and feu-holdings, where this caſualty is expreſsly ſtipulated, a year's blanch or feu-duty is due in name of *relief*, beſide the current year's duty payable in name of *blanch* or *feu farm*.

Eſcheat.

12. ESCHEAT (from *eſcheoir*, *to happen* or *fall)* is that forfeiture which falls through a perſon's being denounced rebel. It is either *ſingle* or *liferent*. *Single eſcheat*, though it does not accrue to the ſuperior, muſt be explained in this place, becauſe of its coincidence with liferent.

Letters of horning.

13. After a debt is conſtituted, either by a formal decree, or by regiſtration of the ground of debt, which to the ſpecial effect of execution, is in law accounted a decree; the creditor may obtain letters of horning, iſſuing from the ſignet, commanding meſſengers to charge the debtor to pay or perform his obligation, within a day certain. Where horning proceeds on a formal decree of the ſeſſion, the time indulged by law to the debtor is fifteen days; if upon a decree of the commiſſion of teinds or admiral, it is ten; and upon the decrees of all inferior judges, fifteen days. Where it proceeds on a regiſtered obligation, which ſpecifies the number of days, that number muſt be the rule; and if no preciſe number be mentioned, the charge muſt be given in fifteen days, which is the term of law, unleſs where ſpecial ſtatute interpoſes; as in bills, upon which the debtor may be charged on ſix days,

Denunciation.

14. The meſſenger muſt execute theſe letters (and indeed all ſummonſes) againſt the debtor, either perſonally or at his dwelling-houſe; and, if he get not acceſs to the houſe, he muſt ſtrike ſix knocks at the gate, and thereafter affix to it a copy of his execution. If payment be not made within the days mentioned in the horning, the meſſenger, after proclaiming three oyeſſes at the market-croſs of the head borough of the debtor's domicile, and reading the letters there, blows three blaſts with a horn, by which the debtor is underſtood to be proclaimed rebel to the king for contempt of his authority; after which, he muſt affix a copy of the execution to the market-croſs: This is called *the publication of the diligence*, or a *denunciation at the horn*. Where the debtor is not in Scotland, he muſt be charged on ſixty days, and denounced at the

market-croſs of Edinburgh, and pier and ſhore of Leith.

Conſequences thereof.

15. Denunciation, if regiſtered within 15 days, either in the ſheriff's books, or in the general regiſter, drew after it the rebel's ſingle eſcheat, *i. e.* the forfeiture of his moveables to the crown. Perſons denounced rebels have not a *perſona ſtandi in judicio;* they can neither ſue nor defend in any action. But this incapacity being unfavourable, is perſonal to the rebel, and cannot be pleaded againſt his aſſignee.

Denunciation in criminal caſes.

16. Perſons cited to the court of juſticiary may be alſo denounced rebels, either for appearing there with too great a number of attendants: or, if they fail to appear, they are declared fugitives from the law. Single eſcheat falls, without denunciation, upon ſentence of death pronounced on any criminal trial; and, by ſpecial ſtatute, upon one's being convicted of certain crimes, though not capital; as perjury, bigamy, deforcement, breach of arreſtment, and uſury. By the late act aboliſhing ward-holdings, the caſualties both of ſingle and liferent eſcheat are diſcharged, when proceeding upon denunciation for civil debts; but they ſtill continue, when they ariſe from criminal cauſes. All moveables belonging to the rebel at the time of his rebellion, (whether proceeding upon denunciation, or ſentence in a criminal trial), and all that ſhall be afterwards acquired by him until relaxation, fall under ſingle eſcheat. Bonds bearing intereſt, becauſe they continue heritable *quoad fiſcum,* fall not under it, nor ſuch fruits of heritable ſubjects as became due after the term next enſuing the rebellion, theſe being reſerved for the liferent eſcheat.

17. The king never retains the right of eſcheat to himſelf, but makes it over to a donatory, whoſe gift is not perfected, till, upon an action of general declarator, it be declared that the rebels eſcheat has fallen to the crown by his denunciation, and that the right of it is now transferred to the purſuer by the gift in his favour. Every creditor therefore of the rebel, whoſe debt was contracted before rebellion, and who has uſed diligence before declarator, is preferable to the donatory. But the eſcheat cannot be affected by any debt contracted, nor by any voluntary deed of the rebel after rebellion.

Letters of relaxation.

18. The rebel, if he either pays the debt charged for, or ſuſpends the diligence, may procure letters of relaxation from the horn, which, if publiſhed in the ſame place, and regiſtered 15 days thereafter in the ſame regiſter with the denunciation, have the effect to reſtore him to his former ſtate; but they have no retroſpect as to the moveables already fallen under eſcheat, without a ſpecial clauſe for that purpoſe.

Liferent eſcheat.

19. The rebel, if he continues unrelaxed for year and day after rebellion, is conſtrued to be civilly dead: and therefore, where he holds any feudal right, his ſuperiors, as being without a vaſſal, are intitled, each of them, to the rents of ſuch of the lands belonging to the rebel as hold of himſelf, during all the days of the rebel's natural life, by the caſualty of LIFERENT ESCHEAT; except where the denunciation proceeds upon treaſon or proper rebellion, in which caſe the liferent falls to the king.

20. It is that eſtate only, to which the rebel has a proper right of liferent in his own perſon, that falls under his liferent eſcheat.

21. Though neither the ſuperior nor his donatory can enter into poſſeſſion in conſequence of this caſualty, till decree of declarator; yet that decree, being truly declaratory, has a retroſpect, and does not ſo properly confer a new right, as declare the right formerly conſtituted to the ſuperior, by the civil death of his vaſſal. Hence, all charters or heritable bonds, though granted prior to the rebellion, and all adjudications, though led upon debts contracted before that period, are ineffectual againſt the liferent eſcheat, unleſs ſeiſin be taken thereon within year and day after the granter's rebellion.

22. Here, as in ſingle eſcheat, no debt contracted after rebellion can hurt the donatory, nor any voluntary right granted after that period, though in ſecurity or ſatisfaction of prior debts.

Diſclamation.

Purpreſture.

23. DISCLAMATION is that caſualty whereby a vaſſal forfeits his whole feu to his ſuperior, if he diſowns or diſclaims him, without ground, as to any part of it. PURPRESTURE draws likewiſe a forfeiture of the whole feu after it; and is incurred by the vaſſal's encroaching upon any part of his ſuperior's property, or attempting by building, incloſing, or otherwiſe, to make it his own. In both theſe feudal delinquencies, the leaſt colour of excuſe ſaves the vaſſal.

Signatures.

24. All grants from the crown, whether charters, gifts of caſualties, or others, proceed on ſignatures which paſs the ſignet. When the king reſided in Scotland, all ſignatures were ſuperſcribed by him; but, on the acceſſion of James VI. to the crown of England, a cachet or ſeal was made, having the king's name engraved on it, in purſuance of an act of the privy-council, April 4. 1603. with which all ſignatures were to be afterwards ſealed, that the lords of exchequer were impowered to paſs; and theſe powers are transferred to the court of exchequer, which was eſtabliſhed in Scotland after the union of the two kingdoms in 1707. Grants of higher conſequence, as remiſſions of crimes, gifts proceeding upon forfeiture, and charters of *novodamus,* muſt have the king's ſign manual for their warrant.

Seals.

25. If lands holding of the crown were to be conveyed, the charter paſſed, before the union of the kingdoms in 1707, by the great ſeal of Scotland; and now by a ſeal ſubſtitute in place thereof. Grants of church-dignities, during epiſcopacy, paſſed alſo by the great ſeal; and the commiſſions to all the principal officers of the crown, as Juſtice-Clerk, King's Advocate, Solicitor, &c. do ſo at this day. All rights which ſubjects may tranſmit by ſimple aſſignation, the king tranſmits by the privy-ſeal: as gifts of moveables, or of caſualties that require no ſeiſin. The quarter ſeal, otherwiſe called the *teſtimonial of the great ſeal,* is appended to gifts of tutory, commiſſions of brieves iſſuing from the chancery, and letters of preſentation to lands holding of a ſubject, proceeding upon forfeiture, baſtardy, or *ultimus hæres.*

Their uſe.

26. Seals are to royal grants what ſubſcription is to rights derived from ſubjects, and give them authority; they ſerve alſo as a check to gifts procured *(ſubreptione vel obreptione)* by concealing the truth, or expreſſing a falſehood; for, where this appears, the gift may be ſtopped before paſſing the ſeals, though the ſignature ſhould have been ſigned by the king. All rights paſſing under the great or privy ſeal muſt be regiſtered

in the regiſters of the great or privy ſeal *reſpective*, before appending the ſeal.

clxvii. SECT. VI. *Of the right which the vaſſal acquires by getting the feu.*

Dominium utile.

UNDER the *dominium utile* which the vaſſal acquires by the feudal right, is comprehended the property of whatever is conſidered as part of the lands, whether of houſes, woods, incloſures, &c. above ground; or of coal, limeſtone, minerals, &c. under ground. Mills have, by the generality of lawyers, been deemed a ſeparate tenement, and ſo not carried by a charter or diſpoſition, without either a ſpecial clauſe conveying mills, or the erection of the lands into a barony. Yet it is certain, that, if a proprietor builds a mill on his own lands, it will be carried by his entail, or by a retour, without mentioning it, although the lands are not erected into a barony. If the lands diſponed be aſtricted, or thirled to another mill, the purchaſer is not allowed to build a new corn-mill on his property, even though he ſhould offer ſecurity that it ſhall not hurt the thirle; which is introduced for preventing daily temptations to fraud.

2. Proprietors are prohibited to hold dove-cotes, unleſs their yearly rent, lying within two miles thereof, extend to ten chalders of victual. A purchaſer of lands, with a dove-cote, is not obliged to pull it down, though he ſhould not be qualified to build one; but, if it becomes ruinous, he cannot rebuild it. The right of brewing, though not expreſſed in the grant, is implied in the nature of property; as are alſo the rights of fiſhing, fowling, and hunting, in ſo far as they are not reſtrained by ſtatute.

Regalia.

3. There are certain rights naturally conſequent on property, which are deemed to be preferred by the crown as *regalia;* unleſs they be ſpecially conveyed. Gold and ſilver mines are of this ſort; the firſt univerſally; and the other, where three half-pennies of ſilver can be extracted from the pound of lead, by act 1424, (three half-pennies at that time was equal to about two ſhillings five pennies of the preſent Scots money), Theſe were by the ancient law annexed to the crown; but they are now diſſolved from it; and every proprietor is intitled to a grant of the mines within his own lands, with the burden of delivering to the crown a tenth of what ſhall be brought up.

4. Salmon-fiſhing is likewiſe a right underſtood to be reſerved to the crown, if it be not expreſly granted: but 40 years poſſeſſion thereof, where the lands are either erected into a barony, or granted with the general clauſe of fiſhings, eſtabliſhes the full right of the ſalmon-fiſhing in the vaſſal. A charter of lands, within which any of the king's foreſts lie, does not carry the property of ſuch foreſt to the vaſſal.

Res publicæ.

5. All the ſubjects which were by the Roman law accounted *res publicæ*, as rivers, highways, ports, &c. are, ſince the introduction of feus, held to be *inter regalia*, or *in patrimonio principis;* and hence encroachment upon a highway is ſaid to infer purpreſture. No perſon has a right of a free port without a ſpecial grant, which implies a power in the grantee to levy anchorage and ſhore dues, and an obligation upon him to uphold the port in good condition. In this claſs of things, our forefathers reckoned fortalices, or ſmall places of ſtrength, originally built for the defence of the country, either againſt foreign invaſions or civil commotions; but theſe now paſs with the lands in every charter.

Pertinents.

6. The vaſſal acquires right by his grant, not only to the lands ſpecially contained in the charter, but to thoſe that have been poſſeſſed 40 years as pertinent thereof. But, 1. If the lands in the grant are marked out by ſpecial limits, the vaſſal is circumſcribed by the tenor of his own right, which excludes every ſubject without theſe limits from being pertinent of the lands. 2. A right poſſeſſed under an expreſs infeſtment is preferable, *cæteris paribus*, to one poſſeſſed only as pertinent. 3. Where neither party is infeſt *per expreſſum*, the mutual promiſcuous poſſeſſion by both, of a ſubject as pertinent, reſolves into a commonty of the ſubject poſſeſſed: but if one of the parties has exerciſed all the acts of property of which the ſubject was capable, while the poſſeſſion of the other was confined to paſturage only, or to caſting ſeal and divot, the firſt is to be deemed ſole proprietor, and the other to have merely a right of ſervitude.

Privileges of barony.

7. As barony is a *nomem univerſitatis*, and unites the ſeveral parts contained in it into one individual right, the general conveyance of a barony carries with it all the different tenements of which it conſiſts, though they ſhould not be ſpecially enumerated (and this holds, even without erection into a barony, in lands that have been united under a ſpecial name). Hence, likewiſe, the poſſeſſion by the vaſſal of the ſmalleſt part of the barony-lands preſerves to him the right of the whole.

8. The vaſſal is intitled, in conſequence of his property, to levy the rents of his own lands, and to recover them from his tenants by an action for rent before his own court; and from all other poſſeſſors and intromitters, by an action of mails and duties before the ſheriff. He can alſo remove from his lands, tenants who have no leaſes; and he can grant tacks or leaſes to others. A tack is a contract or location, whereby the uſe of land, or any other immoveable ſubject, is ſet to the leſſee or tackſman for a certain yearly rent, either in money, the fruits of the ground, or ſervices. It ought to be reduced into writing, as it is a right concerning lands: tacks, therefore, that are given verbally, to endure for a term of years, are good againſt neither party for more than one year. An obligation to grant a tack is as effectual againſt the granter as a formal tack. A liferenter, having a temporary property in the fruits, may grant tacks to endure for the term of his own liferent.

Tack or leaſe.

9. The tackſman's right is limited to the fruits which ſpring up annually from the ſubject ſet, either naturally, or by his own induſtry; he is not therefore intitled to any of the growing timber above ground, and far leſs to the minerals, coal, clay, &c. under ground, the uſe of which conſumes the ſubſtance. Tacks are, like other contracts, perſonal rights in their own nature; and conſequently ineffectual againſt ſingular ſucceſſors in the lands; but, for the encouragement of agriculture, they were, by act 1449, declared effectual to the tackſman for the full time of their endurance, into whoſe hands ſoever the lands might come.

10. To give a written tack the benefit of this ſtatute,

it muſt mention the ſpecial tack-duty payable to the proprietor, which though ſmall, if it be not eluſory, ſecures the tackſman; and it muſt be followed by poſſeſſion, which ſupplies the want of a ſeiſie. If a tack does not expreſs the term of entry, the entry will commence at the next term after its date, agreeable to the rule, *Quod pure debetur, præſenti die debetur.* If it does not mention the iſh, *i. e.* the term at which it is to determine, it is good for one year only; but, if the intention of parties to continue it for more than one year, ſhould appear from any clauſe in the tack (*e. g.* if the tackſman ſhould be bound to certain annual preſtations), it is ſuſtained for two years as the *minimum.* Tacks granted to perpetuity, or with an indefinite iſh, have not the benefit of the ſtatute. Tacks of houſes within boroughs do not fall within this act, it being cuſtomary to let theſe from year to year.

Tacks are *ſtricti juris.*

11. Tacks neceſſarily imply a *delectus perſonæ*, a choice by the ſetter of a proper perſon for his tenant. Hence the conveyance of a tack which is not granted to aſſignees, is ineffectual without the landlord's conſent. A right of tack, though it be heritable, falls under the *jus mariti*, becauſe it cannot be ſeparated from the labouring cattle and implements of tillage, which are moveable ſubjects. A tack, therefore, granted to a ſingle woman, without the liberty of aſſigning, falls by her marriage; becauſe the marriage, which is a legal conveyance thereof to the huſband, cannot be annulled This implied excluſion of aſſignees is, however, limited to voluntary, and does not extend to neceſſary, aſſignments; as an adjudication of a tack by the tackſman's creditor: but a tack, expreſsly excluding aſſignees, cannot be carried even by adjudication. It was not a fixed point for a long time, whether a tenant could ſubſet without conſent of the landlord; but the court of ſeſſion, in a caſe which occurred a few years ago, denied the power of ſubſetting in the tenant. Liferent tacks, becauſe they import a higher degree of right in the tackſman than tacks for a definite term, may be aſſigned, unleſs aſſignees be ſpecially excluded.

Tacit relocation.

12. If neither the ſetter nor tackſman ſhall properly diſcover their intention to have the tack diſſolved at the term fixed for its expiration, they are underſtood, or preſumed, to have entered into a new tack upon the ſame terms with the former, which is called *tacit relocation;* and continues till the landlord warns the tenant to remove, or the tenant renounces his tack to the landlord: this obtains alſo in the caſe of moveable tenants, who poſſeſs from year to year without written tacks. In judicial tacks, however, by the court of ſeſſion, tacit relocation neither does nor can take place; for cautioners being interpoſed to theſe, they are looſed at the end of the tack: and therefore, where judicial tackſmen poſſeſs after expiry of their right, they are accountable as factors.

13. In tacks of land, the ſetter is commonly bound to put all the houſes and office-houſes, neceſſary for the farm, in good condition at the tenant's entry; and the tenant muſt keep them and leave them ſo at his removal. But in tacks of houſes, the ſetter muſt not only deliver to the tenant the ſubject ſet, in tenantable repair at his entry, but uphold it in that repair during the whole years of the tack, unleſs it is otherwiſe covenanted betwixt the parties.

14. If the inclemency of the weather, inundation, or calamity of war, ſhould have brought upon the crop an extraordinary damage (*plus quam tolerabile*), the landlord had, by the Roman law, no claim for any part of the tack-duty: if the damage was more moderate, he might exact the full rent. It is no where defined, what degree of ſterility or devaſtation makes a loſs *plus quam tolerabile;* but the general rule of the Roman law ſeems to be made ours. Tenants are not obliged to pay any public burdens to which they are not expreſsly bound by their tack, except mill-ſervices.

Deſtitution of tacks.

15 Tacks may be evacuated during their currency, (1.) In the ſame manner as feu-rights, by the tackſman's running in arrear of his tack-duty for two years together. This irritancy may be prevented by the tenant's making payment at the bar before ſentence. (2.) Where the tenant either runs in arrear of one year's rent, or leaves his farm uncultivated at the uſual ſeaſon; in which caſe he may, by act of ſederunt 1756, be ordained to give ſecurity for the arrears, and for the rent of the five following crops, if the tack ſhall ſubſiſt ſo long; otherwiſe, to remove, as if the tack were at an end. (3.) Tacks may be evacuated at any time by the mutual conſent of parties.

Warnings.

16. The landlord, when he intends to remove a tenant whoſe tack is expiring, or who poſſeſſes without a tack, muſt, upon a precept ſigned by himſelf, warn the tenant forty days preceding the term of Whitſunday, at or immediately preceding the iſh, perſonally, or at his dwelling-houſe, to remove at that term, with his family and effects. This precept muſt be alſo executed on the ground of the lands, and thereafter read in the pariſh-church where the lands lie, after the morning ſervice, and affixed to the moſt patent door thereof. Whitſunday, though it be a moveable feaſt, is, in queſtions of removing, fixed to the 15th of May. In warnings from tenements within borough, it is ſufficient that the tenant be warned forty days before the iſh of the tack, whether it be Whitſunday or Martinmas; and in theſe the ceremony of chalking the door is ſuſtained as warning, when proceeding upon a verbal order from the proprietor.

17. This proceſs of warning was preciſely neceſſary for founding an action of removing againſt tenants, till the act of ſederunt 1756, which leaves it in the option of the proprietor, either to uſe the former method, or to bring his action of removing before the judge-ordinary; which if it be called 40 days before the ſaid term of Whitſunday, ſhall be held as equal to a warning. Where the tenant is bound, by an expreſs clauſe of his tack, to remove at the iſh without warning, ſuch obligation is, by the ſaid act, declared to be a ſufficient warrant for letters of horning, upon which, if the landlord charge his tenant forty days before the ſaid Whitſunday, the judge is authoriſed to eject him within ſix days after the term of removing expreſſed in the tack.

Actions of removing.

18. Actions of removing might, even before this act of ſederunt, have been purſued without any previous warning (1.) Againſt vicious poſſeſſors, *i. e.* perſons who had ſeized the poſſeſſion by force, or who, without any legal title, had intruded into it, after the laſt poſſeſſor had given it up. (2.) Againſt poſſeſſors who had a naked tolerance. (3.) Againſt tenants who had run

in arrear of rent, during the currency of their tacks. (4.) Againſt ſuch as had ſold their lands, and yet continued to poſſeſs after the term of the purchaſer's entry. Upon the ſame ground, warning was not required, in removings againſt poſſeſſors of liferented lands, after the death of the liferenter who died in the natural poſſeſſion: but if he poſſeſſed by tenants, theſe tenants could not be diſturbed in their poſſeſſions till the next Whitſunday, that they might have time to look out for other farms; but they might be compelled to remove at that term, by an action of removing, without warning.

19. A landlord's title in a removing, let it be ever ſo lame, cannot be brought under queſtion by a tenant whoſe tack flows immediately from him; but, if he is to inſiſt againſt tenants not his own, his right muſt be perfected by infeftment, unleſs it be ſuch as requires no infeftment; as terce, &c.

Violent profits.

20. The defender, in a removing, muſt (by act 1555), before offering any defence which is not inſtantly verified, give ſecurity to pay to the ſetter the *violent profits*, if they ſhould be awarded againſt him. Theſe are ſo called, becauſe the law conſiders the tenant's poſſeſſion after the warning as violent. They are eſtimated, in tenements within borough, to double the rent; and in lands, to the higheſt profits the purſuer could have made of them, by poſſeſſing them either by a tenant or by himſelf.

Effect of warning not inſiſted on.

21. If the action of removing ſhall be paſſed from, or if the landlord ſhall, after uſing warning, accept of rent from the tenant, for any term ſubſequent to that of the removal, he is preſumed to have changed his mind, and tacit relocation takes place. All actions of removing againſt the principal or original tackſman, and decrees thereupon, if the order be uſed, which is ſet forth *ſupra* (17.), are, by the act of ſederunt 1756, declared to be effectual againſt the aſſignees to the tack or ſubtenants.

Hypothec.

22. The landlord has, in ſecurity of his tack-duty, over and above the tenant's perſonal obligation, a tacit pledge or hypothec, not only on the fruits, but on the cattle paſturing on the ground. The corn, and other fruits, are hypothecated for the rent of that year whereof they are the crop; for which they remain affected, though the landlord ſhould not uſe his right for years together. In virtue of this hypothec, the landlord is intitled to a preference over any creditor, though he has actually uſed a poinding; except in the ſpecial caſe, that the poinding is executed after the term of payment, when the landlord can appropriate the crop for his payment, the poinder in ſuch caſe being obliged to leave as much on the ground as to ſatiſfy the landlord's hypothec: and it has been lately found, that this right of the landlord is preferable even to a debt due to the crown, for which a writ of extent had been iſſued: but the caſe here alluded to is preſently under appeal.

23. The whole cattle on the ground, conſidered as a quantity, are hypothecated for a year's rent, one after another ſucceſſively. The landlord may apply this hypothec for payment of the paſt year's rent, at any time within three months from the laſt conventional term of payment, after which it ceaſes for that year. As the tenant may increaſe the ſubject of this hypothec, by purchaſing oxen, ſheep, &c. ſo he can impair it, by ſelling part of his ſtock; but if the landlord ſuſpects the tenant's management, he may, by ſequeſtration or poinding, make his right, which was before general upon the whole ſtock, ſpecial upon every individual. A ſuperior has alſo a hypothec for his feu-duty, of the ſame kind with that juſt explained.

24. In tacks of houſes, breweries, ſhops, and other tenements, which have no natural fruits, the furniture and other goods brought into the ſubject ſet are hypothecated to the landlord for one year's rent. But the tenant may by ſale impair this hypothec, as he might that of cattle in rural tenements; and indeed, in the particular caſe of a ſhop, the tenant rents it for no other purpoſe than as a place of ſale.

SECT. VII. *Of the tranſmiſſion of rights, by confirmation and reſignation.*

clxviii.

Tranſmiſſion of feudal rights.

A VASSAL may tranſmit his feu either to univerſal ſucceſſors, as heirs; or to ſingular ſucceſſors, *i. e.* thoſe who acquire by gift, purchaſe, or other ſingular title. This laſt ſort of tranſmiſſion is either voluntary, by diſpoſition; or neceſſary, by adjudication.

2. By the firſt feudal rules, no ſuperior could be compelled to receive any vaſſal in the lands, other than the heir expreſſed in the inveſtiture; for the ſuperior alone had the power of aſcertaining to what order of heirs the fee granted by himſelf was to deſcend. But this right of refuſal in the ſuperior did not take place, (1.) In the caſe of creditors appriſers or adjudgers, whom ſuperiors were obliged to receive upon payment of a year's rent (1469, c. 37. 1672, c. 19.): (2.) In the caſe of purchaſers of bankrupt eſtates, who were put on the ſame footing with adjudgers by 1690, c. 20. The crown refuſes no voluntary diſponee, on his paying a compoſition to the exchequer of a ſixth part of the valued rent Now, by 20 Geo. II. ſuperiors are directed to enter all ſingular ſucceſſors (except incorporations) who ſhall have got from the vaſſal a diſpoſition, containing procuratory of reſignation; they always receiving the fees or caſualties that law intitles them to on a vaſſal's entry, *i. e.* a year's rent (A).

Baſe rights.

3. Baſe rights, *i. e.* diſpoſitions to be holden of the diſponer, are tranſmiſſions only of the property, the ſuperiority remaining as formerly. As this kind of right might, before eſtabliſhing the regiſters, have been kept quite concealed from all but the granter and receiver, public right was preferable to it, unleſs cloathed

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(A) It was long matter of doubt how this compoſition due to the ſuperior upon the entry of ſingular ſucceſſors ſhould be regulated. The matter at laſt received a ſolemn deciſion; finding, That the ſuperior is intitled, for the entry of ſingular ſucceſſors, in all caſes where ſuch entries are not taxed, to a year's rent of the ſubject, whether lands or houſes, as the ſame are ſet, or may be ſet at the time; deducting the feu-duty and all public burdens, and likewiſe all annual burdens impoſed on the lands by conſent of the ſuperior, with all reaſonable annual repairs to houſes and other periſhable ſubjects.

cloathed with poſſeſſion: but as this diſtinction was no longer neceſſary after the eſtabliſhment of the records, all infeſtments are declared preferable, according to the dates of their ſeveral regiſtrations; without reſpect to the former diſtinction of baſe and public, or of being cloathed and not cloathed with poſſeſſion.

Public rights.

4. Public rights, *i. e.* diſpoſitions to be holden of the granter's ſuperior, may be perfected either by confirmation or reſignation; and therefore they generally contain both precept of ſeiſin and procuratory of reſignation. When the receiver is to complete his right in the firſt way, he takes ſeiſin upon the precept: but ſuch ſeiſin is ineffectual without the ſuperior's confirmation; for the diſponee cannot be deemed a vaſſal till the ſuperior receive him as ſuch, or confirm the holding. By the uſual ſtyle in the tranſmiſſion of lands, the diſpoſition contains an obligation and precept of infeftment, both *a me* and *de me*, in the option of the diſponee; upon which, if ſeiſin is taken indefinitely, it is conſtrued in favour of the diſponee to be a baſe infeſtment, becauſe a public right is null without confirmation: but if the receiver ſhall afterwards obtain the ſuperior's confirmation, it is conſidered as if it had been from the beginning a public right.

Preference in confirmation.

5. Where two ſeveral public rights of the ſame ſubject are confirmed by the ſuperior, their preference is governed by the dates of the confirmations, not of the infeſments confirmed; becauſe it is the confirmation which completes a public right.

Effect of confirmation.

6. Though a public right becomes, by the ſuperior's confirmation, valid from its date; yet if any mid impediment intervene betwixt that period and the confirmation, to hinder the two from being conjoined, *e. g.* if the granter of a public right ſhould afterwards grant a baſe right to another, upon which ſeiſin is taken before the ſuperior's confirmation of the firſt, the confirmation will have effect only from its own date; and conſequently the baſe right firſt completed will carry the *property* of the lands preferable to the public one.

Reſignations.

7. Reſignation is that form of law, by which a vaſſal ſurrenders his feu to his ſuperior; and it is either *ad perpetuam remanentiam*, or *in favorem*. In reſignations *ad remanentiam*, where the feu is reſigned, to the effect that it may remain with the ſuperior, the ſuperior, who before had the ſuperiority, acquires, by the reſignation, the property alſo of the lands reſigned: and as his infeſtment in the lands ſtill ſubſiſted, notwithſtanding the right by which he had given his vaſſal the property; therefore, upon the vaſſal's reſignation, the ſuperior's right of property revives, and is conſolidated with the ſuperiority, without the neceſſity of a new infeſtment; but the inſtrument of reſignation muſt be recorded.

8. Reſignations *in favorem* are made, not with an intention that the property reſigned ſhould remain with the ſuperior, but that it ſhould be again given by him, in favour either of the reſigner himſelf, or of a third party; conſequently the fee remains in the reſigner, till the perſon in whoſe favour reſignation is made gets his right from the ſuperior perfected by ſeiſin. And becauſe reſignations *in favorem* are but incomplete perſonal deeds, the law has made no proviſion for recording them. Hence, the firſt ſeiſin on a ſecond reſignation is preferable to the laſt ſeiſin upon the firſt reſignation; but the ſuperior, accepting a ſecond reſignation, whereupon a prior ſeiſin may be taken in prejudice of the firſt reſignatory, is liable in damages.

9. By former deciſions, one who was veſted with a perſonal right of lands, *i. e.* a right not completed by ſeiſin, effectually diveſted himſelf by diſponing it to another; after which no right remained in the diſponer, which could be carried by a ſecond diſpoſition, becauſe a perſonal right is no more than a *jus obligationis*, which may be transferred by any deed ſufficiently expreſſing the will of the granter. But this doctrine, at the ſame time that it rendered the ſecurity of the records extremely uncertain, was not truly applicable to ſuch rights as required ſeiſin to complete them; and therefore it now obtains, that the granter even of a perſonal right of lands is not ſo diveſted by conveying the right to one perſon, but that he may effectually make it over afterwards to another; and the preference between the two does not depend on the dates of the diſpoſitions, but on the priority of the ſeiſins following upon them.

Sect. VIII. *Of Redeemable Rights.*

clxix.

Reverſion legal.

An heritable right is ſaid to be redeemable, when it contains a right of reverſion, or return, in favour of the perſon from whom the right flows. Reverſions are either legal, which ariſe from the law itſelf, as in adjudications, which law declares to be redeemable within a certain term after their date; or conventional, which are conſtituted by the agreement of parties, as in wadſets, rights of annualrent, and rights in ſecurity. A wadſet (from wad or pledge) is a right, by which lands, or other heritable ſubjects, are impignorated by the proprietor to his creditor in ſecurity of his debt; and, like other heritable rights, is perfected by ſeiſin. The debtor, who grants the wadſet, and has the right of reverſion, is called the *reverſer*; and the creditor, receiver of the wadſet, is called the *wadſetter*.

Wadſet.

2. Wadſets, by the preſent practice, are commonly made out in the form of mutual contracts, in which one party ſells the land, and the other grants the right of reverſion. When the right of reverſion is thus incorporated in the body of the wadſet, it is effectual without regiſtration; becauſe the ſingular ſucceſſor in the wadſet is, in that caſe, ſufficiently certified of the reverſion, though it be not regiſtered, by looking into his own right, which bears it *in gremio*. But where the right of reverſion is granted in a ſeparate writing, it is ineffectual againſt the ſingular ſucceſſor of the wadſetter, unleſs it be regiſtered in the regiſter of ſeiſins within 60 days after the date of the ſeiſin upon the wadſet.

Reverſion is *ſtricti juris*.

3. Rights of reverſion are generally eſteemed *ſtricti juris*; yet they go to heirs, though heirs ſhould not be mentioned, unleſs there be ſome clauſe in the right, diſcovering the intention of parties, that the reverſion ſhould be perſonal to the reverſer himſelf. In like manner, though the right ſhould not expreſs a power to redeem from the wadſetter's heir, as well as from himſelf, redemption will be competent againſt the heir. All the lawyers have affirmed, that reverſions cannot be

be aſſigned, unleſs they are taken to aſſignees; but from the favour of legal diligence, they may be adjudged.

Redemption.

4. Reverſions commonly leave the reverſer at liberty to redeem the lands *quandocunque*, without reſtriction in point of time; but a clauſe is adjected to ſome reverſions, that if the debt be not paid againſt a determinate day, the right of the reverſion ſhall be irritated, and the lands ſhall become the irredeemable property of the wadſetter. Nevertheleſs, the irritancy being penal, as in wadſets, where the ſum lent falls always ſhort of the value of the lands, the right of redemption is by indulgence continued to the reverſer, even after the term has expired, while the irritancy is not declared. But the reverſer, if he does not take the benefit of this indulgence within 40 years after the lapſe of the term, is cut out of it by preſcription.

5. If the reverſer would redeem his lands, he muſt uſe an order of redemption againſt the wadſetter: the firſt ſtep of which is premonition (or notice given under form of inſtrument) to the wadſetter, to appear at the time and place appointed by the reverſion, then and there to receive payment of his debt, and thereupon to renounce his right of wadſet. In the voluntary redemption of a right of wadſet holden baſe, a renunciation duly regiſtered re-eſtabliſhes the reverſer in the full right of the lands. Where the wadſet was granted to be holden of the granter's ſuperior, the ſuperior muſt receive the reverſer, on payment of a year's rent, if he produce a diſpoſition from the wadſetter, containing procuratory of reſignation. If, at executing the wadſet, the ſuperior has granted letters of regreſs, *i. e.* an obligation again to enter the reverſer upon redemption of the lands, he will be obliged to receive him, without payment of the year's rent. But letters of regreſs will not have this effect againſt ſingular ſucceſſors in the ſuperiority, if they are not regiſtered in the regiſter of reverſions. All wadſets that remain perſonal rights, are extinguiſhed by ſimple diſcharges, though they ſhould not be recorded.

Letters of regreſs.

Redemption money

6. If the wadſetter either does not appear at the time and place appointed, or refuſes the redemption-money, the reverſer muſt conſign it under form of inſtrument, in the hands of the perſon appointed in the right of reverſion; or, if no perſon be named, in the hands of the clerk to the bills, a clerk of ſeſſion, or any reſponſal perſon. An inſtrument of conſignation, with the conſignatory's receipt of the money conſigned, completes the order of redemption, ſtops the farther currency of intereſt againſt the reverſer, and founds in him an action for declaring the order to be formal, and the lands to be redeemed in conſequence of it.

7. After decree of declarator is obtained, by which the lands are declared to return to the debtor, the conſigned money, which comes in place of the lands, becomes the wadſetter's, who therefore can charge the conſignatory upon letters of horning to deliver it up to him; but, becauſe the reverſer may, at any time before decree, paſs from his order, as one may do from any other ſtep of diligence, the conſigned ſums continue to belong to the reverſer, and the wadſetter's intereſt in the wadſet continues heritable till that period.

8. If the wadſetter chooſes to have his money rather than the lands, he muſt require from the reverſer, under form of inſtrument, the ſums due by the wadſet, in terms of the right. The wadſet-ſums continue heritable, notwithſtanding requiſition, which may be paſſed from by the wadſetter even after the reverſer has conſigned the redemption-money in conſequence thereof.

Wadſets proper and improper.

9. Wadſets are either proper or improper. A proper wadſet is that whereby it is agreed, that the uſe of the land ſhall go for the uſe of the money; ſo that the wadſetter takes his hazard of the rents, and enjoys them without accounting, in ſatisfaction, or *in ſolutum* of his intereſt.

10. In an improper wadſet, the reverſer, if the rent ſhould fall ſhort of the intereſt, is taken bound to make up the deficiency; if it amounts to more, the wadſetter is obliged to impute the excreſcence towards extinction of the capital: And, as ſoon as the whole ſums, principal and intereſt, are extinguiſhed by the wadſetter's poſſeſſion, he may be compelled to renounce, or diveſt himſelf in favour of the reverſer.

11. If the wadſetter be intitled by his right to enjoy the rents without accounting, and if at the ſame time the reverſer be ſubject to the hazard of their deficiency, ſuch contract is juſtly declared uſurious: and alſo in all proper wadſets wherein any unreaſonable advantage has been taken of the debtor, the wadſetter muſt (by act 1661), during the not requiſition of the ſum lent, either quit his poſſeſſion to the debtor, upon his giving ſecurity to pay the intereſt, or ſubject himſelf to account for the ſurplus-rents, as in improper wadſets.

Right of annualrent.

12. Infeftments of annual rent, the nature of which has been explained, are alſo redeemable rights. A right of annual rent does not carry the property of the lands; but it creates a real *nexus* or burden upon the property, for payment of the intereſt or annualrent contained in the right; and conſequently the bygone intereſts due upon it are *debita fundi*. The annualrenter may therefore either inſiſt in a real action for obtaining letters of poinding the ground, or ſue the tenant in a perſonal action towards the payment of his paſt intereſt: and in a competition for thoſe rents, the annualrenter's preference will not depend on his having uſed a poinding of the ground, for his right was completed by the ſeiſin; the power of poinding the ground, ariſing from that antecedent right, is *meræ facultatis*, and need not be exerciſed, if payment can be otherwiſe got. As it is only the intereſt of the ſum lent which is a burden upon the lands, the annualrenter, if he wants his principal ſum, cannot recover it either by poinding or by a perſonal action againſt the debtor's tenants; but muſt demand it from the debtor himſelf, on his perſonal obligation in the bond, either by requiſition, or by a charge of letters of horning, according as the right is drawn.

13. Rights of annualrent, being ſervitudes upon the property, and conſequently conſiſtent with the right of property in the debtor, may be extinguiſhed without reſignation.

Rights of ſecurity.

14. Infeftments in ſecurity are another kind of redeemable rights (now frequently uſed in place of rights of annualrent), by which the receivers are infeſt in the lands themſelves, and not ſimply in an annualrent forth of them, for ſecurity of the principal ſums, intereſt,

and penalty, contained in the rights. If an infeftment in ſecurity be granted to a creditor, he may thereupon enter into the immediate poſſeſſion of the lands or annualrent for his payment. They are extinguiſhed as rights of annualrent.

15. All rights of annualrent, rights in ſecurity, and generally whatever conſtitutes a real burden on the fee, may be the ground of an adjudication, which is preferable to all adjudications, or other diligences, intervening between the date of the right and of the adjudication deduced on it; not only for the principal ſum contained in the right, but alſo for the whole paſt intereſt contained in the adjudication. This preference ariſes from the nature of real debts, or *debita fundi:* but in order to obtain it for the intereſt of the intereſt accumulated in the adjudication, ſuch adjudication muſt proceed on a proceſs of poinding the ground.

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Sect. IX. *Of Servitudes.*

Different kinds of ſervitude.

Servitude is a burden affecting lands, or other heritable ſubjects, whereby the proprietor is either reſtrained from the full uſe of what is his own, or is obliged to ſuffer another to do ſomething upon it. Servitudes are either *natural*, *regal*, or *conventional*. *Nature* itſelf may be ſaid to conſtitute a ſervitude upon inferior tenements, whereby they muſt receive the water that falls from thoſe that ſtand on higher ground. *Legal* ſervitudes are eſtabliſhed by ſtatute or cuſtom, from conſiderations of public policy; among which may be numbered the reſtraints laid upon the proprietors of tenements within the city of Edinburgh. There is as great a variety of *conventional* ſervitudes, as there are ways by which the exerciſe of property may be reſtrained by paction in favour of another.

2. *Conventional* ſervitudes are conſtituted, either by grant, where the will of the party burdened is expreſſed in writing: or by preſcription, where his conſent is preſumed from his acquieſcence in the burden for 40 years. A ſervitude conſtituted by writing, or grant, is not effectual againſt the granter's ſingular ſucceſſors, unleſs the grantee has been in the uſe or exerciſe of his right: but they are valid againſt the granter and his heirs, even without uſe. In ſervitudes that may be acquired by preſcription, 40 years exerciſe of the right is ſufficient, without any title in writing, other than a charter and ſeiſin of the lands to which the ſervitude is claimed to be due.

3. Servitudes conſtituted by grant are not effectual, in a queſtion with the ſuperior of the tenement burdened with the ſervitude, unleſs his conſent be adhibited; for a ſuperior cannot be hurt by his vaſſal's deed: but where the ſervitude is acquired by preſcription, the conſent of the ſuperior, whoſe right afforded him a good title to interrupt, is implied. A ſervitude by grant, though followed only by a partial poſſeſſion, muſt be governed, as to its extent, by the tenor of the grant; but a ſervitude by preſcription is limited by the meaſure or degree of the uſe had by him who preſcribes: agreeably to the maxim, *Tantum præſcriptum, quantum poſſeſſum.*

Predial ſervitudes.

4. Servitudes are either *predial* or *perſonal*. *Predial* ſervitudes are burdens impoſed upon one tenement, in favour of another tenement. That to which the ſervitude is due is called the *dominant*, and that which owes it is called the *ſervient tenement*. No perſon can have right to a predial ſervitude, if he is not proprietor of ſome dominant tenement that may have benefit by it; for that right is annexed to a tenement, and ſo cannot paſs from one perſon to another, unleſs ſome tenement goes along with it.

Rural ſervitudes.

5. Predial ſervitudes are divided into *rural* ſervitudes, or of lands; and *urban* ſervitudes, or of houſes. The rural ſervitudes of the Romans were *iter*, *actus*, *via*, *aquæductus*, *aquæhauſtus*, and *jus paſcendi pecoris*. Similar ſervitudes may be conſtituted of a foot-road, horſe-road, cart-road, dams, and aqueducts, watering of cattle, and paſturage. The right of a highway is not a ſervitude conſtituted in favour of a particular tenement, but is a right common to all travellers. The care of high-ways, bridges, and ferries, is committed to the ſheriffs, juſtices of peace, and commiſſioners of ſupply in each ſhire.

6. Common paſturage, or the right of feeding one's cattle upon the property of another, is ſometimes conſtituted by a general clauſe of paſturage in a charter or diſpoſition, without mentioning the lands burdened; in which caſe, the right comprehends whatever had been formerly appropriated to the lands diſponed out of the granter's own property, and likewiſe all paſturage due to them out of other lands. When a right of paſturage is given to ſeveral neighbouring proprietors, on a moor or common belonging to the granter, indefinite as to the number of cattle to be paſtured, the extent of their ſeveral rights is to be proportioned according to the number that each of them can fodder in winter upon his own dominant tenement.

Urban ſervitudes.

7. The chief ſervitudes of houſes among the Romans were thoſe of ſupport, viz. *tigni immittendi*, and *oneris ferendi*. The firſt was the right of fixing in our neighbours wall a joiſt or beam from our houſe: the ſecond was that of reſting the weight of one's houſe upon his neighbour's wall.

8. Where different floors or ſtories of the ſame houſe belong to different perſons, as is frequent in the city of Edinburgh, the property of the houſe cannot be ſaid to be entirely divided; the roof remains a common roof to the whole, and the area on which the houſe ſtands ſupports the whole; ſo that there is a communication of property, in conſequence of which the proprietor of the ground-floor muſt, without the conſtitution of any ſervitude, uphold it for the ſupport of the upper, and the owner of the higheſt ſtory muſt uphold that as a cover to the lower. When the higheſt floor is divided into garrets among the ſeveral proprietors, each proprietor is obliged, according to this rule, to uphold that part of the roof which covers his own garret.

9. No proprietor can build, ſo as to throw the rain-water falling from his own houſe, immediately upon his neighbour's ground, without a ſpecial ſervitude, which is called of *ſtillicide*; but, if it falls within his own property, though at the ſmalleſt diſtance from the march, the owner of the inferior tenement muſt receive it.

10. The ſervitudes *altius non tollendi, et non officiendi luminibus vel proſpectui*, reſtrain proprietors from raiſing their houſes beyond a certain height, or from making any building whatſoever that may hurt the light

or proſpect of the dominant tenement. Theſe ſervitudes cannot be conſtituted by preſcription alone: for, though a proprietor ſhould have his houſe ever ſo low, or ſhould not have built at all upon his grounds for 40 years together, he is preſumed to have done ſo for his own conveniency or profit; and therefore cannot be barred from afterwards building a houſe on his property, or raiſing it to what height he pleaſes, unleſs he be tied down by his own conſent.

Servitude of feal and divot.

11. There are two predial ſervitudes to which the Romans were ſtrangers, viz. that of fuel or feal and divot, and thirlage. The firſt is a right, by which the owner of the dominant tenement may turn up peats, turfs, feals, or divots, from the ground of the ſervient, and carry them off either for fuel, or thatch, or the other uſes of his own tenement.

Thirlage.

12. THIRLAGE is that ſervitude, by which lands are aſtricted, or thirled, to a particular mill; and the poſſeſſors bound to grind their grain there, for payment of certain multures and ſequels as the agreed price of grinding. In this ſervitude, the mill is the dominant tenement, and the lands aſtricted (which are called alſo the *thirl* or *ſucken*) the ſervient. Multure is the quantity of grain or meal payable to the proprietor of the mill, or to the multerer his tackſman. The ſequels are the ſmall quantities given to the ſervants, under the name of *knaveſhip*, *bannock*, and *lock* or *gowpen*. The quantities paid to the mill by the lands not aſtricted, are generally proportioned to the value of the labour, and are called *out town* or *out ſucken multures*; but thoſe paid by the thirl are ordinarily higher, and are called *in town* or *in ſucken multures*.

13. Thirlage may be conſtituted by a land-holder, when, in the diſpoſition of certain lands, he aſtricts them to his own mill; or when, in the diſpoſition of a mill, he aſtricts his own lands to the mill diſponed; or when, in letting his lands, he makes it a condition in the tacks. The grant of a mill with the general clauſe of multures, without ſpecifying the lands aſtricted, conveys the thirlage of all the lands formerly aſtricted to that mill, whether they were the property of the granter, or of a third party.

14. A leſs formal conſtitution ſerves to aſtrict barony-lands to the mill of the barony, than is neceſſary in any other thirlage; which perhaps proceeds from the effects of the union betwixt the two. Hence, if a baron makes over the mill of a barony *cum multuris*, or *cum aſtrictis multuris*, it infers an aſtriction of the barony lands to the mill conveyed, although they had not formerly been aſtricted. But if, prior to the baron's conveyance of his mill *cum multuris*, he had ſold any part of the barony-lands to another *cum multuris*, the firſt Purchaſer's lands are not aſtricted by the poſterior grant; for a right of lands with the multures, implies a freedom of theſe lands from thirlage.

15 Thirlage is either, 1. Of grindable corns: or, 2. Of all growing corns; or, 3. Of the *invecta et illata*, i. e. of all the grain brought within the thirl, though of another growth. Where the thirlage is of grindable grain, it is in practice reſtricted to the corns which the tenants have occaſion to grind, either for the ſupport of their families, or for other uſes; the ſurplus may be carried out of the thirl unmanufactured, without being liable in multure. Where it is of the *grana creſcentia*, the whole grain growing upon the thirl is aſtricted, with the exceptions, 1. Of ſeed and horſe-corn, which are deſtined to uſes inconſiſtent with grinding; and, 2. Of the farm duties due to the landlord, if they are delivered in grain not grinded. But, if the rent be payable in meal, flour, or malt, the grain of which theſe are made muſt be manufactured in the dominant mill.

16. The thirlage of *invecta et illata* is ſeldom conſtituted but againſt the inhabitants of a borough or village, that they ſhall grind all the unmanufactured grain they import thither at the dominant mill. Multure, therefore, cannot be exacted in a thirlage of *invecta et illata*, for flour or oat-meal brought into the ſervient tenement, unleſs the importer had bought it in grain, and grinded it at another mill. The ſame grain that owes multure, as *granum creſcens*, to the mill in whoſe thirl it grew, if it ſhall be afterwards brought within a borough where the *invecta et illata* are thirled, muſt pay a ſecond multure to the proprietor of that dominant tenement; but, where the right of theſe two thirlages is in the ſame proprietor, he cannot exact both. Where lands are thirled in general terms, without expreſſing the particular nature of the ſervitude, the lighteſt thirlage is preſumed, from the favour of liberty; but in the aſtriction of a borough or village, where there is no growing grain which can be the ſubject of thirlage, the aſtriction of *invecta et illata* muſt be neceſſarily underſtood.

17. Thirlage, in the general caſe, cannot be eſtabliſhed by preſcription alone, for *iis quæ ſunt meræ facultatis non preſcribitur*; but where one has paid for 40 years together the heavy inſucken multures, the ſlighteſt title in writing will ſubject his lands. Thirlage may, contrary to the common rule, be conſtituted by preſcription alone, 1. Where one pays to a mill a certain ſum, or quantity of grain yearly, in name of multure, whether he grinds at it or not (called *dry multure*). 2. In mills of the king's property; which is conſtituted *jure coronæ*, without titles in writing; and, where he derives right from another, his titles are more liable to be loſt. This is extended in practice to mills belonging to church-lands, where thirty years poſſeſſion is deemed equivalent to a title in writing, from a preſumption that their rights were deſtroyed at the reformation. Though thirlage itſelf cannot be conſtituted by mere poſſeſſion, the proportion of multure payable to the dominant tenement may be ſo fixed.

18. The poſſeſſors of the lands aſtricted are bound to uphold the mill, repair the dam-dykes and aqueducts, and bring home the millſtones. Theſe ſervices, though not expreſſed in the conſtitution, are implied.

Servitudes are *ſtricti juris*.

19. Servitudes, being reſtraints upon property, are *ſtricti juris*: they are not therefore preſumed, if the acts upon which they are claimed can be explained conſiſtently with freedom; and, when ſervitudes are conſtituted, they ought to be uſed in the way leaſt burdenſome to the ſervient tenement. Hence, one who has a ſervitude of peats upon his neighbour's moſs, is not at liberty to extend it for the uſe of any manufacture which may require an extraordinary expence of fuel; but muſt confine it to the natural uſes of the dominant tenement.

20. Servitudes are extinguiſhed, (1.) *Confuſione*, when the perſon comes to be proprietor of the domi-

nant and ſervient tenements; for *res ſua nomini ſervit*, and the uſe the proprietor thereafter makes of the ſervient tenement is not *jure ſervitutis*, but is an act of property. (2) By the periſhing either of the dominant or ſervient tenement. (3.) Servitudes are loſt *non utendo*, by the dominant tenement neglecting to uſe the right for 40 years; which is conſidered as a dereliction of it, though he who has the ſervient tenement ſhould have made no interruption by doing acts contrary to the ſervitude.

Liferent.

21. *Perſonal* ſervitudes are thoſe by which the property of a ſubject is burdened, in favour, not of a tenement, but of a perſon. The only perſonal ſervitude known in law, is uſufruct or liferent; which is a right to uſe and enjoy a thing during life, the ſubſtance of it being preſerved. A liferent cannot therefore be conſtituted upon things which periſh in the uſe; and though it may upon ſubjects which gradually wear out by time, as houſehold furniture, &c. yet it is generally applied to heritable ſubjects. He whoſe property is burdened, is uſually called the *fiar*.

Liferents.

22. Liferents are divided into *conventional* and *legal*. *Conventional* liferents are either *ſimple*, or *by reſervation*. A *ſimple liferent*, or by a ſeparate conſtitution, is that which is granted by the proprietor in favour of another: And this ſort, contrary to the nature of predial ſervitudes, requires ſeiſin in order to affect ſingular ſucceſſors; for a liferent of lands is, in ſtrict ſpeech, not a ſervitude, but a right reſembling property which conſtitutes the liferenter vaſſal for life; and ſingular ſucceſſors have no way of diſcovering a liferent-right, which perhaps is not yet commenced, but by the records; whereas, in predial ſervitudes, the conſtant uſe of the dominant tenement makes them public. The proper right of liferent is intranſmiſſible; *oſſibus uſufructuarii inhæret*: When the profits of the liferented ſubject are tranſmitted to another, the right becomes merely perſonal: for it intitles the aſſignee to the rent, not during his own life, but his cedent's; and is therefore carried by ſimple aſſignation, without ſeiſin.

23. A liferent *by reſervation*, is that which a proprietor reſerves to himſelf in the ſame writing by which he conveys the fee to another. It requires no ſeiſin; for the granter's former ſeiſin, which virtually included the liferent, ſtill ſubſiſts as to the liferent which is expreſsly reſerved. In conjunct infeftments taken to huſband and wife, the wife's right of conjunct fee reſolves, in the general caſe, into a liferent.

Terce.

24. Liferents, *by law*, are the *terce* and the *curteſy*. The *terce (tertia)* is a liferent competent by law to widows, who have not accepted of ſpecial proviſions, in the third of the heritable ſubjects in which their huſbands died infeſt; and takes place only where the marriage has ſubſiſted for year and day, or where a child has been born alive of it (A).

25. The terce is not limited to lands, but extends to teinds, and to ſervitudes and other burdens affecting lands; thus, the widow is intitled, in the right of her terce, to a liferent of the third of the ſums ſecured, either by rights of annualrent, or by rights in ſecurity. In improper wadſets, the terce is a third of the ſum lent: In thoſe that are proper, it is a third of the wadſet lands; or, in caſe of redemption, a third of the redemption money. Neither rights of reverſion, ſuperiority, nor patronage, fall under the terce; for none of theſe have fixed profits, and ſo are not proper ſubjects for the widow's ſubſiſtence; nor tacks; becauſe they are not feudal rights. Burgage-tenements are alſo excluded from it, the reaſon of which is not ſo obvious. Since the huſband's ſeiſin is both the meaſure and ſecurity of the terce, ſuch debts or diligences alone, as exclude the huſband's ſeiſin, can prevail over it.

26. Where a terce is due out of lands burdened with a prior terce ſtill ſubſiſting, the ſecond tercer has only right to a third of the two thirds that remain unaffected by the firſt terce. But upon the death of the firſt widow, whereby the lands are diſburdened of her terce, the leſſer terce becomes enlarged, as if the firſt had never exiſted. A widow, who has accepted of a ſpecial proviſion from her huſband, is thereby excluded from the terce, unleſs ſuch proviſion ſhall contain a clauſe that ſhe ſhall have right to both.

27. The widow has no title of poſſeſſion, and ſo cannot receive the rents in virtue of her terce, till ſhe be ſerved to it; and in order to this, ſhe muſt obtain a brief out of the chancery, directed to the ſheriff, who calls an inqueſt, to take proof that ſhe was wife to the deceaſed, and that her huſband died infeſt in the ſubjects contained in the brief. The ſervice or ſentence of the jury, finding theſe points proved, does, without the neceſſity of a retour to the chancery, intitle the wife to enter into the poſſeſſion; but ſhe can only poſſeſs with the heir *pro indiviſo*, and ſo cannot remove tenants till the ſheriff kens her to her terce, or divides the lands between her and the heir. In this diviſion, after determining by lot or kavil, whether to begin by the ſun or the ſhade, *i. e.* by the eaſt or the weſt, the ſheriff ſets off the two firſt acres for the heir, and the third for the widow. Sometimes the diviſion is executed, by giving one entire farm to the widow, and two of equal value to the heir. The widow's right is not properly conſtituted by this ſervice; it was conſtituted before by the huſband's ſeiſin; and fixed by his death; the ſervice only declares it, and ſo intitles her to the third part of the rents *retro* to her huſband's death, preferable to any rights that may have affected the lands in the intermediate period between that and her own

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(A) In the caſe referred to, when treating of the effects of diſſolution of marriage within the year without a living child, and where no ſpecial proviſions had been granted to, or accepted by, the widow; ſhe did not demand her *legal* proviſions of *terce* or *jus relictæ*, but merely inſiſted, that as widow ſhe was intitled to be *alimented* out of the heritable eſtate of which her huſband died poſſeſſed: So that the deciſion in that caſe cannot ſo properly be ſaid to be an alteration in the law, as an equitable interpoſition of the court of ſeſſion, in their capacity as a court of equity, in order to grant a ſubſiſtence to the widow of a man whoſe eſtate was fully ſufficient, and who, it could not reaſonably be preſumed, would have inclined that his widow ſhould be left deſtitute, when his eſtate went perhaps to a diſtant ſeries of heirs.

own ſervice. The relict, if ſhe was reputed to be lawful wife to the deceaſed, muſt be ſerved, notwithſtanding any objections by the heir againſt the marriage, which may be afterwards tried by the commiſſary.

Courteſy.

28. *Courteſy* is a liferent given by law, to the ſurviving huſband, of all his wife's heritage in which ſhe died infeſt, if there was a child of the marriage born alive. A marriage, though of the longeſt continuance, gives no right to the courteſy, if there was no iſſue of it. The child born of the marriage muſt be the mother's heir: If ſhe had a child of the former marriage, who is to ſucceed to her eſtate, the huſband has no right to the courteſy while ſuch child is alive: ſo that the courteſy is due to the huſband, rather as father to an heir, than as huſband to an heireſs. Heritage is here oppoſed to conqueſt; and ſo is to be underſtood only of the heritable rights to which the wife ſucceeded as heir to her anceſtors, excluding what ſhe herſelf had acquired by ſingular titles.

29. Becauſe the huſband enjoys the liferent of his wife's whole heritage, on a lucrative title, he is conſidered as her temporary repreſentative; and ſo is liable in payment of all the yearly burdens chargeable on the ſubject, and of the current intereſt of all her debts, real and perſonal, to the value of the yearly rent he enjoys by the courteſy. The courteſy needs no ſolemnity to its conſtitution: That right which the huſband had to the rents of his wife's eſtate during the marriage, *jure mariti*, is continued with him after her death, under the name of *courteſy*, by an act of the law itſelf. As in the terce, the huſband's ſeiſin is the ground and meaſure of the wife's right; ſo in the courteſy, the wife's ſeiſin is the foundation of the huſband's; and the two rights are, in all other reſpects, of the ſame nature; if it is not that the courteſy extends to burgage holdings, and to ſuperiorities.

30. All liferenters muſt uſe their right *ſalva rei ſubſtantia*: whatever therefore is part of the fee itſelf, cannot be incroached on by the liferenter, *e. g.* woods or growing timber, even for the neceſſary uſes of the liferented tenement. But, where a coppice or *ſilva cædua* has been divided into hags, one of which was in uſe to be cut annually by the proprietor, the liferenter may continue the former yearly cuttings; becauſe theſe are conſidered as the annual fruits the ſubject was intended to yield, and ſo the proper ſubject of a liferent.

31. Liferenters are bound to keep the ſubject liferented in proper repair. They are alſo burdened with the alimony of the heir, where he has not enough for maintaining himſelf. The bare right of apparency founds the action againſt the liferenter. It is a burden perſonal to the liferenter himſelf, and cannot be thrown upon his adjudging creditors as coming in his place by their diligences. Liferenters are alſo ſubjected to the payment of the yearly ceſſes, ſtipends, &c. falling due during their right, and to all other burdens that attend the ſubject liferented.

32. Liferent is extinguiſhed by the liferenter's death. That part of the rents which the liferenter had a proper right to, before his death, falls to his executors; the reſt, as never having been *in bonis* of the deceaſed, goes to the fiar. Martinmas and Whitſunday are, by cuſtom, the legal terms of the payment of rent: conſequently, if a liferenter of lands ſurvives the term of Whitſunday, his executors are intitled to the half of that year's rent, becauſe it was due the term before his death; and if he ſurvives the term of Martinmas, they have right to the whole. If the liferenter, being in the natural poſſeſſion, and having firſt ſowed the ground, ſhould die, even before Whitſunday, his executors are intitled to the whole crop, in reſpect that both ſeed and induſtry were his. In a liferent of money conſtituted by a moveable bond, the executors have a right to the intereſt, down to the very day of the liferenter's death, where no terms are mentioned for the payment thereof; but in the caſe of an heritable bond, or of a money liferent ſecured on land, the intereſts of liferenter and fiar (or of heir and executor, for the ſame rules ſerve to fix the intereſts of both) are both governed by the legal terms of land-rent, without regard to the conventional.

Sect. X. *Of Teinds.* clxxi.

Teinds.

TEINDS, or tithes, are that liquid proportion of rents or goods, which is due to churchmen, for performing divine ſervice, or exerciſing the other ſpiritual functions proper to their ſeveral offices. Moſt of the canoniſts affirm, that the preciſe proportion of a tenth, not only of the fruits of the ground, but of what is acquired by perſonal induſtry, is due to the Chriſtian clergy, of divine right, which they therefore call the *proper patrimony of the church*; though it is certain that titles, in their infancy, were given, not to the clergy alone, but to lay-monks who were called *pauperes*, and to other indigent perſons. Charles the Great was the firſt ſecular prince who acknowledged this right in the church. It appears to have been received in Scotland as far back as David I.

2. The perſon employed by a cathedral church or monaſtery to ſerve the cure in any church annexed was called a *vicar*, becauſe he held the church, not in his own right, but in the right or *vice* of his employers; and ſo was removeable at pleaſure, and had no ſhare of the benefice, other than what they thought fit to allow him: but, in the courſe of time, the appellation of *vicar* was limited to thoſe who were made perpetual, and who got a ſtated ſhare of the benefice for their incumbency; from whence aroſe the diſtinction of benefices into parſonages and vicarages.

3. Parſonage teinds are the teinds of corn; and they are ſo called becauſe they are due to the parſon or other titular of the benefice. Vicarage teinds are the ſmall teinds of calves, lint, hemp, eggs, &c, which were commonly given by the titular to the vicar who ſerved the cure in his place. The firſt ſort was univerſally due, unleſs in the caſe of their infeudation to laics, or of a pontifical exemption; but, by the cuſtoms of almoſt all Chriſtendom, the leſſer teinds were not demanded where they had not been in uſe to be paid. By the practice of Scotland, the teinds of animals, or of things produced from animals, as lambs, wool, calves, are due though not accuſtomed to be paid; but roots, herbs, &c. are not tithable, unleſs uſe of payment be proved: neither are perſonal teinds (*i. e.* the tenth of what one acquires by his own induſtry) acknowledged by the law: yet they have been found due, when ſupported by 40 years poſſeſſion.

4. The parſon who was intitled to the teind of corns, made his right effectual, either by accepting of a cer-

tain number of teind-bolls yearly from the proprietor in ſatisfaction of it; or, more frequently, by drawing or ſeparating upon the field his own tenth part of the corns, after they were reaped, from the ſtock or the remaining nine-tenths of the crop, and carrying it off to his own granaries; which is called *drawn teind*.

Annexation of church-lands to the crown.

5. After the reformation, James VI. conſidered himſelf as proprietor of all the church-lands; partly becauſe the purpoſes for which they had been granted were declared ſuperſtitious: and partly, in conſequence of the reſignations which he, and queen Mary his mother, had procured from the beneficiaries: and even as to the teinds, though the reformed clergy alſo claimed them as the patrimony of the church, the ſovereign did not ſubmit to that doctrine farther than extended to a competent proviſion for miniſters. He therefore erected or ſeculariſed ſeveral abbacies and priories into temporal lordſhips; the grantees of which were called ſometimes *lords of erection*, and ſometimes *titulars*, as having by their grants the ſame title to the erected benefices that monaſteries had formerly.

6. As the crown's revenue ſuffered greatly by theſe erections, the temporality of all church benefices (*i. e.* church lands) was, by 1587. *c.* 29, annexed to the crown. That ſtatute excepts from the annexation ſuch benefices as were eſtabliſhed before the reformation in laymen, whoſe rights the legiſlature had no intention to weaken. Notwithſtanding this ſtatute, his majeſty continued to make farther erections, which were declared null by 1592, *c.* 119 with an exception of ſuch as had been made in favour of lords of parliament ſince the general act of annexation in 1587.

7. King Charles I. ſoon after his ſucceſſion, raiſed a reduction of all theſe erections, whether granted before or after the act of annexation, upon the grounds mentioned at length by Mr Forbes in his treatiſe of tithes, p. 259. At laſt the whole matter was referred to the king himſelf by four ſeveral ſubmiſſions or compromiſes; in which the parties on one ſide were the titulars and their tackſmen, the biſhops with the inferior clergy, and the royal boroughs, for the intereſt they had in the teinds that were gifted for the proviſion of miniſters, ſchools, or hoſpitals, within their boroughs; and, on the other part, the proprietors who wanted to have the leading of their own teinds. The ſubmiſſion by the titulars contained a ſurrender into his majeſty's hands of the ſuperiorities of their ſeveral erections.

Valuation of teinds.

8. Upon each of theſe ſubmiſſions his majeſty pronounced ſeparate decrees arbitral, dated Sept. 2. 1629, which are ſubjoined to the acts of parliament of his reign. He made it lawful to proprietors to ſue the titulars for a valuation, and if they thought fit for a ſale alſo, of their teinds, before the commiſſioners named or to be named for that purpoſe. The rate of teind, when it was poſſeſſed by the proprietor jointly with the ſtock, for payment of a certain duty to the titular, and ſo did not admit a ſeparate valuation, was fixed at a fifth part of the conſtant yearly rent, which was accounted a reaſonable *ſurrogatum*, in place of a tenth of the increaſe. Where it was drawn by the titular, and conſequently might be valued ſeparately from the ſtock, it was to be valued as its extent ſhould be aſcertained upon a proof before the commiſſioners; but in this laſt valuation, the king directed the fifth part to be deducted from the proved teind, in favour of the proprietor, which was therefore called the *king's eaſe*. The proprietor ſuing for a valuation gets the leading of his own teinds as ſoon as his ſuit commences, providing he does not allow proteſtation to be extracted againſt him for not inſiſting.

9. Where the proprietor inſiſted alſo for a ſale of his teinds, the titular was obliged to ſell them at nine years purchaſe of the valued teind-duty. If the purſuer had a tack of his own teinds not yet expired; or if the defender was only tackſman of the teinds, and ſo could not give the purſuer an heritable right; an abatement of the price was to be granted accordingly by the commiſſioners.

10. There is no proviſion in the decrees-arbitral, for ſelling the teinds granted for the ſuſtentation of miniſters, univerſities, ſchools, or hoſpitals, becauſe theſe were to continue, as a perpetual fund, for the maintenance of the perſons or ſocieties to whom they were appropriated; and they are expreſsly declared not ſubject to ſale, by 1690, *c.* 30.—1693, *c.* 23. By the laſt of theſe acts, it is alſo provided, that the teinds belonging to biſhops, which had then fallen to the crown upon the aboliſhing of epiſcopacy, ſhould not be ſubject to ſale as long as they remained with the crown not diſpoſed of; nor thoſe which the proprietor, who had right both to ſtock and teind, reſerved to himſelf in a ſale or feu of the lands. But, though none of theſe tiends can be ſold, they may be valued.

King's right to the ſuperiorities of erection.

11. The king, by the decrees arbitral, declared his own right to the ſuperiorities of erection which had been reſigned to him by the ſubmiſſion, reſerving to the titulars the feu-duties thereof, until payment by himſelf to them of 1000 merks Scots for every chaldern of feu-victual, and for each 100 merks of feu duty; which right of redeeming the feu-duties was afterwards renounced by the crown. If the church-vaſſal ſhould conſent to hold his lands of the titular, he cannot thereafter recur to the crown as his immediate ſuperior.

Rules for fixing the rent in the valuation of teinds.

12. In explaining what the conſtant rent is by which the teind muſt be valued the following rules are obſerved. The rent drawn by the proprietor from the ſale of ſubjects that are more properly parts of the land than of the fruits, *e. g.* quarries, minerals, moſſes, &c. is to be deducted from the rental of the lands; and alſo the rent of ſupernumerary houſes, over and above what is neceſſary for agriculture; and the additional rent that may be paid by the tenant, in conſideration of the proprietor's undertaking any burden that law impoſes on the tenant, *e. g.* upholding the tenant's houſes, becauſe none of theſe articles are paid properly on account of the fruits. Orchards muſt alſo be deducted, and mill-rent, becauſe the profits of a mill ariſe from induſtry; and the corns manufactured there ſuffer a valuation as rent payable by the tenant, and therefore ought not to be valued a ſecond time againſt the titular as mill-rent. The yearly expence of culture ought not to be deducted; for no rent can be produced without it: but, if an improvement of rent is made at an uncommon expence, *e. g.* by draining a lake, the proprietor is allowed a reaſonable abatement on that account.

Teind's, redeemable, &c.

13. Notwithſtanding the ſeveral ways of miſapplying parochial teinds in the times of Popery, ſome few benefices remained entire in the hands of the parſons.

the miniſters planted in theſe, after the reformation, continued to have the full right to them, as proper beneficiaries: but a power was afterwards granted to the patron, to redeem the whole teind from ſuch beneficiaries, upon their getting a competent ſtipend modified to them; which teind ſo redeemed, the patron is obliged to ſell to the proprietor, at ſix years purchaſe.

14. Some teinds are more directly ſubject to an allocation for a miniſter's ſtipend than others. The teinds in the hands of the lay titular fall firſt to be allocated, who, ſince he is not capable to ſerve the cure in his own perſon, ought to provide one who can, and if the titular, in place of drawing the teind, has ſet it in tack, the tack-duty is allocated: this ſort is called *free teind*. Where the tack-duty, which is the titular's intereſt in the teinds, falls ſhort, the tack itſelf is burdened, or, in other words, the ſurplus teind over and above the tack-duty: but, in this caſe, the commiſſioners are empowered to recompenſe the tackſman, by prorogating his tack for ſuch a number of years as they ſhall judge equitable. Where this likewiſe proves deficient, the allocation falls on the teinds heritably conveyed by the titular, unleſs he has warranted his grant againſt future augmentations: in which caſe, the teinds of the lands belonging in property to the titular himſelf muſt be allocated in the firſt place.

15. Where there is ſufficiency of free teinds in a pariſh, the titular may allocate any of them he ſhall think fit for the miniſter's ſtipend, ſince they are all his own; unleſs there has been a previous decree of locality: and this holds, though the ſtipend ſhould have been paid immemorially out of the teinds of certain particular lands. This right was frequently abuſed by titulars, who, as ſoon as a proprietor had brought an action of ſale of his teinds, allocated the purſuer's full teind for the ſtipend, whereby ſuch action became ineffectual: it was therefore provided, that after citation in a ſale of teinds, it ſhall not be in the titular's power to allocate the purſuer's teinds ſolely, but only in proportion with the other teinds in the pariſh.

Miniſters glebes, &c. exempted from teinds.

16. Miniſters glebes are declared free from the payment of teind. Lands *cum decimis incluſis* are alſo exempted from teind. But in order to exempt lands from payment of teind, it is neceſſary that the proprietor prove his right thereto, *cum decimis incluſis*, as far back as the above act of annexation 1587.

17. Teinds are *debita fructuum*, not *fundi*. The action therefore for bygone teinds is only perſonal, againſt thoſe who have intermeddled, unleſs where the titular is infeft in the lands, in ſecurity of the valued teind-duty. Where a tenant is, by his tack, bound to pay a joint duty to the landlord for ſtock and teind, without diſtinguiſhing the rent of each, his defence of a *bona fide* payment of the whole to the landlord has been ſuſtained in a ſuit at the inſtance of a laic titular, but repelled where a churchman was purſuer. In both caſes the proprietor who receives ſuch rent is liable as intermeddler.

Inhibition of teinds.

18. In tacks of teinds, as of lands, there is place for tacit relocation: to ſtop the effect of which, the titular muſt obtain and execute an inhibition of teinds againſt the tackſman; which differs much from inhibition of lands (explained under the next ſection), and is intended merely to interpel or inhibit the tackſman from farther intermeddling. This diligence of inhibition may alſo be uſed at the ſuit of the titular, againſt any other poſſeſſor of the teinds; and if the tackſman or poſſeſſor ſhall intermeddle after the inhibition is executed, he is liable in a ſpuilzie.

19. Lands and teinds paſs by different titles; a diſpoſition of lands, therefore, though granted by one who has alſo right to the teind, will not carry the teind, unleſs it ſhall appear from ſpecial circumſtances that a ſale of both was deſigned by the parties. In lands *cum decimis incluſis*, where the teinds are conſolidated with the ſtock, the right of both muſt neceſſarily go together in all caſes.

Sect. XI. *Of inhibitions.*

clxxi.

The conſtitutions and tranſmiſſion of feudal rights, and the burdens with which they are chargeable, being now explained, it remains to be conſidered how theſe rights may be affected at the ſuit of creditors by legal diligence. Diligences are certain forms of law whereby a creditor endeavours to make good his payment, either by affecting the perſon of his debtor, or by ſecuring the ſubjects belonging to him from alienation, or by carrying the property of theſe ſubjects to himſelf. They are either real or perſonal. Real diligence is that which is proper to heritable or real rights; perſonal, is that by which the perſon of the debtor may be ſecured, or his perſonal eſtate affected. Of the firſt ſort we have two, *viz. inhibition* and *adjudication*.

Diligences.

Inhibition.

2. *Inhibition* is a perſonal prohibition, which paſſes by letters under the ſignet, prohibiting the party inhibited to contract any debt, or do any deed, by which any part of his lands may be allienated or carried off in prejudice of the creditor inhibiting. It muſt be executed againſt the debtor, perſonally, or at his dwelling-houſe, as ſummonſes, and thereafter publiſhed and regiſtered in the ſame manner with interdictions, (ſee N° clxxxiii. 21.)

3. Inhibition may proceed, either upon a liquid obligation, or even on an action commenced by a creditor for making good a claim not yet ſuſtained by the judge; which laſt is called *inhibition upon a depending action*. The ſummons, which conſtitutes the dependence, muſt be executed againſt the debtor before the letters of inhibition paſs the ſignet; for no ſuit can be ſaid to depend againſt one till he be cited in it as a defender: but the effect of ſuch inhibition is ſuſpended till decree be obtained in the action againſt the debtor; and in the ſame manner, inhibitions on conditional debts have no effect till the condition be purified. Inhibitions are not granted, without a trial of the cauſe, when they proceed on conditional debts. And though, in other caſes, inhibitions now paſs of courſe, the lords are in uſe to ſtay, or recal them, either on the debtor's ſhowing cauſe why the diligence ſhould not proceed, or even *ex officio* where the ground of the diligence is doubtful.

Limited to heritage.

4. Though inhibitions, by their uniform ſtyle, diſable the debtor from ſelling his moveable as well as his heritable eſtate, their effect has been long limited to heritage, from the interuption that ſuch an embargo upon moveables muſt have given to commerce;

ſo that debts contracted after inhibition may be the foundation of diligence againſt the debtor's perſon and moveable eſtate. An inhibition ſecures the inhibitor againſt the alienation, not only of lands that belonged to his debtor when he was inhibited, but of thoſe that he ſhall afterwards acquire: but no inhibition can extend to ſuch after-purchaſes as lie in a juriſdiction where the inhibition was not regiſtered; for it could not have extended to theſe though they had been made prior to the inhibition.

5. This diligence only ſtrikes againſt the voluntary debts or deeds of the inhibited perſon: it does not reſtrain him from granting neceſſary deeds, *i. e.* ſuch as he was obliged to grant anterior to the inhibition, ſince he might have been compelled to grant theſe before the inhibitor had acquired any right by his diligence. By this rule, a wadſetter or annualrenter might, after being inhibited, have effectually renounced his right to the reverſer on payment, becauſe law could have compelled him to it: but to ſecure inhibitors againſt the effect of ſuch alienations, it is declared by act of ſederunt of the court of ſeſſion, Feb. 19. 1680, that, after intimation of the inhibition to the reverſer, no renunciation or grant of redemption ſhall be ſuſtained, except upon declarator of redemption brought by him, to which the inhibitor muſt be made a party.

Is ſimply prohibitory. 6. An inhibition is a diligence ſimply prohibitory, ſo that the debt, on which it proceeds, continues perſonal after the diligence: and conſequently, the inhibitor, in a queſtion with anterior creditors whoſe debts are not ſtruck at by the inhibition, is only preferable from the period at which his debt is made real by adjudication: and where debts are contracted on heritable ſecurity, though poſterior to the inhibition, the inhibitor's debt, being perſonal, cannot be ranked with them; he only draws back from the creditors ranked the ſums contained in his diligence. The heir of the perſon inhibited is not reſtrained from alienation by the diligence uſed againſt his anceſtor; for the prohibition is perſonal, affecting only the debtor againſt whom the diligence is uſed.

7. Inhibitions do not, of themſelves, make void the poſterior debts or deeds of the perſon inhibited; they only afford a title to the uſer of the diligence to ſet them aſide, if he finds them hurtful to him: and even where a debt is actually reduced *ex capite inhibitionis*, ſuch reduction, being founded ſolely in the inhibitor's intereſt, is profitable to him alone, and cannot alter the natural preference of the other creditors.

Purging of inhibitions. 8. Inhibitions may be reduced upon legal nullities, ariſing either from the ground of debt or the form of diligence. When payment is made by the debtor to the inhibitor, the inhibition is ſaid to be *purged*. Any creditor, whoſe debt is ſtruck at by the inhibition, may, upon making payment to the inhibitor, compel him to aſſign the debt and diligence in his favour, that he may make goood his payment the more effectually againſt the common debtor.

clxxii. SECT. XII. *Of compriſings, adjudications, and judicial Sales.*

Appriſing. HERITABLE rights may be carried from the debtor to the creditor, either by the diligence of appriſing (now adjudication), or by a judicial ſale carried on before the court of ſeſſion. Appriſing, or compriſing, was the ſentence of a ſheriff, or of a meſſenger who was ſpecially conſtituted ſheriff for that purpoſe, by which the heritable rights belonging to the debtor were ſold for payment of the debt due to the appriſer; ſo that appriſings were, by their original conſtitution, proper ſales of the debtor's lands to any purchaſer who offered. If no purchaſer could be found, the ſheriff was to appriſe or tax the value of the lands by an inqueſt (whence came the name of *appriſing*), and to make over to the creditor lands to the value of the debt. A full hiſtory of appriſings will be found in the beginning of Mr Erſkine's large *Inſtitute* under this title; it being conſidered as unneceſſary to enter into a deduction now no longer neceſſary, as by the act 1672 adjudications were ſubſtituted in their place.

2. That creditors may have acceſs to affect the eſtate of their deceaſed debtor, though the heir ſhould ſtand off from entering, it is made lawful (by 1540, *c.* 106.) for any creditor to charge the heir of his debtor to enter to his anceſtor (year and day being paſt after the anceſtor's death), within 40 days after the charge; and if the heir fails, the creditor may proceed to appriſe his debtor's lands, as if the heir had been entered. Cuſtom has ſo explained this ſtatute, that the creditor may charge the heir, immediately after the death of his anceſtor, provided that the ſummons which is to be founded on the charge be not raiſed till after the expiry both of the year and of the 40 days neat enſuing the year, within which the heir is charged to enter. But this ſtatute relates only to ſuch charges on which appriſing is to be led againſt the anceſtor's lands; for, in thoſe which are to be barely the foundation of a common ſummons or proceſs againſt the heir, action will be ſuſtained if the year be elapſed from the anceſtor's death before the execution of the ſummons, though the 40 days ſhould not be alſo expired. Though the ſtatute authoriſes ſuch charges againſt majors only, practice has alſo extended it againſt minors, and the rule is extended to the caſe where the heir is the debtor. One muſt, in this matter, diſtinguiſh between a general and a ſpecial charge. A general charge ſerves only to fix the repreſentation of the heir who is charged, ſo as to make the debt his which was formerly his anceſtor's: but a ſpecial charge makes up for the want of a ſervice (N° clxxx. 25.); and ſtates the heir, *fictione juris* in the right of the ſubjects to which he is charged to enter. Where, therefore, the heir is the debtor, a general charge for fixing the repreſentation againſt him is unneceſſary, ſince the only concern of the creditor is, that his debtor make up titles to the anceſtor's eſtate, which is done by a ſpecial charge: but where the deceaſed was the debtor, the creditor muſt firſt charge his heir to enter in general, that it may be known whether he is to repreſent the debtor: if he does not enter within forty days, the debt may be fixed againſt him by a decree of conſtitution; after which, the heritable rights belonging to the anceſtor will fall to be attached; in doing which, the diligence to be uſed is different, according to the ſtate of the titles in the anceſtors perſon: for if the anceſtor ſtood veſted by inſeftment, the heir muſt be charged to enter heir in ſpecial; but if the anceſtor had but a perſonal right to the ſubjects (i. e. not perfected by ſeiſin), which would have been carried to the heir by a general ſervice, then what is called a *general ſpecial charge* muſt be given to the heir. Theſe char-

ges, either ſpecial or general ſpecial, as the circumſtances of the caſe may require, are by the ſtatute 1540 made equivalent to the heir's actual entry; and therefore an adjudication led after the *induciæ* of the charges are elapſed, effectually carries to the creditor the ſubjects to which the heir was charged to enter.

Adjudications.

3. Appriſings in courſe of time underwent many changes in their form and effect, till at length, by act 1672, *c.* 19. adjudications were ſubſtituted in their place, and are carried on by way of action before the court of ſeſſion. By that ſtatute, ſuch part of the debtor's lands is to be adjudged as is equivalent to the principal ſum and intereſt of the debt, with the compoſition due to the ſuperior and expences of infeſtment, and a fifth part more in reſpect the creditor is obliged to take land for his money. The debtor muſt deliver to the creditor a valid right of the lands to be adjudged, or tranſumpts thereof, renounce the poſſeſſion in his favour, and ratify the decree of adjudication: and law conſiders the rent of the lands as preciſely commenſurated to the intereſt of the debt; ſo that the adjudger lies under no obligation to account for the ſurplus rents. In this, which is called a *ſpecial adjudication*, the legal, or time within which the debtor may redeem, is declared to be five years; and the creditor attaining poſſeſſion upon it can uſe no farther execution againſt the debtor, unleſs the lands be evicted from him.

4. Where the debtor does not produce a ſufficient right to the lands, or is not willing to renounce the poſſeſſion, and ratify the decree (which is the caſe that has moſt frequently happened), the ſtatute makes it lawful for the creditor to adjudge all right belonging to the debtor in the ſame manner, and under the ſame reverſion of ten years, as he could, by the former laws, have appriſed it. In this laſt kind, which is called a *general adjudication*, the creditor muſt limit his claim to the principal ſum, intereſt, and penalty, without demanding a fifth part more. But no general adjudication can be inſiſted on, without libelling in the ſummons the other alternative of a ſpecial adjudication; for ſpecial adjudications are introduced by the ſtatute in the place of appriſings; and it is only where the debtor refuſes to comply with the terms thereof, that the creditor can lead a general adjudication.

5. Abbreviates are ordained to be made of all adjudications, which muſt be recorded within 60 days after the date of the decree. In every other reſpect, general adjudications have the ſame effects that appriſings had: adjudgers in poſſeſſion are accountable for the ſurplus rents; a citation in adjudications renders the ſubject litigious; ſuperiors are obliged to enter adjudgers; the legality of adjudications does not expire during the debtor's minority, &c. Only it may be obſerved, that though appriſings could not proceed before the term of payment, yet where the debtor is *vergens ad inopiam* the court *ex nobili officio* admit adjudication for the debt before it be payable. But this ſort being founded ſolely in equity, ſubſiſts merely as a ſecurity, and cannot carry the property to the creditor by the lapſe of any length of time.

Two kinds of adjudications.

6. There are two kinds of adjudication, which took place at the ſame time with appriſings, and ſtill obtain; *viz.* adjudications on a decree *cognitionis cauſa*, otherwiſe called *contra hereditatem jacentem*; and adjudications *in implement*. Where the debtor's apparent heir, who is charged to enter, formally renounces the ſucceſſion, the creditor may obtain a decree *cognitionis cauſa*; in which, though the heir renouncing is cited for the ſake of form, no ſentence condemnatory can be pronounced againſt him, in reſpect of his renunciation; the only effect of it is to ſubject the *hereditas jacens* to the creditor's diligence.

7. Adjudications *contra hereditatem jacentem*, carry not only the lands themſelves that belonged to the deceaſed, but the rents thereof fallen due ſince his death; for theſe, as an acceſſory to the eſtate belonging to the deceaſed, would have deſcended to the heir if he had entered, which rule is applied to all adjudications led on a ſpecial charge. This ſort of adjudication is declared redeemable within ſeven years, by any co-adjudging creditor, either of the deceaſed debtor or of the heir renouncing. The heir himſelf, who renounces, cannot be reſtored againſt his renunciation, nor conſequently redeem, if he be not a minor. But even a major may redeem indirectly, by granting a ſimulate bond to a confident perſon; the adjudication upon which, when conveyed to himſelf, is a good title to redeem all other adjudications againſt the lands belonging to his anceſtor.

8. Adjudications *in implement* are deduced againſt thoſe who have granted deeds without procuratory of reſignation or precept of ſeiſin, and refuſe to diveſt themſelves; to the end that the ſubject conveyed may be effectually veſted in the grantee. Theſe adjudications may be alſo directed againſt the heir of the granter, upon a charge to enter. Here there is no place for a legal reverſion; for, as the adjudication is led for completing the right of a ſpecial ſubject, it muſt carry that ſubject as irredeemably as if the right had been voluntarily completed.

9. All adjudications led within year and day of that one which has been made firſt effectual by ſeiſin (where ſeiſin is neceſſary), or exact diligence for obtaining ſeiſin, are preferable *pari paſſu*. The year and day runs from the date of the adjudication, and not of the ſeiſin or diligence, for obtaining it. After the days of that period, they are preferable according to their dates. All the co-adjudgers within the year are preferable *pari paſſu*, as if one adjudication had been led for all their debts. This makes the ſeiſin or diligence on the firſt adjudication a common right to the reſt, who muſt therefore refund to the owner of that diligence his whole expence laid out in carrying on and completing it. And though that firſt adjudication ſhould be redeemed, the diligence upon it ſtill ſubſiſts as to the reſt. This *pari paſſu* preference, however, does not deſtroy the legal preference of adjudications led on *debita fundi* (ſee N° clxix. 16.); nor does it take place in adjudications in implement.

A new ſort of adjudication has been lately introduced into the law of Scotland by the act of the 23d Geo. III. for rendering the payment of the creditors of inſolvent debtors more equal and expeditious. Among the many other proviſos in that ſtatute for expediting the payment of creditors, and leſſening the expence of diligence againſt the debtor's eſtate, it is enacted, That upon an order from the court of ſeſſion or lord ordinary, the bankrupt ſhall be bound to execute a diſpoſition or diſpoſitions, making over to the truſtee or truſtees choſen by the creditors the whole eſtate real and perſonal, wherever ſituated; and in caſe of the bankrupt's refuſal, or of the order not being complied with from any other reaſon, the court or the lord ordinary ſhall, upon the application of the truſtee, iſſue an act or decree, adjudging the property of the whole ſequeſtrated eſtate to be in the truſtee for behoof of the creditors; which ſhall have the ſame effect as if the bankrupt had executed the conveyance: and by a ſubſequent clauſe in the ſtatute, it is enacted, that this diſpoſition of the heritable eſtate, together with the order of the court or lord ordinary on which it proceeds, or, failing thereof, the decree of adjudication of the court or the lord ordinary, ſhall within 60 days of the date thereof be regiſtered in the regiſter of abbreviates of adjudications; and ſhall have the effect to intitle the truſtee for behoof of the whole creditors to rank in the ſame manner upon the heritable eſtate as if it had been a proper decree of adjudication, obtained at the date of the interlocutor awarding the ſequeſtration; accumulating the whole debts, principal and intereſt, as at that period, and adjudging for ſecurity or payment thereof, ſo as to rank *pari paſſu* with any prior effectual adjudication, and within year and day of the ſame. By this act alſo, in order to leſſen the number of adjudications, and conſequently the expence upon a bankrupt eſtate, it is declared, that intimation ſhall be made of the firſt adjudication which is called, ſo as all creditors who are in readineſs may, within ſuch a reaſonable time as may be allowed, not exceeding twenty ſederunt days, produce their grounds of debt, and be conjoined in the decree to follow on ſaid firſt adjudication. At the ſame time it may be proper to mention, that this act is only temporary; and after eight years experience, will probably ſuffer very conſiderable alterations, when it ſhall become neceſſary to digeſt another bankrupt law for Scotland.

Sequeſtration.

10. Before treating of judicial ſales of bankrupts eſtates, the nature of *ſequeſtration* may be ſhortly explained, which is a diligence that generally uſhers in actions of ſale. Sequeſtration of lands is a judicial act of the court of ſeſſion, whereby the management of an eſtate is put into the hands of a factor or ſteward named by the court, who gives ſecurity, and is to be accountable for the rents to all having intereſt. This diligence is competent, either where the right of the lands is doubtful, if it be applied for before either of the competitors has attained poſſeſſion, or where the eſtate is heavily charged with debts: but, as it is an unfavourable diligence, it is not admitted, unleſs that meaſure ſhall appear neceſſary for the ſecurity of creditors. Subjects not brought before the court by the diligence of creditors, cannot fall under ſequeſtration; for it is the competition of creditors which alone founds the juriſdiction of the court to take the diſputed ſubject into their poſſeſſion.

11. The court of ſeſſion who decrees the ſequeſtration has the nomination of the factor, in which they are directed by the recommendation of the creditors. A factor appointed by the ſeſſion, though the proprietor had not been infeft in the lands, has a power to remove tenants. Judicial factors muſt, within ſix months after extracting their factory, make up a rental of the eſtate, and a liſt of the arrears due by tenants, to be put into the hands of the clerk of the proceſs, as a charge againſt themſelves, and a note of ſuch alterations in the rental as may afterwards happen; and muſt alſo deliver to the clerk annually a ſcheme of their accounts, charge and diſcharge, under heavy penalties. They are, by the nature of their office, bound to the ſame degree of diligence that a prudent man adhibits in his own affairs; they are accountable for the intereſt of the rents, which they either have, or by diligence might have recovered, from a year after their falling due. As it is much in the power of thoſe factors to take advantage of the neceſſities of creditors, by purchaſing their debts at an undervalue, all ſuch purchaſes made either by the factor himſelf, or to his behoof, are declared equivalent to an acquittance or extinction of the debt. No factor can warrantably pay to any creditor, without an order of the court of ſeſſion; for he is, by the tenor of his commiſſion, directed to pay the rents to thoſe who ſhall be found to have the beſt right to them. Judicial factors are intitled to a ſalary, which is generally ſtated at five *per cent.* of their intromiſſions: but it is ſeldom aſcertained till their office expires, or till their accounting; that the court may modify a greater or ſmaller ſalary, or none, in proportion to the factor's integrity and diligence. Many caſes occur, where the court of ſeſſion, without ſequeſtration, name a factor to preſerve the rents from periſhing; *e. g.* where an heir is deliberating whether to enter, where a minor is without tutors, where a ſucceſſion opens to a perſon reſiding abroad; in all which caſes the factor is ſubjected to the rules laid down in act of ſederunt, Feb. 13. 1730.

As to ſequeſtrations under the bankrupt act before recited, the reader muſt neceſſarily be referred to the act itſelf; for being only temporary, as before mentioned, it ſeems quite inconſiſtent with the plan of this work to enter into a minute detail of the different regulations thereby laid down in caſes of ſequeſtration under it.

Sale of bankrupt eſtates.

12. The word *bankrupt* is ſometimes applied to perſons whoſe funds are not ſufficient for their debts; and ſometimes, not to the debtor, but to his eſtate. The court of ſeſſion are empowered, at the ſuit of any real creditor, to try the value of a bankrupt's eſtate, and ſell it for the payment of his debts.

Ranking of creditors.

13. No proceſs of ſale, at the ſuit of a creditor, can proceed without a proof of the debtor's bankruptcy, or at leaſt that his lands are ſo charged with debts that no prudent perſons will buy from him; and therefore the ſummons of ſale muſt comprehend the debtor's whole eſtate. The debtor, or his apparent heir, and all the real creditors in poſſeſſion, muſt be made parties to the ſuit; but it is ſufficient if the other creditors be called by an edictal citation. The ſummons of ſale contains a concluſion of ranking or preference of the bankrupt's creditors. In this ranking, firſt and ſecond terms are aſſigned to the whole creditors for exhibiting in court (or producing) their rights and diligences; and the decree of certification proceeding thereupon, againſt the writings not produced, has the ſame effect in favour of the creditors who have produced their rights, as if that decree had proceeded upon an action of reduction-improbation. See N° clxxxiii. 3. By the late bankrupt act, the ſale may precede the ranking of the creditors, unleſs the court uqon application of the creditors or any of them ſhall find ſufficient cauſe to delay the ſale. The irredeemable property of the lands is adjudged by the court to the higheſt of-

ferer at the ſale. The creditors receiving payment muſt grant to the purchaſer abſolute warrandice, to the extent of the ſum received by them; and the lands purchaſed are declared diſburdened of all debts or deeds of the bankrupt, or his anceſtors, either on payment of the price by the purchaſer to the creditors according to their preference, or on conſignation of it. By the act 1695, purchaſers were bound to conſign the price in the hands of the magiſtrates of Edinburgh; but by § 5. of the above act, they may conſign it in the royal bank or bank of Scotland. The only remedy provided to ſuch creditors as judge themſelves hurt by the ſale or diviſion of the price, even though they ſhould be minors, is an action for recovering their ſhare of the price againſt the creditors who have received it.

14. The expence of theſe proceſſes is deburſed by the factor out of the rents in his hands; by which the whole burden of ſuch expence falls upon the poſterior creditors.

15. Apparent heirs are intitled to bring actions of ſale of the eſtates belonging to their anceſtors, whether bankrupt or not; the expence of which ought to fall upon the purſuer, if there is any excreſcence of the price, after payment of the creditors; but if there be no excreſcence, the creditors, who alone are gainers by the ſale, ought to bear the charge of it.

16. As proceſſes of ranking and ſale are deſigned for the common intereſt of all the creditors, no diligence carried on or completed during their pendency ought to give any preference in the competition; *pendente lite, nihil innovandum.*

17. It is a rule in all real diligences, that where a creditor is preferable on ſeveral different ſubjects, he cannot uſe his preference arbitrarily, by favouring one creditor more than another; but muſt allocate his univerſal or catholic debt proportionally againſt all the ſubjects or parties whom it affects. If it is material to ſuch creditor to draw his whole payment out of any one fund, he may apply his debt ſo as may beſt ſecure himſelf: but that inequality will be rectified as to the poſterior creditors, who had likewiſe, by their rights and diligences, affected the ſubjects out of which he drew his payment, by obliging him to aſſign in their favour his right upon the ſeparate ſubjects which he did not uſe in the ranking; by which they may recur againſt theſe ſeparate ſubjects for the ſhares which the debt preferred might have drawn out of them. As the obligation to aſſign is founded merely in equity, the catholic creditor cannot be compelled to it, if his aſſigning ſhall weaken the preference of any ſeparate debt veſted in himſelf, affecting the ſpecial ſubject ſought to be aſſigned. But if a creditor upon a ſpecial ſubject ſhall acquire from another a catholic right, or a catholic creditor ſhall purchaſe a debt affecting a ſpecial ſubject, with a view of creating to the ſpecial debt a higher degree of preference than was naturally due to it, by an arbitrary application of the catholic debt, equity cannot protect him from aſſigning in favour of the creditor excluded by ſuch application, eſpecially if, prior to the purchaſe, the ſubject has become litigious by the proceſs of ranking.

II. MOVEABLE RIGHTS.

The law of heritable rights being explained, *Moveable* Rights fall next to be conſidered; the doctrine of which depends chiefly on the nature of Obligations.

Sect. XIII. *Of obligations and contracts in general.* clxxiii.

Obligations.

An obligation is a legal tie, by which one is bound to pay or perform ſomething to another. Every obligation on the perſon obliged implies an oppoſite right in the creditor, ſo that what is a burden in regard to the one is right with reſpect to the other; and all rights founded on obligation are called *perſonal.* There is this eſſential difference between a real and a perſonal right, that a *jus in re*, whether of property, or of an inferior kind, as ſervitude, intitles the perſon veſted with it to poſſeſs the ſubject as his own; or if he is not in poſſeſſion, to demand it from the poſſeſſors: whereas the creditor in a perſonal right has only *jus ad rem*, or a right to compel the debtor to fulfil his obligation; without any right in the ſubject itſelf, which the debtor is bound to transfer to him. One cannot oblige himſelf, but by a preſent act of the will. A bare reſolution, therefore, or purpoſe, to be obliged, is alterable at pleaſure.

Diviſion of obligations.

2. Obligations are either, (1.) Merely natural, where one perſon is bound to another by the law of nature, but cannot be compelled by any civil action to the performance. Thus, though deeds granted by a minor having curators, without their conſent, are null, yet the minor is naturally obliged to perform ſuch deeds; and parents are naturally obliged to provide their children in reaſonable patrimonies. Natural obligations intitle the creditor to retain what he has got in virtue thereof, without being ſubjected to reſtore it. (2.) Obligations are merely civil, which may be ſued upon by an action, but are elided by an exception in equity; this is the caſe of obligations granted through force or fear, &c. (3.) Proper or full obligations, are thoſe which are ſupported both by equity and the civil ſanction.

3. Obligations may be alſo divided into, (1.) Pure, to which neither day nor condition is adjected. Theſe may be exacted immediately. (2.) Obligations *(ex die)*, which have a day adjected to their performance. In theſe, *dies ſtatim cedit, ſed non venit;* a proper debt ariſes from the date of the obligations, becauſe it is certain that the day will exiſt; but the execution is ſuſpended till the lapſe of that day. (3.) Conditional obligations; in which there is no proper debt *(dies non cedit)* till the condition be purified, becauſe it is poſſible the condition may never exiſt; and which therefore are ſaid to create only the hope of a debt; but the granter, even of theſe, has no right to reſile An obligation, to which a day is adjected that poſſibly may never exiſt, implies a condition; *dies incertus pro conditione habetur.* Thus, in the caſe of a proviſion to a child, payable when he attains to the age of fourteen, if the child dies before that age, the proviſion falls.

4. Obligations, when conſidered with regard to their cauſe, were divided by the Romans, into thoſe ariſing from contract, quaſi contract, delict, and quaſi delict: but there are certain obligations, even full and proper ones, which cannot be derived from any of theſe ſources, and to which Lord Stair gives the name of *obediential.* Such as the obligation on parents to aliment or maintain their children; which ariſes ſingly from the relation

tion of parent and child, and may be enforced by the civil magiſtrate. Under parents are comprehended, the mother, grandfather, and grandmother, in their proper order. This obligation on parents extends to the providing of their iſſue in all the neceſſaries of life, and giving them ſuitable education. It ceaſes, when the children can earn a livelihood by their own induſtry; but the obligation on parents to maintain their indigent children, and reciprocally on children to maintain their indigent parents, is perpetual. This obligation is, on the father's death, transferred to the eldeſt ſon, the heir of the family; who, as repreſenting the father, muſt aliment his younger brothers and ſiſters: the brothers are only intitled to alimony, till their age of twenty-one, after which they are preſumed able to do for themſelves; but the obligation to maintain the ſiſters continues till their marriage. In perſons of lower rank, the obligation to aliment the ſiſters ceaſes after they are capable of ſubſiſting by any ſervice or employment.

5. All obligations, ariſing from the natural duty of reſtitution, fall under this claſs; thus, things given upon the view of a certain event, muſt be reſtored, if that event does not afterwards exiſt; thus alſo, things given *ob turpem cauſam*, where the turpitude is in the receiver and not in the giver, muſt be reſtored. And on the ſame principle, one upon whoſe ground a houſe is built or repaired by another, is obliged, without any covenant, to reſtore the expence laid out upon it, in ſo far as it has been profitable to him.

Contracts.

6. A contract is the voluntary agreement of two or more perſons, whereby ſomething is to be given or performed upon one part, for a valuable conſideration, either preſent or future, on the other part. Conſent, which is implied in agreement, is excluded, (1.) By error in the eſſentials of the contract; for, in ſuch caſe, the party does not properly contract, but errs or is deceived; and this may be alſo applied to contracts which take their riſe from fraud or impoſition. (2.) Conſent is excluded by ſuch a degree of reſtraint upon any of the contracting parties, as extorts the agreement; for where violence or threatening are uſed againſt a perſon, his will has really no part in the contract.

Loan.

7. Loan, or *mutuum*, is that contract which obliges a perſon, who has borrowed any fungible ſubject from another, to reſtore to him as much of the ſame kind, and of equal goodneſs. Whatever receives its eſtimation in number, weight, or meaſure, is a fungible; as corn, wine, current coin, &c. The only proper ſubjects of this contract are things which cannot be uſed without either their extinction or alienation: hence the property of the thing lent is neceſſarily transferred by delivery to the borrower, who conſequently muſt run all the hazards either of its deterioration or its periſhing, according to the rule, *res perit ſuo domino*. Where the borrower neglects to reſtore at the time and place agreed on, the eſtimation of the thing lent muſt be made according to its price at that time and in that place; becauſe it would have been worth ſo much to the lender, if the obligation had been duly performed. If there is no place nor time ſtipulated for, the value is to be ſtated according to the price that the commodity gave when and where it was demanded. In the loan of money, the value put on it by public authority, and not its intrinſic worth, is to be conſidered. This contract is one of thoſe called by the Romans *unilateral*, being obligatory only on one part; for the lender is ſubjected to no obligation: the only action therefore that it produces, is pointed againſt the borrower, that he may reſtore as much in quantity and quality as he borrowed, together with the damage the lender may have ſuffered through default of due performance.

Commodate.

8. Commodate is a ſpecies of loan, gratuitous on the part of the lender, where the thing lent may be uſed, without either its periſhing or its alienation. Hence in this ſort of loan, the property continues with the lender; the only right the borrower acquires in the ſubject is its uſe, after which he muſt reſtore the individual thing that he borrowed: conſequently, if the ſubject periſhes, it periſhes to the lender, unleſs it has periſhed by the borrower's fault. What degree of fault or negligence makes either of the contracting parties liable to the other in damages, is comprehended under the following rules. Where the contract gives a mutual benefit to both parties, each contractor is bound to adhibit a middle ſort of diligence; ſuch as a man of ordinary prudence uſes in his affairs. Where only one of the parties has benefit by the contract, that party muſt uſe exact diligence; and the other who has no advantage by it, is accountable only for dole, or for groſs omiſſions, which the law conſtrues to be dole. Where one employs leſs care on the ſubject of any contract which implies an exuberant truſt, than he is known to employ in his own affairs, it is conſidered as dole.

9. Hence it will appear that this is a *bilateral* contract; the borrower muſt be exactly careful of the thing lent, and reſtore it at the time fixed by the contract, or after that uſe is made of it for which it was lent: if he puts it to any other uſe, or neglects to reſtore it at the time covenanted, and if the thing periſhes thereafter, even by mere accident, he is bound to pay the value. On the other hand, the lender is obliged to reſtore to the borrower ſuch of the expences deburſed by him on that ſubject as aroſe from any uncommon accident, but not thoſe that naturally attend the uſe of it. Where a thing is lent gratuitouſly, without ſpecifying any time of redelivery, it conſtitutes the contract of *precarium*, which is revocable at the lender's pleaſure, and, being entered into from a perſonal regard to the borrower, ceaſeth by his death.

Depoſitation.

10. Depoſitation is alſo a *bilateral* contract, by which one who has the cuſtody of a thing committed to him (the depoſitary) is obliged to reſtore it to the depoſitor. If a reward is bargained for by the depoſitory for his care, it reſolves into the contract of location. As this contract is gratuitous, the depoſitory is only anſwerable for the conſequences of groſs neglect; but after the depoſit is redemanded, he is accountable even for caſual misfortunes. He is intitled to a full indemnification for the loſſes he has ſuſtained by the contract, and to the recovery of all ſums expended by him on the ſubject.

Nautæ, caupones, ſtabularii.

11. An obligation ariſes without formal paction, barely by a traveller's entering into an inn, ſhip, or ſtable, and there depoſiting his goods, or putting up his horſes; whereby the innkeeper, ſhipmaſter, or ſtabler, is accountable, not only for his own facts and thoſe of his ſervants (which is an obligation implied in the very exerciſe of theſe employments), but of the other gueſts or paſſengers; and, indeed, in every caſe, unleſs

where the goods have been loſt *damno fatali*, or carried off by pirates or houſe-breakers. Not only the maſters of ſhips, but their employers, are liable each of them for the ſhare that he has in the ſhip; but by the preſent cuſtom of trading nations, the goods brought into a ſhip muſt have been delivered to the maſter or mate, or entered into the ſhip-books. Carriers fall within the intendment of this law; and practice has extended it to vintners within borough. The extent of the damage ſuſtained by the party may be proved by his own oath *in litem*.

Sequeſtration.

12. Sequeſtration, whether voluntarily conſented to by the parties, or authoriſed by the judge, is a kind of depoſit; but as the office of ſequeſtree, to whoſe care the ſubject in diſpute is committed, is not conſidered as gratuitous, he cannot throw it up at pleaſure, as a common depoſitory may do; and he is liable in the middle degree of diligence. Conſignation of money is alſo a depoſit. It may be made, either where the debt is called in queſtion by the debtor, as in ſuſpenſions; or where the creditor refuſes to receive his money, as in wadſets, &c. The riſk of the conſigned money lies on the conſigner, where he ought to have made payment, and not conſignation; or has conſigned only a part; or has choſen for conſignatory, a perſon neither named by the parties nor of good credit. The charger, or other creditor, runs the riſk, if he has charged for ſums not due, or has without good reaſon refuſed payment, by which refuſal the conſignation became neceſſary. It is the office of a conſignatory, to keep the money in ſafe cuſtody till it be called for: if therefore he puts it out at intereſt, he muſt run the hazard of the debtor's inſolvency; but, for the ſame reaſon, though he ſhould draw intereſt for it, he is liable in none to the conſigner.

Conſignation.

Pledge.

13. Pledge, when oppoſed to wadſet, is a contract, by which a debtor puts into the hands of his creditor a ſpecial moveable ſubject in ſecurity of the debt, to be redelivered on payment. Where a ſecurity is eſtabliſhed by law to the creditor, upon a ſubject which continues in the debtor's poſſeſſion, it has the ſpecial name of an hypothec. Tradeſmen and ſhip-carpenters have an hypothec on the houſe or ſhip repaired, for the materials and other charges of reparation: but not for the expence of building a new ſhip. This, however, muſt not now be underſtood to apply univerſally; for the court of ſeſſion, in different caſes which lately occurred before them, and founding upon the law and practice of England in ſimilar caſes, have found, that no hypothec exiſts for the expence of repairs done in a *home* port. Owners of ſhips have an hypothec on the cargo for the freight; heritors on the fruits of the ground; and landlords on the *invecta et illata*, for their rents. Writers alſo, and agents, have a right of hypothec, or more properly of retention, in their conſtituent's writings, for their claim of pains and deburſements. A creditor cannot, for his own payment, ſell the ſubject impignorated, without applying to the judge-ordinary for a warrant to put it up to public ſale or roup; and to this application the debtor ought to be made a party.

Hypothec.

clxxiv.
Verbal agreement.

SECT. XIV. *Of obligations by word or writ.*

THE appellation of *verbal* may be applied to all obligations to the conſtitution of which writing is not eſſential, which includes both real and conſenſual contracts; but as theſe are explained under ſeparate titles, obligations *by word*, in the ſenſe of this rubric, muſt be reſtricted, either to promiſes, or to ſuch verbal agreements as have no ſpecial name to diſtinguiſh them. Agreement implies, the intervention of two different parties, who come under mutual obligations to one another. Where nothing is to be given or performed but on one part, it is properly called a *promiſe*; which, as it is gratuitous, does not require the acceptance of him to whom the promiſe is made. An offer, which muſt be diſtinguiſhed from a promiſe, implies ſomething to be done by the other party; and conſequently is not binding on the offerer, till it be accepted, with its limitations or conditions, by him to whom the offer is made; after which, it becomes a proper agreement.

Writing.

2. Writing muſt neceſſarily intervene in all obligations and bargains concerning heritable ſubjects, though they ſhould be only temporary: as tacks, which, when they are verbal, laſt but for one year. In theſe, no verbal agreement is binding, though it ſhould be referred to the oath of the party; for, till writing is adhibited, law gives both parties a right to reſile, as from an unfiniſhed bargain; which is called *locus pœnitentiæ*. If, upon a verbal bargain of lands, part of the price ſhall be paid by him who was to purchaſe, the *interventus rei*, the actual payment of money, creates a valid obligation, and gives a beginning to the contract of ſale: and, in general, where-ever matters are no longer entire, the right to reſile ſeems to be excluded. An agreement, whereby a real right is paſſed from, or reſtricted, called *pactum liberatorium*, may be preferred verbally; for freedom is favourable, and the purpoſe of ſuch agreement is rather to diſſolve than to create an obligation. Writing is alſo eſſential to bargains made under condition that they ſhall be reduced into writing; for in ſuch caſes, it is *pars contractus*, that, till writing be adhibited, both parties ſhall have liberty to withdraw. In the ſame manner, verbal or nuncupative teſtaments are rejected by the law; but verbal legacies are ſuſtained, where they do not exceed L. 100 Scots.

Solemnities of written obligations.

3. Anciently, when writing was little uſed, deeds were executed by the party, appending his ſeal to them in preſence of witneſſes. For preventing frauds that might happen by appending ſeals to falſe deeds, the ſubſcription alſo of the granter was afterwards required, and, if he could not write, that of a notary. As it might be of dangerous conſequences to give full force to the ſubſcription of the parties by initials, which is more eaſily counterfeited; the practice, in order to ſuſtain ſuch ſubſcription, ſeems to require a proof, not only that the granter uſed to ſubſcribe in that way, but that *de facto* he had ſubſcribed the deed in queſtion; at leaſt, ſuch proof is required, if the inſtrumentary witneſſes be ſtill alive.

4. As a further check, it was afterwards provided, that all writings carrying any heritable right, and other deeds of importance, be ſubſcribed by the principal parties, if they can ſubſcribe; otherwiſe, by two notaries, before four witneſſes ſpecially deſigned. The ſubſequent practice extended this requiſite of the deſignation of the witneſſes to the caſe where the parties themſelves ſubſcribed. Cuſtom has conſtrued obligations for

ſums exceeding L.100 Scots, to be obligations of importance. In a diviſible obligation, *ex. gr.* for a ſum of money, though exceeding L. 100, the ſubſcription of one notary is ſufficient, if the creditor reſtricts his claim to L. 100: But in an obligation indiviſible, *e. g.* for the performance of a fact, if it be not ſubſcribed in terms of the ſtatute, it is void. When notaries thus atteſt a deed, the atteſtation or docquet muſt ſpecially expreſs that the granter gave them a mandate to ſign; nor is it ſufficient that this be mentioned in the body of the writing.

5. In every deed, the name of him who writes it, with his dwelling-place, or other mark of diſtinction, muſt be inſerted. The witneſſes muſt both ſubſcribe as witneſſes, and their names and deſignations be inſerted in the body of the deed: And all ſubſcribing witneſſes muſt know the granter, and either ſee him ſubſcribe, or hear him acknowledge his ſubſcription; otherwiſe they are declared puniſhable as acceſſary to forgery. Deeds, decrees, and other ſecurities, conſiſting of more than one ſheet, may be written by way of book, in place of the former cuſtom of paſting together the ſeveral ſheets, and ſigning the joinings on the margin; provided each page be ſigned by the granter, and marked by its number, and the teſting clauſe expreſs the number of pages.

Solemnities of notarial inſtruments, &c.

6. Inſtruments of ſeiſin are valid, if ſubſcribed by one notary, before a reaſonable number of witneſſes; which is extended by practice to inſtruments of reſignation. Two witneſſes are deemed a reaſonable number to every deed that can be executed by one notary. It is not neceſſary that the witneſſes to a notorial inſtrument or execution ſee the notary or meſſenger ſign; for they are called as witneſſes to the tranſaction which is atteſted, and not to the ſubſcription of the perſon atteſting.

7. A new requiſite has been added to certain deeds ſince the union, for the benefit of the revenue: They muſt be executed on ſtamped paper, or parchment, paying a certain duty to the crown. Theſe duties muſt all be paid before wrote upon, under a penalty; but they are ſo numerous and complex, that it would be tedious, even if it fell under our plan, to enter into an enumeration of them. They will be found at length in Swinton's Abridgement, *voce Stamps*, to which the reader is referred. Certain judicial deeds, ſuch as bail-bonds, bonds of cautionry, in ſuſpenſions, &c. are excepted, and do not require ſtamps, as will be ſeen from the ſeveral acts referred to by the compiler of the above abridgement of the ſtatutes.

Blank bonds.

8. The granter's name and deſignation are eſſential, not properly as ſolemnities, but becauſe no writing can have effect without them. Bonds were, by our ancient practice, frequently executed without filling up the creditor's name; and they paſſed from hand to hand, like notes payable to the bearer: But as there was no method for the creditor of a perſon poſſeſſed of theſe to ſecure them from his payment, all writings taken blank in the creditor's name are declared null, as covers to fraud; with the exception of indorſations of bills of exchange.

Privileged deeds.

9. Certain privileged writings do not require the ordinary ſolemnities. 1. Holograph deeds (written by the granter himſelf) are effectual without witneſſes. The date of no holograph writing, except a bill of exchange (ſee next parag.), can be proved by the granter's own aſſertion, in prejudice either of his heir or his creditors, but muſt be ſupported by other adminicles. 2. Teſtaments, if executed where men of ſkill and buſineſs cannot be had, are valid though they ſhould not be quite formal: and let the ſubject of a teſtament be ever ſo valuable, one notary ſigning for the teſtator, before two witneſſes, is in practice ſufficient. Clergymen were frequently notaries before the reformation; and, though they were afterwards prohibited to act as notaries, the caſe of teſtaments is excepted; ſo that theſe are ſupported by the atteſtation of one miniſter, with two witneſſes. 3. Diſcharges to tenants are ſuſtained without witneſſes, from their preſumed ruſticity, or ignorance in buſineſs. 4. Miſſive letters *in re mercatoria*, commiſſions, and fitted accounts in the courſe of trade, and bills of exchange, though they are not holograph, are, from the favour of commerce, ſuſtained without the ordinary ſolemnities.

Bills of exchange.

10. A bill of exchange is an obligation in the form of a mandate, whereby the drawer or mandant deſires him to whom it is directed, to pay a certain ſum, at the day and place therein mentioned, to a third party. Bills of exchange are drawn by a perſon in one country to his correſpondent in another; and they have that name, becauſe it is the exchange, or the value of money in one place compared with its value in another, that generally determines the preciſe extent of the ſum contained in the draught. The creditor in the bill is ſometimes called the poſſeſſor, or *porteur*. As parties to bills are of different countries, queſtions concerning them ought to be determined by the received cuſtom of trading nations, unleſs where ſpecial ſtatute interpoſes. For this reaſon, bills of exchange, though their form admits not of witneſſes, yet prove their own dates, in queſtions either with the heir or creditors of the debtor; but this doctrine is not extended to inland bills payable to the drawer himſelf.

Their ſolemnities and obligations.

11. A bill is valid, without the deſignation either of the drawer or of the perſon to whom it is made payable: It is enough, that the drawer's ſubſcription appears to be truly his; and one's being poſſeſſor of a bill marks him out to be the creditor, if he bears the name given in the bill to the creditor: Nay, though the perſon drawn on ſhould not be deſigned, his acceptance preſumes that it was he whom the drawer had in his eye. Bills drawn blank, in the creditor's name fall under the ſtatutory nullity; for though indorſations of bills are excepted from it, bills themſelves are not. Not only the perſon drawn upon muſt ſign his acceptance, but the drawer muſt ſign his draught, before any obligation can be formed againſt the accepter: Yet it is ſufficient in practice, that the drawer ſigns before the bill be produced in judgment; though it ſhould be after the death both of the creditor and accepter. A creditor in a bill may tranſmit it to another by indorſation, though the bill ſhould not bear *to his order*; by the ſame rule that other rights are tranſmiſſible by aſſignation, though they do not bear *to aſſignees*.

Obligation.

12. The drawer, by ſigning his draught, becomes liable for the value to the creditor in the bill, in caſe the perſon drawn upon either does not accept, or after acceptance does not pay; for he is preſumed to have received value from the creditor at giving him the draught, though it ſhould not bear *for value received*: But, if

the drawer was debtor to the creditor in the bill before the draught, the bill is preſumed to be given towards payment of the debt, unleſs it expreſsly bears *for value*. The perſon drawn upon, if he refuſe to accept, while he has the drawer's money in his hands, is liable to him in damages. As a bill preſumes value from the creditor, indorſation preſumes value from the indorſee; who therefore, if he cannot obtain payment from the accepter, has recourſe againſt the indorſer, unleſs the bill be indorſed in theſe words, *without recourſe*.

13. Payment of a bill, by the accepter, acquits both the drawer and him at the hands of the creditor: but it intitles the accepter, if he was not the drawer's debtor, to an action of recourſe againſt him; and, if he was, to a ground of compenſation. Where the bill does not bear value in the hands of the perſon drawn upon, it is preſumed that he is not the drawer's debtor, and conſequently he has recourſe againſt the drawer, *ex mandato*.

14. Bills, when indorſed, are conſidered as ſo many bags of money delivered to the onerous indorſee; which therefore carry right to the contents, free of all burdens that do not appear on the bills themſelves. Hence, a receipt or diſcharge, by the original creditor, if granted on a ſeparate paper, does not exempt the accepter from ſecond payment to the indorſee; hence, alſo, no ground of compenſation competent to the accepter againſt the original creditor can be pleaded againſt the indorſee: but, if the debtor ſhall prove, by the oath of the indorſee, either that the bill is indorſed to him for the indorſer's own behoof, or that he paid not the full value for the indorſation, the indorſee is juſtly conſidered as but a name; and therefore all exceptions, receivable againſt the original creditor, will be ſuſtained againſt him. A proteſted bill, after regiſtration, cannot be tranſmitted by indorſation, but by aſſignation.

Negociation.

15. Bills muſt be negociated by the poſſeſſor, againſt the perſon drawn upon, within a preciſe time, in order to preſerve recourſe againſt the drawer. In bills payable ſo many days after ſight, the creditor has a diſcretionary power of fixing the payment ſomewhat ſooner or later, as his occaſions ſhall require. Bills payable on a day certain, need not be preſented for acceptance till the day of payment, becauſe that day can neither be prolonged nor ſhortened by the time of acceptance. For the ſame reaſon, the acceptance of bills, payable on a preciſe day, need not be dated; but, where a bill is drawn payable ſo many days after ſight, it muſt; becauſe there the term of payment depends on the date of acceptance.

Days of grace.

16. Though bills are, in ſtrict law, due the very day on which they are made payable, and may thefore be proteſted on the day thereafter; yet there are three days immediately following the day of payment, called *days of grace*, within any of which the creditor may proteſt the bill: but if he delay proteſting till the day after the laſt day of grace, he loſes his recourſe Where a bill is proteſted, either for not acceptance or not payment, the diſhonour muſt be notified to the drawer or indorſer, within three poſts at fartheſt. This ſtrictneſs of negociation is confined to ſuch bills as may be proteſted by the poſſeſſor upon a third day of grace: where, therefore, bills, are indorſed after the days of grace are expired, the indorſee is left more at liberty, and does not loſe his recourſe, tho' he ſhould not take a formal proteſt for not payment, if, within a reaſonable time, he ſhall give the indorſer notice of the accepter's refuſing to pay. Not only does the poſſeſſor, who neglects ſtrict negociation, loſe his recourſe againſt the drawer, where the perſon drawn upon becomes afterwards bankrupt; but tho' he ſhould continue ſolvent: for he may in that caſe recover payment from the debtor, and ſo is not to be indulged in an unneceſſary proceſs againſt the drawer, which he has tacitly renounced by his negligence. Recourſe is preſerved againſt the drawer, though the bill ſhould not be duly negociated, if the perſon drawn upon was not his debtor; for there the drawer can qualify no prejudice by the neglect of diligence, and he ought not to have drawn on one who owed him nothing.

Privileges of bills by ſtatute.

17. The privileges ſuperadded to bills by ſtatute are, that though, by their form, they can have no clauſe of regiſtration, yet, if duly proteſted, they are regiſtrable within ſix months after their date in caſe of not acceptance, or in ſix months after the term of payment in the caſe of not payment; which regiſtration is made the foundation of ſummary diligence, either againſt the drawer or indorſer in the caſe of not acceptance, or againſt the accepter in the caſe of not payment. This is extended to inland bills, *i. e.* bills both drawn and made payable in Scotland. After acceptance, ſummary diligence lies againſt no other than the accepter; the drawer and indorſer muſt be purſued by an ordinary action. It is only the principal ſum in the bill, and intereſt, that can be charged for ſummarily: the exchange, when it is not included in the draught, the re-exchange incurred by ſuffering the bill to be proteſted and returned, and the expence of diligence, muſt all be recovered by an ordinary action; becauſe theſe are not liquid debts, and ſo muſt be previouſly conſtituted.

Inland bills.

Certain bills not privileged.

18. Bills, when drawn payable at any conſiderable diſtance of time after date, are denied the privileges of bills; for bills are intended for currency, and not to lie as a ſecurity in the creditor's hands. Bills are not valid which appear *ex facie* to be donations. No extrinſic ſtipulation ought to be contained in a bill which deviates from the proper nature of bills: hence, a bill to which a penalty is adjected, or with a clauſe of intereſt from the date, is null. Inland precepts drawn, not for money the medium of trade, but for fungibles, are null, as wanting writer's name and witneſſes. It is not an agreed point whether promiſſory notes, without writer and witneſſes, unleſs holograph, are probative.

Late alterations as to bills and promiſſory notes.

19. So ſtood the law of Scotland, in regard to bills and promiſſory notes, previous to the ſtatute 12 Geo. III. By that ſtatute, however, the law of Scotland has undergone very material alterations. They are declared to have the ſame privileges; and to preſcribe in ſix years after the term of payment. Bank notes and poſt-bills are excepted from this preſcription; nor does it run during the years of the creditor's minority. Inland bills and promiſſory notes muſt be proteſted within the days of grace, to ſecure recourſe; and the diſhomary notified within 14 days after the proteſt. Sumnour diligence may paſs not only againſt the accepter, but likewiſe againſt the drawer, and all the indorſees jointly and ſeverally; and at the inſtance of any indorſee,

dorſee, though the bill was not proteſted in his name, upon his producing a receipt or letter from the proteſting indorſee. This act was in force only for ſeven years after 15th May 1772, and to the end of the then next ſeſſion of parliament. But as it was found by experience, that it had been of great advantage to Scotland, it was made perpetual by the late act 23 Geo. III. ſo that it has now become a permanent part of the law of Scotland.

Solemnities of deeds ſigned in a foreign country.

20. As for the ſolemnities eſſential to deeds ſigned in a foreign country, when they come to receive execution in Scotland, it is a general rule, that no laws can be of authority beyond the dominions of the lawgiver. Hence, in ſtrictneſs, no deed, though perfected according to the law of the place where it is ſigned, can have effect in another country where different ſolemnities are required to a deed of that ſort. But this rigour is ſo ſoftened *ex comitate*, by the common conſent of nations, that all perſonal obligations granted according to the law of that country where they are ſigned, are effectual every where; which obtains in obligations to convey heritage. Conveyances themſelves, however, of heritable ſubjects, muſt be perfected according to the law of the country where the heritage lies, and from which it cannot be removed.

Delivery and depoſitation of deeds.

21. A writing, while the granter keeps it under his own power or his doer's, has no force; it becomes obligatory, only after it is delivered to the grantee himſelf, or found in the hands of a third perſon. As to which laſt, the following rules are obſerved. A deed found in the hands of one who is doer both for the granter and grantee, is preſumed to have been put in his hands as doer for the grantee. The preſumption is alſo for delivery, if the deed appears in the hands of one who is a ſtranger to both. Where a deed is depoſited in the hands of a third perſon, the terms of depoſitation may be proved by the oath of the depoſitary, unleſs where they are reduced into writing. A deed appearing in the cuſtody of the grantee himſelf, is conſidered as his abſolute right; in ſo much that the granter is not allowed to prove that it was granted in truſt, otherwiſe than by a written declaration ſigned by the truſtee, or by his oath.

What deeds effectual without delivery.

22. The following deeds are effectual without delivery. (1.) Writings containing a clauſe diſpenſing with the delivery; theſe are of the nature of revocable deeds, where the death of the granter is equivalent to delivery, becauſe after death there can be no revocation. (2.) Deeds in favour of children, even natural ones; for parents are the proper cuſtodiars or keepers of their childrens writings. From a ſimilar reaſon, poſtnuptial ſettlements by the huſband to the wife need no delivery. (3.) Rights which are not to take effect till the granter's death, or even where he reſerves an intereſt to himſelf during his life; for it is preſumed he holds the cuſtody of theſe, merely to ſecure to himſelf ſuch reſerved intereſt. (4.) Deeds which the granter lay under an antecedent natural obligation to execute, *e. g.* rights granted to a cautioner for his relief. (5.) Mutual obligations, *e. g.* contracts; for every ſuch deed, the moment it is executed, is a common evident to all the parties contractors. Laſtly, the publication of a writing by regiſtration, is equivalent to delivery.

SECT. XV. *Of obligations and contracts ariſing from conſent, and of acceſſory obligations.*

clxxv. Conſenſual contracts.

CONTRACTS conſenſual, (*i. e.* which might, by the Roman law, be perfected by ſole conſent, without the intervention either of things or of writing,) are *ſale*, *permutation*, *location*, *ſociety*, and *mandate*. Where the ſubject of any of theſe contracts is heritable, writing is neceſſary.

Sale.

2. *Sale* is a contract, by which one becomes obliged to give ſomething to another, in conſideration of a certain price in current money to be paid for it. Things conſiſting merely in hope, may be the ſubject of this contract, as the draught of a net. Commodities, where their importation or uſe is abſolutely prohibited, cannot be the ſubject of ſale; and even in run goods, no action lies againſt the vender for not delivery, if the buyer knew the goods were run. So far indeed has this principle been carried, and ſo anxious have the judges been to put a ſtop to the practice of ſmuggling, that in different caſes which have occurred of action being brought at the inſtance of a foreign merchant againſt perſons reſident in Scotland for payment of goods which had been ſmuggled, a diſtinction has been made betwixt the caſe of the foreign merchant being or not being a native of Scotland. Where the foreign merchant was a native of Scotland, it has been preſumed that he was acquainted with the revenue law of the country, and that he was in a manner *verſans in re illicita*; and therefore action has been denied for recovery of the price of ſuch goods: but where, on the other hand, the foreign merchant was not a native of Scotland, no ways amendable to, and even preſumed ignorant of, its laws, he has with juſtice been allowed action for the price of ſuch goods, unleſs it were ſhown that he had in fact been *particeps criminis*, by aiding the ſmuggle. The ſame principle has regulated the deciſions in the courts of England in caſes of a ſimilar nature, which have within theſe few years come before them.

3. Though this contract may be perfected before delivery of the ſubject, the property remains till then with the vender: (See N° clxii. 9.). Yet till delivery, the hazard of its deterioration falls on the purchaſer becauſe he has all the profits ariſing from it after the ſale. On the other hand, the ſubject itſelf periſhes to the vender; (1.) If it ſhould periſh through his fault, or after his undue delay to deliver it. (2.) If a ſubject is ſold as a fungible, and not as an individual, or *corpus*, e. g. a quantity of farm-wheat, ſold without diſtinguiſhing the parcel to be delivered from the reſt of the farm. (3.) The *periculum* lies on the vender till delivery, if he be obliged by a ſpecial article in the contract to deliver the ſubject at a certain place.

Location.

4. *Location* is that contract where an hire is ſtipulated for the uſe of things, or for the ſervice of perſons. He who lets his work or the uſe of his property to hire, is the locator or leſſor; and the other, the conductor or leſſee. In the location of things, the leſſor is obliged to deliver the ſubject, fitted to the uſe it was let for; and the leſſee muſt preſerve it carefully, put it to no other uſe, and, after that is over, reſtore it. Where a workman or artificer lets his labour, and if the work is either not performed according to contract,

or if it be inſufficient, even from mere unſkilfulneſs, he is liable to his employer in damages, for he ought not, as an artificer, to have undertaken a work to which he was not equal. A ſervant hired for a certain term, is intitled to his full wages, though from ſickneſs or other accident he ſhould be diſabled for a part of his time; but if he die before the term, his wages are only due for the time he actually ſerved. If a maſter dies, or without good reaſon turns off, before the term, a ſervant who eats in his houſe, the ſervant is intitled to his full wages, and to his maintenance till that term: and, on the other part, a ſervant who without ground deſerts his ſervice, forfeits his wages and maintenance, and is liable to his maſter in damages.

Society,

5. *Society* or *copartnerſhip* is a contract, whereby the ſeveral partners agree concerning the communication of loſs and gain ariſing from the ſubject of the contract. It is formed by the reciprocal choice which the partners make one of another; and ſo is not conſtituted in the caſe of co-heirs, or of ſeveral legatees in the ſame ſubject. A copartnerſhip may be ſo conſtituted, that one of the partners ſhall, either from his ſole right of property in the ſubject, or from his ſuperior ſkill, be intitled to a certain ſhare of the profits, without being ſubjected to any part of the loſs; but a ſociety, where one partner is to bear a certain proportion of loſs, without being intitled to any ſhare of the profits, called by the Romans *ſocietas leonina*, is juſtly reprobated. All the partners are intitled to ſhares of profit and loſs proportioned to their ſeveral ſtocks, where it is not otherwiſe covenanted.

6. As partners are united, from a *delectus perſonæ*, in a kind of brotherhood, no partner can, without a ſpecial power contained in the contract, transfer any part of his ſhare to another. All the partners are bound *in ſolidum* by the obligation of any one of them, if he ſubſcribe by the *firm* or ſocial name of the company; unleſs it be a deed that falls not under the common courſe of adminiſtration. The company effects are the common property of the ſociety ſubjected to its debts; ſo that no partner can claim a diviſion thereof, even after the ſociety is diſſolved, till theſe are paid: and, conſequently, no creditor of a partner can, by diligence, carry to himſelf the property of any part of the common ſtock, in prejudice of a company creditor: but he may, by arreſtment, ſecure his debtor's ſhare in the company's hands, to be made forthcoming to him at the cloſe of the copartnerſhip, in ſo far as it is not exhauſted by the company debts.

7. Society being founded in the mutual confidence among the *ſocii*, is diſſolved, not only by the renunciation, but by the death of any one of them, if it be not otherwiſe ſpecially covenanted. A partner who renounces upon unfair views, or at a critical time, when his withdrawing may be fatal to the ſociety, looſes his partners from all their engagements to him, while he is bound to them for all the profits he ſhall make by his withdrawing, and for the loſs ariſing thereby to the company. Not only natural, but civil death, *e. g.* ariſing from a ſentence inflicting capital puniſhment, makes one incapable to perform the duties of a partner, and conſequently diſſolves the ſociety. In both caſes, of death and renunciation, the remaining partners may continue the copartnerſhip, either expreſsly, by entering into a new contract; or tacitly, by carrying on their trade as formerly. Public trading companies are now every day conſtituted, with rules very different from thoſe which either obtained in the Roman law or at this day obtain in private ſocieties. The proprietors or partners in theſe, though they may transfer their ſhares, cannot renounce; nor does their death diſſolve the company, but the ſhare of the deceaſed deſcends to his repreſentative.

A joint trade

8. A *joint trade* is not a copartnerſhip, but a momentary contract, where two or more perſons agree to contribute a ſum, to be employed in a particular courſe of trade, the produce whereof is to be divided among the adventurers, according to their ſeveral ſhares, after the voyage is finiſhed. If, in joint trade, that partner who is intruſted with the money for purchaſing the goods, ſhould, in place of paying them in caſh, buy them upon credit, the furniſher who followed his faith alone in the ſale, has no recourſe againſt the other adventurers; he can only recover from them what of the buyer's ſhare is yet in their hands. Where any one of the adventurers in a joint trade becomes bankrupt, the others are preferable to his creditors, upon the common ſtock, as long as it continues undivided, for their relief of all the engagements entered into by them on account of the adventure.

Mandate.

9. *Mandate* is a contract, by which one employs another to manage any buſineſs for him; and by the Roman law, it muſt have been gratuitous. It may be conſtituted tacitly, by one's ſuffering another to act in a certain branch of his affairs, for a tract of time together, without challenge. The mandator is at liberty not to accept of the mandate; and as his powers are ſolely founded in the mandants commiſſion, he muſt if he undertakes it, ſtrictly adhere to the directions given him: Nor is it a good defence, that the method he followed was more rational; for in that his employer was the proper judge. Where no ſpecial rules are preſcribed, the mandatory, if he acts prudently, is ſecure, whatever the ſucceſs may be; and he can ſue for the recovery of all the expences reaſonably deburſed by him in the execution of his office.

10. Mandates may be general, containing a power of adminiſtering the mandant's whole affairs; but no mandate implies a power of diſpoſing gratuitouſly of the conſtituent's property, nor even of ſelling his heritage for an adequate price but a general mandatory may ſell ſuch of the moveables as muſt otherwiſe periſh. No mandatory can, without ſpecial powers, tranſact doubtful claims belonging to his conſtituent, or refer them to arbiters.

11. Mandates expire, (1.) By the revocation of the employer, though only tacit, as if he ſhould name another mandatory for the ſame buſineſs. (2.) By the renunciation of the mundatory; even after he has executed part of his commiſſion, if his office be gratuitous. (3.) By the death, either of the mandant or mandatory: But if matters are not entire, the mandate continues in force, notwithſtanding ſuch revocation, renunciation, or death. Procuratories of reſignation, and precepts of ſeiſin, are made out in the form of mandates; but, becauſe they are granted for the ſole benefit of the mandatory, all of them, excepting precepts of *clare conſtat*, are declared (by act 1693) to continue after the death either of the granter or grantee. Deeds which cotain a clauſe or mandate for regiſtration, are for the

ſame reaſon made regiſtrable after the death of either (by act 1693 and 1696.)

12. The favour of commerce has introduced a tacit mandate, by which maſters of ſhips are impowered to contract in name of their exercitors or employers, for repairs, ſhip-proviſions, or whatever elſe may be neceſſary for the ſhip or crew; ſo as to oblige not themſelves only, but their employers. Whoever has the actual charge of the ſhip is deemed the maſter, though he ſhould have no commiſſion from the exercitors, or ſhould be ſubſtituted by the maſter in the direction of the ſhip without their knowledge. Exercitors are liable, whether the maſter has paid his own money to a merchant for neceſſaries, or has borrowed money to purchaſe them. The furniſher or lender muſt prove that the ſhip needed repairs, proviſions, &c. to ſuch an extent; but he is under no neceſſity to prove the application of the money or materials to the ſhip's uſe. If there are ſeveral exercitors, they are liable *ſinguli in ſolidum*. In the ſame manner the undertaker of any branch of trade, manufacture, or other land negociation, is bound by the contracts of the inſtitors whom he ſets over it, in ſo far as relates to the ſubject of the *præpoſitura*.

Homologation.

13. Contracts and obligations, in themſelves imperfect, receive ſtrength by the contractor or his heir's doing any act thereafter which imports an approbation of them, and conſequently ſupplies the place of an original legal conſent. This is called *homologation;* and it takes place even in deeds intrinſically null, whether the nullity ariſes from the want of ſtatutory ſolemnities, or from the incapacity of the granter. It cannot be inferred, (1.). By the act of a perſon who was not in the knowledge of the original deed; for one cannot approve what he is ignorant of. (2.) Homologation has no place where the act or deed, which is pleaded as ſuch, can be aſcribed to any other cauſe; for an intention to come under an obligation is not preſumed.

Quaſi-contracts,

14. *Quaſi-contracts* are formed without explicit conſent, by one of the parties doing ſomething which by its nature either obliges him to the other party, or the other party to him. Under this claſs may be reckoned tutory, &c. the entry of an heir, *negotiorum geſtio*, *indebiti ſolutio*, communion of goods between two or more common proprietors, and *mercium jactus levandæ navis cauſa*. *Negotiorum geſtio* forms thoſe obligations which ariſe from the management of a perſon's affairs, in his abſence, by another, without a mandate. As ſuch manager acts without authority from the proprietor, he ought to be liable in exact diligence, unleſs he has from friendſhip interpoſed in affairs which admitted no delay; and he is accountable for his intromiſſions with intereſt. On the other part, he is intitled to the recovery of his neceſſary deburſements on the ſubject, and to be relieved of the obligations in which he may have bound himſelf in conſequence of the management.

13. *Indebiti ſolutio*, or the payment to one of what is not due to him, if made through any miſtake, either of fact, or even of law, founds him who made the payment in an action againſt the receiver for repayment *(condictio indebiti.)* This action does not lie, (1.) If the ſum paid was due *ex æquitate*, or by a natural obligation: for the obligation to reſtore is founded ſolely in equity. (2.) If he who made the payment knew that nothing was due; for *qui conſulto dat quod non debebat, præſumiter donare.*

Right of dividing common property.

16. Where two or more perſons become common proprietors of the ſame ſubject, either by legacy, gift, or purchaſe, without the view of copartnerſhip, an obligation is thereby created among the proprietors to communicate the profit and loſs ariſing from the ſubject, while it remains common: And the ſubject may be divided at the ſuit of any having intereſt. This diviſion, where the queſtion is among the common proprietors, is *according to the valuation of their reſpective properties:* But where the queſtion is between the proprietors and thoſe having ſervitudes upon the property, the ſuperfice is only divided, without prejudice to the property. Commonties belonging to the king, or to royal boroughs, are not diviſible. Lands lying runrig, and belonging to different proprietors, may be divided, with the exception of borough and incorporated acres; the execution of which is committed to the judge ordinary, or juſtices of the peace.

Lex Rhodia de jactu.

17. The throwing of goods overboard, for lightening a ſhip in a ſtorm, creates an obligation, whereby the owners of the ſhip and goods ſaved are obliged to contribute for the relief of thoſe whoſe goods were thrown overboard, that ſo all may bear a proportional loſs of the goods ejected for the common ſafety. In this contribution, the ſhip's proviſions ſuffer no eſtimation. A maſter who has cut his maſt, or parted with his anchor to ſave the ſhip, is intitled to this relief; but if he has loſt them by the ſtorm, the loſs falls only on the ſhip and freight. If the ejection does not ſave the ſhip, the goods preſerved from ſhipwreck are not liable in contribution. Ejection may be lawfully made, if the maſter and a third part of the mariners judge that meaſure neceſſary, though the owner of the goods ſhould oppoſe it: and the goods ejected are to be valued at the price that the goods of the ſame ſort which are ſaved ſhall be afterwards ſold for.

Acceſſory obligations

18. There are certain obligations which cannot ſubſiſt by themſelves, but are *acceſſions* to, or make a part of, other obligations. Of this ſort are *fidejuſſion*, and the *obligation to pay intereſt*. *Cautionry*, or *fidejuſſion*, is that obligation by which one becomes engaged as ſecurity for another, that he ſhall either pay a ſum, or perform a deed.

Cautionry.

19. A cautioner for a ſum of money may be bound, either ſimply as cautioner for the principal debtor, or conjunctly and ſeverally for and with the principal debtor. The firſt has, by our cuſtoms, the *beneficium ordinis*, or of diſcuſſion; by which the creditor is obliged to diſcuſs the proper debtor, before he can inſiſt for payment againſt the cautioner. When one is bound as full debtor with and for the principal, or conjunctly and ſeverally with him, the two obligants are bound equally in the ſame obligation, each *in ſolidum;* and conſequently, the cautioner, though he is but an acceſſory, may be ſued for the whole, without either diſcuſſing or even citing the principal debtor. Cautioners for performance of facts by another, or for the faithful diſcharge of an office (*e. g.* for factors, tutors, &c.), cannot by the nature of their engagement be bound conjunctly and ſeverally with the principal obligant, becauſe the fact to which the principal is bound cannot poſſibly be performed by another. In ſuch engagements, therefore, the failure muſt be previouſly

conſtituted againſt the proper debtor, before action can be brought againſt the cautioner for making up the loſs of the party ſuffering.

20. The cautioner, who binds himſelf at the deſire of the principal debtor, has an *actio mandati* or of relief againſt him, for recovering the principal and intereſt paid by himſelf to the creditor, and for neceſſary damages; which action lies *de jure*, though the creditor ſhould not aſſign to him on payment. As relief againſt the debtor is implied in fidejuſſory obligations, the cautioner, where ſuch relief is cut off, is no longer bound: hence, the defence of preſcription frees the cautioner, as well as the principal debtor.

21. But, (1.) Where the cautionry is interpoſed to an obligation merely natural, the relief is reſtricted to the ſums that have really turned to the debtor's profit. (2.) A cautioner who pays without citing the debtor, loſes his relief, in ſo far as the debtor had a relevant defence againſt the debt, in whole or in part. Relief is not competent to the cautioner, till he either pays the debt, or is diſtreſſed for it; except, 1ſt, Where the debtor is expreſsly bound to deliver to the cautioner his obligation cancelled, againſt a day certain, and has failed; or, 2dly, Where the debtor is *vergens ad inopiam*; in which caſe the cautioner may, by proper diligence, ſecure the debtor's funds for his own relief, even before payment or diſtreſs.

22. A right of relief is competent *de jure* to the cautioner who pays, againſt his co-cautioners, unleſs where the cautioner appears to have renounced it. In conſequence of this implied relief, a creditor, if he ſhall grant a diſcharge to any one of the cautioners, muſt, in demanding the debt from the others, deduct that part as to which he has cut off their relief by that diſcharge. Where the principal debtor, in a bond in which a cautioner is bound, grants bond of corroboration with a new cautioner, both cautioners, as they intervene for the ſame debt, and at the deſire of the ſame debtor, have a mutual relief againſt each other; but where the cautioner in the firſt bond ſigns as a principal obligant in the corroboration, the cautioner in the new bond, it would ſeem, would be intitled to a total relief againſt the firſt cautioner. At ſame time, the deciſions of the court of ſeſſion are not perfectly at one upon this branch of the doctrine of cautionry.

Judicial cautionry.

23. Cautionry is alſo *judicial*, as in a ſuſpenſion. It is ſufficient to looſe the cautioner, that when he became bound, the ſuſpender had good reaſon to ſuſpend, *e. g.* if the charger had at that period no title, or had not then performed his part, though theſe grounds of ſuſpenſion ſhould be afterwards taken off. In all maritime cauſes, where the parties are frequently foreigners, the defender muſt give caution *judicio ſiſti et judicatum ſolvi*: ſuch cautioner gets free by the death of the defender before ſentence; but he continues bound though the cauſe ſhould be carried from the admiral to the court of ſeſſion. This ſort of caution is only to be exacted in cauſes ſtrictly maritime.

24. It happens frequently, that a creditor takes two or more obligants bound to him, all as principal debtors, without fidejuſſion. Where they are ſo bound, for the performance of facts that are in themſelves indiviſible, they are liable each for the whole, or *ſinguli in ſolidum*. But, if the obligation be for a ſum of money, they are only liable *pro rata*; unleſs, (1.) Where they are in expreſs words bound conjunctly and ſeverally; or, (2.) In the caſe of bills or promiſſory notes. One of ſeveral obligants of this ſort, who pays the whole debt, or fulfils the obligation, is intitled to a proportional relief againſt the reſt; in ſuch manner, that the loſs muſt, in every caſe, fall equally upon all the ſolvent obligants.

Intereſt of money.

25. Obligations for ſums of money are frequently accompanied with an obligation for the annualrent or intereſt thereof. *Intereſt (uſuræ)* is the profit due by the debtor, of a ſum of money to the creditor for the uſe of it. The canon law conſidered the taking of intereſt as unlawful: the law of Moſes allowed it to be exacted from ſtrangers: and all the reformed nations of Europe have found it neceſſary, after the example of the Romans, to authoriſe it at certain rates fixed by ſtatute. Soon after the reformation, the legal intereſt was fixed at the rate of 10 *per cent. per annum*; from which time it has been gradually reduced, till at laſt, by 12 *Ann ſtat.* 2. *c.* 16. it was brought to five *per cent.* and has continued at that rate ever ſince.

26. Intereſt is due, either *by law* or *by paction*. It is due *by law*, either *from the force of ſtatute*, under which may be included acts of ſederunt, or *from the nature of the tranſaction*. Bills of exchange, and inland bills, though they ſhould not be proteſted, carry intereſt from their date in caſe of non acceptance; or from the day of their falling due, in caſe of acceptance and nonpayment. Where a bill is accepted, which bears no term of payment, or which is payable on demand, no intereſt is due till demand be made of the ſum, the legal voucher of which is a notorial proteſt. Intereſt is due by a debtor after deunciation, for all the ſums contained in the diligence, even for that part which is made up of intereſt. Sums paid by cautioners on diſtreſs carry intereſt, not only as to the principal ſum in the obligation, but as to the intereſt paid by the cautioner. Factors named by the court of ſeſſion are liable for intereſt, by a ſpecial act of ſederunt; ſee N° clxxii. 11.

27. It riſes *ex lege*, or from the nature of the tranſaction, that a purchaſer in a ſale is liable in intereſt for the price of the lands bought from the term of his entry, though the price ſhould be arreſted in his hands, or though the ſeller ſhould not be able to deliver to him a ſufficient progreſs or title to the lands; for no purchaſer can in equity enjoy the fruits of the lands, while at the ſame time he retains the intereſt of the price: but lawful conſignation of the price made by a purchaſer, upon the refuſal of perſon's having right to receive it, ſtops the currency of intereſt. Where one intermeddles with money belonging to another which carries intereſt, he ought to reſtore it *cum omni obventione et cauſa*; and is therefore liable in the intereſt of it, as being truly an acceſſory of the ſubject itſelf. It is alſo from the nature of the tranſaction, that intereſt is in certain caſes allowed to merchants or others in name of damages.

28. Intereſt is due *by expreſs paction*, where there is a clauſe in a bond or obligation, by which money is made to carry intereſt. An obligation is not lawful, where it is agreed on, that the yearly intereſt of the ſum lent, if it ſhould not be paid punctually as it

falls due, ſhall be accumulated into a principal ſum bearing intereſt; but an obligation may be lawfully granted, not only for the ſum truly lent, but for the intereſt to the day at which the obligation is made payable, whereby the intermediate intereſt is accumulated into a principal ſum from the term of payment. Intereſt may be alſo due by *implied paction;* Thus, where intereſt upon a debt is by a letter promiſed for time paſt, ſuch promiſe implies a paction for intereſt as long as the debt remains unpaid; thus alſo, the uſe of payment of intereſt preſumes a paction, and when intereſt is expreſſed for one term, it is preſumed to be bargained for till payment.

General properties of obligation.

29. The ſubject-matter of all obligations conſiſts either *of things*, or *of facts*. Things exempted from commerce cannot be the ſubject of obligation. (See N° clxii. 2.) One cannot be obliged to the performance of a fact naturally impoſſible: nor of a fact in itſelf immoral, for that is alſo in the judgment of law impoſſible. Since impoſſible obligations are null, no penalty or damage can be incurred for non performance: but it is otherwiſe, if the fact be in itſelf poſſible, though not in the debtor's power; in which caſe the rule obtains, *locum facti impræſtabilis ſubit damnum et intereſſe*.

30. An obligation, to which a condition is adjected, either naturally or morally impoſſible, is in the general caſe null; for the parties are preſumed not to have been ſerious. But ſuch obligation is valid, and the condition thereof held *pro non ſcripta*, (1.) In teſtaments; (2.) In obligations to the performance of which the granter lies under a natural tie, as in bonds of proviſion to a child. Where an obligation is granted under a condition, lawful but unfavourable, *e. g.* that the creditor ſhall not marry without the conſent of certain friends, no more weight is given to the condition than the judge thinks reaſonable. A condition, which is in ſome degree in the power of the creditor himſelf, is held as fulfilled, if he has done all he could to fulfil it. Implement or performance cannot be demanded in a mutual contract, by that party who himſelf declines or cannot fulfil the counterpart.

Donation,

31. *Donation*, ſo long as the ſubject is not delivered to the donee, may be juſtly ranked among obligations; and it is that obligation which ariſes from the mere good will and liberality of the granter. Donations imply no warrandice, but from the future facts of the donor. They are hardly revocable by law for ingratitude, though it ſhould be of the groſſeſt kind: thoſe betwixt man and wife are revocable by the donor, even after the death of the donee; but remuneratory grants, not being truly donations, cannot be ſo revoked. That ſpecial ſort of donation, which is conſtituted verbally, is called a *promiſe*. The Roman law intitled all donors to the *beneficium competentiæ*, in virtue of which they might retain ſuch part of the donation as was neceſſary for their own ſubſiſtence. The law allows this benefit to fathers, with reſpect to the proviſions granted to their children; and to grandfathers, which is a natural conſequence of childrens obligation to aliment their indigent parents; but to no collateral relation, not even to brothers.

32. Donations made in contemplation of death, or *mortis cauſa*, are of the nature of legacies, and like them revocable: conſequently, not being effectual in the granter's life, they cannot compete with any of his creditors; not even with thoſe whoſe debts were contracted after the donation. They are underſtood to be given from a perſonal regard to the donee, and therefore fall by his predeceaſe. No deed, after delivery, is to be preſumed a *donatio mortis cauſa;* for revocation is excluded by delivery.

33. Deeds are not preſumed, *in dubio*, to be donations. Hence, a deed by a debtor to his creditor, if donation be not expreſſed, is preſumed to be granted in ſecurity or ſatisfaction of the debt; but bonds of proviſion to children are, from the preſumption of paternal affection, conſtrued to be intended as an additional patrimony: yet a tocher, given to a daughter in her marriage-contract, is preſumed to be in ſatisfaction of all former bonds and debts; becauſe marriage contracts uſually contain the whole proviſions in favour of the bride. One who aliments a perſon that is come of age, without an expreſs paction for board, is preſumed to have entertained him as a friend, unleſs in the caſe of thoſe who earn their living by the entertainment or board of ſtrangers. But alimony given to minors, who cannot bargain for themſelves, is not accounted a donation; except either where it is preſumed, from the near relation of the perſon alimenting, that it was given *ex pietate;* or where the minor had a father or curators, with whom a bargain might have been made.

Sect. XVI. *Of the diſſolution or extinction of obligations.* clxxvi.

Extinction of obligations, as, performance.

Obligations may be diſſolved by *performance or implement*, *conſent*, *compenſation*, *novation*, and *confuſion*. (1.) By *ſpecifical performance:* thus, an obligation for a ſum of money is extinguiſhed by payment. The creditor is not obliged to accept of payment by parts, unleſs where the ſum is payable by different diviſions. If a debtor in two or more ſeparate bonds to the ſame creditor, made an indefinite payment, without aſcribing it at the time to any one of the obligations, the payment is applied, 1ſt, To intereſt, or to ſums not bearing intereſt. 2dly, To the ſums that are leaſt ſecured, if the debtor thereby incurs no rigorous penalty. But, 3dly, if this application be penal on the debtor, *e. g.* by ſuffering the legal of an adjudication to expire, the payment will be applied ſo as to ſave the debtor from that forfeiture. Where one of the debts is ſecured by a cautioner, the other not, the application is to be ſo made, *cæteris paribus*, that both creditor and cautioner may have equal juſtce done to them.

2. Payment made by the debtor upon a miſtake in fact, to one whom he believed, upon probable grounds, to have the right of receiving payment, extinguiſhes the obligation. But payment made to one, to whom the law denies the power of receiving it, has not this effect; as if a debtor, ſeized by letters of caption, ſhould make payment to the meſſenger; for *ignorantia juris neminem excuſat*. In all debts, the debtor, if he be not interpelled, may ſafely pay before the term, except in tack-duties or feu-duties; the payment whereof, before the terms at which they

are made payable, is conſtrued to be colluſive, in a queſtion with a creditor of the landlord or ſuperior. Payment is *in dubio* preſumed, by the voucher of the debt being in the hands of the debtor; *chirographum, apud debitorem repertum, præſumitur ſolutum.*

By conſent.

3. Obligations are extinguiſhable by the *conſent of the creditor*, who, without full implement, or even any implement, may renounce the right conſtituted in his own favour. Though a diſcharge or acquittance granted by one whom the debtor *bona fide* took for the creditor, but who was not, extinguiſhes the obligation, if the ſatisfaction made by the debtor was real; yet where it is imaginary, the diſcharge will not ſcreen him from paying to the true creditor the debt for which he had made no prior ſatisfaction. In all debts which are conſtituted by writing, the extinction, whether it be by ſpecifical performance or bare conſent, muſt be proved, either by the oath of the creditor, or by a diſcharge in writing; and the ſame ſolemnities which law requires in the obligation, are neceſſary in the diſcharge: but, where payment is made, not by the debtor himſelf, but by the creditor's intromiſſion with the rents of the debtor's eſtate, or by delivery to him of goods in name of the debtor, ſuch delivery or intromiſſion, being *facti*, may be proved by witneſſes, though the debt ſhould have been not only conſtituted by writing, but made real on the debtor's lands by adjudication.

4. A diſcharge, though it ſhould be general, of all that the granter can demand, extends not to debts of an uncommon kind, which are not preſumed to have been under the granter's eye. This doctrine applies alſo to general aſſignations. In annual payments, as of rents, feu-duties, intereſt, &c. three conſecutive diſcharges by the creditor, of the yearly or termly duties, preſume the payment of all precedings. Two diſcharges by the anceſtor, and the third by the heir, do not infer this preſumption, if the heir was ignorant of the anceſtor's diſcharges. And diſcharges by an adminiſtrator, as a factor, tutor, &c. preſume only the payment of all preceding duties incurred during his adminiſtration. This preſumption ariſes from repeating the diſcharges thrice ſucceſſively; and ſo does not hold in the caſe of two diſcharges, though they ſhould include the duties of three or more terms.

By compenſation.

5. Where the ſame perſon is both creditor and debtor to another, the mutual obligations, if they are for equal ſums, are extinguiſhed by *compenſation*; if for unequal, ſtill the leſſer obligation is extinguiſhed, and the greater diminiſhed, as far as the concourſe of debit and credit goes. To found compenſation, (1.) Each of the parties muſt be debtor and creditor at the ſame time. (2.) Each of them muſt be debtor and creditor in his own right. (3.) The mutual debts muſt be of the ſame quality: hence, a ſum of money cannot be compenſated with a quantity of corns; becauſe, till the prices are fixed, at which the corns are to be converted into money, the two debts are incommenſurable. Laſtly, compenſation cannot be admitted, where the mutual debts are not clearly aſcertained either by a written obligation, the ſentence of a judge, or the oath of the party. Where this requires but a ſhort diſcuſſion, ſentence for the purſuer is delayed for ſome time, *ex æquitate*, that the defender may make good his ground of compenſation. Where a debt for fungibles is aſcertained in money by the ſentence of a judge, the compenſation can have no effect farther back than the liquidation; becauſe, before ſentence, the debts were incommenſurable: but, where a debt for a ſum of money is, in the courſe of a ſuit, conſtituted by the oath of the debtor, the compenſation, after it is admitted by the judge, operates *retro*, in ſo far as concerns the currency of intereſt, to the time when, by the parties acknowledgment, the debt became due: for, in this caſe, the debtor's oath is not what creates the debt, or makes it liquid; it only declares that ſuch a liquid ſum was truly due before. Compenſation cannot be offered after decree, either by way of ſuſpenſion or reduction; unleſs it has been formerly pleaded, and unjuſtly repelled. Decrees in abſence are excepted.

By retention.

6. The right of *retention*, which bears a near reſemblance to compenſation, is chiefly competent, where the mutual debts, not being liquid, cannot be the ground of compenſation; and it is ſometimes admitted *ex æquitate*, in liquid debts, where compenſation is excluded by ſtatute: thus, though compenſation cannot be pleaded after decree, either againſt a creditor or his aſſignee; yet, if the original creditor ſhould become bankrupt, the debtor, even after decree, may retain againſt the aſſignee, till he gives ſecurity for ſatisfying the debtor's claim againſt the cedent. This right is frequently founded in the expence deburſed or work employed on the ſubject retained, and ſo ariſes from the mutual obligations incumbent on the parties. It has never been diſputed that retention of goods was competent, until payment or ſatisfaction of the debt incurred in relation to theſe goods; but it was found by the court of ſeſſion, in a caſe which was very lately before them, that goods could not be retained by a manufacturer until payment of a prior debt; the debt incurred upon the goods in his hand being offered; and although the debtor had become bankrupt, and the manufacturer muſt otherwiſe rank as a common creditor for his prior debt. But retention may be ſuſtained, though the debt due to him who claims it does not ariſe from the nature of the obligation by which he is debtor: thus, a factor on a land-eſtate may retain the ſums levied by him in conſequence of his factory, not only till he be paid of the diſburſements made on occaſion of ſuch eſtate, but alſo till he be diſcharged from the ſeparate engagements he may have entered into on his conſtituent's account.

By novation.

7. Obligations are diſſolved by *novation*, whereby one obligation is changed into another, without changing either the debtor or creditor. The firſt obligation being thereby extinguiſhed, the cautioners in it are looſed, and all its conſequences diſcharged; ſo that the debtor remains bound only by the laſt. As the creditor to whom a right is once conſtituted, ought not to loſe it by implication, novation is not eaſily preſumed, and the new obligation is conſtrued to be merely corroborative of the old; but, where the ſecond obligation expreſsly bears to be *in ſatisfaction* of the firſt, theſe words muſt neceſſarily be explained into novation. Where the creditor accepts of a new debtor, in place of the former who is diſcharged, this method of extinction is called *delegation*.

By delegation.

By confuſion.

8. Obligations are extinguiſhed *confuſione*, where the

debit and credit meet in the ſame perſon, either by ſucceſſion or ſingular title, *e. g.* when the debtor ſucceeds to the creditor, or the creditor to the debtor, or a ſtranger to both; for one cannot be debtor to himſelf. If the ſucceſſion, from which the *confuſio* ariſes, happens afterwards to be divided, ſo as the debtor and creditor come again to be different perſons; the *confuſio* does not produce an extinction, but only a temporary ſuſpenſion of the debt.

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Sect. XVII. *Of Aſſignations.*

Aſſignations.

Heritable rights, when they are cloathed with infeftment, are tranſmittted by diſpoſition, which is a writing containing procuratory of reſignation and precept of ſeiſin; but thoſe which either acquire no ſeiſin, or on which ſeiſin has not actually followed, are tranſmiſſible by ſimple *aſſignation*. He who grants the aſſignation is called the *cedent;* and he who receives it the *aſſignee* or ceſſionary: if the aſſignee conveys his right to a third perſon, the deed of conveyance is called a *tranſlation;* and if he aſſigns it back to the cedent, a *retroceſſion*. Certain rights are, from the uſes to which they are deſtined, incapable of tranſmiſſion, as alimentary rights: others cannot be aſſigned by the perſon inveſted in them, without ſpecial powers given to him; as tacks, reverſions: the tranſmiſſion of a third ſort, is not preſumed to be intended, without an expreſs conveyance; as of paraphernal goods, which are ſo proper to the wife, that a general aſſignation, by her to her huſband, of all that did or ſhould belong to her at her deceaſe, does not comprehend them. A liferent-right is, by its nature, incapable of a proper traſmiſſion; but its profits may be aſſigned, while it ſubſiſts.

Intimation of aſſignations.

2. Aſſignations muſt not only be delivered to the aſſignee, but intimated by him to the debtor. Intimations are conſidered as ſo neceſſary for completing the conveyance, that in a competition between two aſſignations, the laſt, if firſt intimated, is preferred.

What notification is equivalent to intimation.

3. Though, regularly, intimation to the debtor is made by an inſtrument, taken in the hands of a notary, by the aſſignee or his procurator; yet the law admits equipollencies, where the notice of the aſſignment given to the debtor is equally ſtrong. Thus, a charge upon letters of horning at the aſſignee's inſtance, or a ſuit brought by him againſt the debtor, ſupplies the want of intimation; theſe being judicial acts, which expoſe the conveyance to the eyes both of the judge and of the debtor; or the debtor's promiſe of payment by writing to the aſſignee, becauſe that is in effect a corroborating of the original debt. The aſſignee's poſſeſſion of the right, by entering into payment of the rents or intereſt, is alſo equal to an intimation; for it imports, not only notice to the debtor, but his actual compliance: but the debtor's private knowledge of the aſſignment is not ſuſtained as intimation.

In what caſes not neceſſary.

4. Certain conveyances need no intimation. (1.) Indorſations of bills of exchange; for theſe are not to be fettered with forms, introduced by the laws of particular ſtates. (2.) Bank-notes are fully conveyed by the bare delivery of them; for as they are payable to the bearer, their property muſt paſs with their poſſeſſion. (3.) Adjudication, which is a judicial conveyance, and marriage, which is a legal one, carry the full right of the ſubjects thereby conveyed, without intimation: nevertheleſs, as there is nothing in theſe conveyances which can of themſelves put the debtor *in mala fide*, he is therefore *in tuto* to pay to the wife, or to the original creditor in the debt adjudged, till the marriage or adjudication be notified to him. Aſſignments of moveable ſubjects, though they be intimated, if they are made *retenta poſſeſſione*, (the cedent retaining the poſſeſſion), cannot hurt the cedents creditors; for ſuch rights are preſumed, in all queſtions with creditors, to be colluſive, and granted in truſt for the cedent himſelf.

Effects of aſſignation.

5. An aſſignment carries to the aſſignee the whole right of the ſubject conveyed, as it was in the cedent; and conſequently he may uſe diligence, either in his cedent's name while he is alive, or in his own.

6. After an aſſignation is intimated, the debtor cannot prove a payment, or compenſation, by the oath of the cedent, who has no longer any intereſt in the debt; unleſs the matter has been made litigious by an action commenced prior to the intimation: but the debtor may refer to the oath of the aſſignee, who is in the right of the debt, that the aſſignment was gratuitous, or in truſt for the cedent: either of which being proved, the oath of the cedent will affect the aſſignee. If the aſſignation be in part onerous, and in part gratuitous, the cedent's oath is good againſt the aſſignee, only in ſo far as his right is gratuitous. All defences competent againſt the original creditor in a moveable debt, which can be proved otherwiſe than by his oath, continue relevant againſt even an onerous aſſignee, whoſe right can be no better than that of his author, and muſt therefore remain affected with all the burdens which attended it in the author's perſon.

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Sect. XVIII. *Of arreſtments and poindings.*

Arreſtment.

The diligences, whereby a creditor may affect his debtor's moveable ſubjects, are *arreſtment* and *poinding*. By *arreſtment* is ſometimes meant the ſecuring of a criminal's perſon till trial: but as it is underſtood in the rubric of this title, it is the order of a judge, by which he who is debtor in a moveable obligation to the arreſter's debtor, is prohibited to make payment or delivery till the debt due to the arreſter be paid or ſecured. The arreſtors debtor is uſually called the common debtor: becauſe, where there are two or more competing creditors, he is debtor to all of them. The perſon in whoſe hands the diligence is uſed is ſtyled the arreſtee.

2. Arreſtment may be laid on by the authority either of the ſupreme court, or of an inferior judge. In the firſt caſe, it proceeds either upon ſpecial letters of arreſtment, or on a warrant contained in letters of horning; and it muſt be executed by a meſſenger. The warrants granted by inferior judges are called precepts of arreſtment, and they are executed by the officer proper to the court. Where the debtor to the common debtor is a pupil, arreſtment is properly uſed in the hands of the tutor, as the pupil's adminiſtrator: this doctrine may perhaps extend to other general adminiſtrators, as commiſſioner, &c. But arreſtment, uſed in the hands of a factor or ſteward, cannot found an action of forthcoming without calling the conſtituent. Where the debtor to a common debtor is a corporation, arreſtment muſt be uſed in the hands of the directors or

treaſurer, who repreſent the whole body. Arreſtment, when it is uſed in the hands of the debtor himſelf, is inept; for that diligence is intended only as a reſtraint upon third parties.

3. All debts, in which one is perſonally bound, though they ſhould be heritably ſecured, are grounds upon which the creditor may arreſt the moveable eſtate belonging to his debtor. Arreſtment may proceed on a debt, the term of payment whereof is not yet come, in caſe the debtor be *vergens ad inopiam*. If a debt be not yet conſtituted by decree or regiſtration, the creditor may raiſe and execute a ſummons againſt his debtor for payment, on which pending action arreſtment may be uſed, in the ſame manner as inhibition, which is called *arreſtment upon a dependence*. If one's ground of credit be for the performance of a fact, or if his depending proceſs be merely declaratory, without a concluſion of payment or delivery, ſuch claims are not admitted to be ſufficient grounds for arreſtment.

What debts arreſtible.

4. Moveable debts are the proper ſubject of arreſtment; under which are comprehended conditional debts, and even depending claims. For leſſening the expence of diligence to creditors, all bonds which have not been made properly heritable by ſeiſin are declared arreſtable: but this does not extend to adjudications, wadſets, or other perſonal rights of lands, which are not properly debts. Certain moveable debts are not arreſtible. (1.) Debts due by bill, which paſs from hand to hand as bags of money. (2.) Future debts; for though inhibition extends to *adquirenda* as well as *adquiſita*, yet arreſtment is limited, by its warrant, to the debt due at the time of ſerving it againſt the arreſtee. Hence, an arreſtment of rents or intereſt carries only thoſe that have already fallen due or at leaſt become current. Claims, depending on the iſſue of a ſuit, are not conſidered as future debts; for the ſentence, when pronounced, has a retroſpect to the period at which the claim was firſt founded. The like doctrine holds in conditional debts. (3.) Alimentary debts are not arreſtable; for theſe are granted on perſonal conſiderations, and ſo are not communicable to creditors: but the paſt intereſt upon ſuch debt may be arreſted by the perſon who has furniſhed the alimony. One cannot ſecure his own effects to himſelf for his maintenance, ſo as they ſhall not be affectable by his creditors. Salaries annexed to offices granted by the king, and particularly thoſe granted to the judges of the Seſſion, and the fees of ſervants, are conſidered as alimentary funds; but the ſurplus fee, over and above what is neceſſary for the ſervant's perſonal uſes, may be arreſted. It has alſo been found, that a wadſet ſum conſigned after an order of redemption uſed, but before decreet of declarator, is not arreſtable.

Effect of breach of arreſtment.

5. If, in contempt of the arreſtment. the arreſtee ſhall make payment of the ſum, or deliver the goods arreſted, to the common debtor, he is not only liable criminally for breach of arreſtment, but he muſt pay the debt again to the arreſter. As the law formerly ſtood, an arreſtment uſed at the market croſs of Edinburgh, pier and ſhore of Leith, againſt a perſon furth of the kingdom, was good; ſo that if the arreſtee made payment to his creditor after the date of the arreſtment, he was found liable in ſecond payment to the arreſter, becauſe he had done all in his power to notify his diligence. This, however, is very properly altered by § 3. of the act, of the 23d Geo. III. which declares, that an arreſtment uſed at the market croſs of Edinburgh, pier and ſhore of Leith, in the hands of any perſon out of the kingdom, without other ſufficient notification, ſhall not interpell the arreſtee from paying *bona fide* to the original creditor. Arreſtment is not merely prohibitory, as inhibitions are; but is a ſtep of diligence which founds the uſer in a ſubſequent action, whereby the property of the ſubject arreſted may be adjudged to him. It therefore does not, by the latter practice, fall by the death of the arreſtee; but continues to ſubſiſt, as a foundation for an action of forthcoming againſt his heir, while the ſubject arreſted remains *in medio*. Far leſs is arreſtment loſt, either by the death of the arreſter, or of the common debtor.

Looſing of arreſtment.

6. Where arreſtment proceeds on a depending action, it may be looſed by the common debtor's giving ſecurity to the arreſter for his debt in the event it ſhall be found due. Arreſtment founded on decrees, or on regiſtered obligations, which in the judgement of law are decrees, cannot be looſed but upon payment or conſignation; except, (1.) Where the term of payment of the debt is not yet come, or the condition has not yet exiſted. (2.) Where the arreſtment has proceeded on a regiſtered contract, in which the debts or mutual obligations are not liquid. (3.) Where the decree is ſuſpended, or turned into a libel; for, till the ſuſpenſion be diſcuſſed, or the pending action concluded, it cannot be known whether any debt be truly due. A looſing takes off the *nexus* which had been laid on the ſubject arreſted; ſo that the arreſtee may thereafter pay ſafely to his creditor, and the cautioner is ſubſtituted in place of the arreſtment, for the arreſter's ſecurity: yet the arreſter may, while the ſubject continues with the arreſtee, purſue him in a forthcoming, notwithſtanding the looſing.

Forthcoming or arreſtment.

7. Arreſtment is only an inchoated or begun diligence; to perfect it, there muſt be an action brought by the arreſter againſt the arreſtee, to make the debt or ſubject arreſted forthcoming. In this action, the common debtor muſt be called for his intereſt, that he may have an opportunity of excepting to the lawfulneſs or extent of the debt on which the diligence proceeded. Before a forthcoming can be purſued, the debt due by the common debtor to the arreſter muſt be liquidated; for the arreſter can be no further intitled to the ſubject arreſted than to the extent of the debt due to him by the common debtor. Where the ſubject arreſted is a ſum of money, it is, by the decree of forthcoming, directed to be paid to the purſuer towards ſatisfying his debt; where goods are arreſted, the judge ordains them to be expoſed to ſale, and the price to be delivered to the purſuer. So that, in either caſe, decrees of forthcoming are judicial aſſignations to the arreſter of the ſubject arreſted.

Preference in arreſtments.

8. In all competitions, regard is had to the dates, not of the grounds of debt, but of the diligences proceeding upon them. In the competition of arreſtments, the preference is governed by their dates, according to the priority even of hours, where it appears with any certainty which is the firſt. But, as arreſtment is but a begun diligence, therefore if a prior arreſter ſhall neglect to inſiſt in an action of forthcoming for ſuch a time as may be reaſonably conſtrued into a deſertion of

his begun diligence, he loſes his preference. But, as dereliction of diligence is not eaſily preſumed, the diſtance of above two years, between the firſt arreſtment and the decree of forthcoming, was found not to make ſuch a *mora* as to intitle the poſterior arreſter to a preference. This rule of preference, according to the dates of the ſeveral arreſtments, holds by the preſent practice, whether they have proceeded on a decree or on a dependence; on debts not yet payable, or on debts already payable; provided the pendency ſhall have been cloſed, or the debt have become payable, before the iſſue of the competition.

By act 23d Geo. III. § 2. it is enacted, that when a debtor is made bankrupt, in terms of the act 1696, as thereby extended (clxxxiii. 13.), all arreſtments which ſhall have been uſed for attaching any perſonal effects of ſuch bankrupt within thirty days prior to the bankruptcy, or within four kalendar months immediately ſubſequent, ſhall be *pari paſſu* preferable: and in order to ſave as far as poſſible the expence of a multiplicity of arreſtments, it is declared, that where the effects of a debtor are arreſted by any creditor within thirty days before the bankruptcy, or within four months after it, and a proceſs of forthcoming or multiple-poinding is brought in which ſuch arreſtment is founded on, it ſhall be competent for any other creditor producing his intereſt, and making his claim in the ſaid proceſs, at any time before the expiration of the ſaid four months, to be ranked in the ſame manner as if he had uſed the form of arreſtment; the expence of raiſing the proceſs, and of the diligence at the inſtance of the creditor who raiſes it, being always paid out of the common fund. We here again repeat, that the enactments of this ſtatute are only temporary, and not yet a permanent part of the law of Scotland, whatever they may become when the ſubject is reſumed by the legiſlature upon the expiry of the act.

9. In the competition of arreſtments with aſſignations, an aſſignation by the common debtor, intimated before arreſtment, is preferable to the arreſtment. If the aſſignation is granted before arreſtment, but not intimated till after it, the arreſter is prefered.

Poinding.

10. Poinding is that diligence affecting moveable ſubjects, by which their property is carried directly to the creditor. No poinding can proceed, till a charge be given to the debtor to pay or perform, and the days thereof be expired, except poindings againſt vaſſals for their feu-duties, and poindings againſt tenants for rent, proceeding upon the landlord's own decree; in which the ancient cuſtom of poinding without a previous charge continues. A debtor's goods may be poinded by one creditor, though they have been arreſted before by another; for arreſtment being but an imperfect diligence, leaves the right of the ſubject ſtill in the debtor, and ſo cannot hinder any creditor from uſing a more perfect diligence, which has the effect of carrying the property directly to himſelf.

11. No cattle pertaining to the plough, nor inſtruments of tillage, can be poinded in the time of labouring or tilling the ground, unleſs where the debtor has no other goods. By labouring time is underſtood, that time, in which that tenant, whoſe goods are to be poinded, is ploughing, though he ſhould have been earlier or later than his neighbours; but ſummer fallowing does not fall under this rule.

Form thereof.

12. In the execution of poinding, the debtor's goods muſt be appraiſed, firſt on the ground of the lands where they are laid hold on, and a ſecond time at the market-croſs of the juriſdiction, by the ſtated appraiſers thereof; or, if there be none, by perſons named by the meſſenger or other officer employed in the diligence. Next, the meſſenger muſt, after public intimation by three oyeſſes, declare the value of the goods according to the ſecond appraiſement, and require the debtor to make payment of the debt, including intereſt and expences. If payment ſhall be offered to the creditor, or in his abſence to his lawful attorney; or if, in caſe of refuſal by them, conſignation of the debt ſhall be made in the hands of the judge-ordinary or his clerk, the goods muſt be left with the debtor; if not, the meſſenger ought to adjudge and deliver them over, at the appraiſed value, to the uſer of the diligence towards his payment: and the debtor is intitled to a copy of the warrant and executions, as a voucher that the debt is diſcharged in whole or in part by the goods poinded.

Powers of meſſengers in poinding.

13. Miniſters may poind for their ſtipends, upon one appraiſement on the ground of the lands, and landlords were always in uſe to poind ſo, for their rents. Appraiſement of the goods at the market-croſs of the next royal borough, or even of the next head-borough of ſtewartry or regality, though theſe juriſdictions be aboliſhed, is declared as ſufficient as if they were carried to the head-borough of the ſhire. Poinding, whether it be conſidered as a ſentence, or as the execution of a ſentence, muſt be proceeded in between ſun-riſing and ſun-ſetting; or at leaſt it muſt be finiſhed before the going off of day-light.—The powers of the officer employed in the execution of poindings, are not clearly defined by cuſtom, in the caſe of a third party claiming the property of the goods to be poinded. This is certain, that he may take the oath of the claimant, upon the verity of his claim; and if from thence it ſhall appear that the claimant's title is colluſive, he ought to proceed in the diligence; but if there remains the leaſt doubt, his ſafeſt courſe is to deliver the goods to the claimant, and to expreſs in his execution the reaſons why poinding did not proceed.

14. Any perſon who ſtops a poinding *via facti*, on groundleſs pretences, is liable, both criminally, in the pains of deforcement (ſee N° clxxxvi. 15.), and civilly, in the value of the goods which might have been poinded by the creditor.

By the foreſaid ſtatute 23d Geo. III. § 4. it is declared, that after a perſon is rendered bankrupt, as thereby directed, no poinding of the moveables belonging to ſuch bankrupt, within 30 days before his bankruptcy, or within four kalendar months thereafter, ſhall give a preference to ſuch poinder over the other lawful creditors of the bankrupt; but the goods ſo poinded ſhall be conſidered *in medio*, and the perſon receiving the price of them ſhall be liable to make the ſame furthcoming ſo as that all the other creditors of the bankrupt who are poſſeſſed of liquidate grounds of debts or decrees for payment, ſhall be intitled to their proportion of the ſame; provided they make their claim by ſummoning the poinder at any time before the expiration of the ſaid four months, deducting always the expence of ſuch poinding from the firſt end of the price of ſuch goods, together with 20 *per cent.* on the appraiſed value, which the poinder ſhall retain to account of his debt in preference to the other creditors; reſerving liberty to him to rank on the remaining ſum for the full amount of the debt contained in his diligence. And it is by the ſaid act further declared, that where any perſon concerned in trade or manufactures is bankrupt, as before mentioned, it may be lawful for any creditor, to the amount of L. 100, or any two creditors to the amount of L. 150, or any three or more creditors to the amount of L. 200 or upwards, to apply for ſequeſtration of the eſtate real and perſonal belonging to the debtor: after awarding which an interim factor, and then a truſtee, ſhall be choſen by the creditors who is to conduct the buſineſs of the ſequeſtration, according to the various rules fixed and laid down by the ſtatute. The act, however, expreſsly excludes all others, except thoſe concerned in trade or manufactures from the benefit of the ſequeſtration; but it is probable, when it comes to be renewed or digeſted in another form, this part of it will ſuffer an alteration.

clxxix.

SECT. XIX. *Of Preſcription.*

Preſcription,

PRESCRIPTION, which is a method, both of eſtabliſhing and extinguiſhing property, is either *poſitive* or *negative*. *Poſitive* preſcription is generally defined, as the Roman *uſucapio*. The acquiſition of property (it ſhould rather be, when applied to the law, the ſecuring it againſt all further challenge) by the poſſeſſor's continuing his poſſeſſion for the time which law has declared ſufficient for that purpoſe: *negative*, is the loſs or omiſſion of a right, by neglecting to follow it forth, or uſe it, during the whole time limited by law. The doctrine of preſcription, which is, by ſome writers, condemned as contrary to juſtice, has been introduced, that the claims of negligent creditors might not ſubſiſt for ever, that property might be at laſt fixed, and forgeries diſcouraged, which the difficulty of detecting muſt have made exceedingly frequent, if no length of time had limited the legal effect of writings.

Poſitive.

2. Poſitive preſcription was firſt introduced into the law by 1617, c. 12. which enacts, that whoever ſhall have poſſeſſed his lands, annualrents or other heritages, peaceably, in virtue of infeſtments, for 40 years continually after their dates, ſhall not thereafter be diſquieted in his right by any perſon pretending a better title. Under *heritages* are comprehended every right that is *fundo annexum*, and capable of continual poſſeſſion. Continued poſſeſſion, if proved as far back as the memory of man, preſumes poſſeſſion upwards to the date of the infeſtment. The whole courſe of poſſeſſion muſt by the act be founded on ſeiſins; and conſequently no part thereof on the bare right of apparency: but 40 years poſſeſſion, without ſeiſin, is ſufficient in the preſcription of ſuch heritable rights as do not require ſeiſin. The poſſeſſion muſt alſo be without any *lawful* interruption, *i. e.* it muſt neither be interrupted *via facti*, nor *via juris*. The preſcription of ſubjects not expreſſed in the infeſtment as part and pertinent of another ſubject ſpecially expreſſed, has been explained, N° clxvii. 6.

3. The act requires, that the poſſeſſor produce, as his title of preſcription, a charter of the lands preceding the 40 years poſſeſſion, with the ſeiſin following on it; and where there is no charter extant, ſeiſins, one or more, ſtanding together for 40 years, and proceeding either on retours or precepts of *clare conſtat*. This has given riſe to a reaſonable diſtinction obſerved in practice, between the preſcription of a ſingular ſucceſſor, and of an heir. Singular ſucceſſors muſt produce for their title of preſcription, not only a ſeiſin, but its warrant, as a charter, diſpoſition, &c. either in their own perſon, or in that of their author: but the production, by an heir, of ſeiſins, one or more, ſtanding together for 40 years, and proceeding on retours or precepts of *clare conſtat*, is ſufficient. The heir is not obliged to produce the retours or precepts on which his ſeiſins proceed, nor is the ſingular ſucceſſor obliged to produce the ground of his charter; ſo that if the title of preſcription produced be a fair deed, and a ſufficient title of property, the poſſeſſor is ſecure by the act, which admits no ground of challenge, but falſehood. A ſpecial ſtatute, for eſtabliſhing the poſitive preſcription in moveable rights, was not neceſſary; for, ſince a title in writing is not requiſite for the acquiring of theſe, the negative preſcription, by which all right of action for recovering their property is cut off, effectually ſecures the poſſeſſor.

Negative preſcription.

4. The negative preſcription of obligations, by the lapſe of 40 years, was introduced into the law long before the poſitive, (1469, c. 29.—1474, c. 55.) This preſcription is now amplified by the foreſaid act (1617), which has extended it to all actions competent upon heritable bonds, reverſions, and others whatſoever; unleſs where the reverſions are either incorporated in the body of the wadſet-right, or regiſtered in the regiſter of reverſions: And reverſions ſo incorporated, or regiſtered, are not only exempted from the negative preſcription, but they are an effectual bar againſt any perſon from pleading the poſitive.

A ſhorter negative preſcription.

5. A ſhorter negative preſcription is introduced by ſtatute, in certain rights and debts. Actions of ſpuilzie, ejection, *and others of that nature*, muſt be purſued within three years after the commiſſion of the fact on which the action is founded. As in ſpuilzies and ejections, the purſuer was entitled, *in odium* of violence, to a proof by his own oath *in litem*, and to the violent profits againſt the defender, the ſtatute meant only to limit theſe ſpecial privileges by a three years preſcription, without cutting off the right of action, where the claim is reſtricted to ſimple reſtitution. Under the general words, *and others of that nature*, are comprehended all actions where the purſuer is admitted to prove his libel by his own oath *in litem*.

Preſcription of ſervants fees, &c.

6. Servants fees, houſe-rents, mens ordinaries, (*i. e.* money due for board), and merchants accounts, fall under the triennial preſcription, (by 1579, c. 83.) There is alſo a general clauſe ſubjoined to this ſtatute, of *other the like debts*, which includes alimentaty debts, wages due to workmen, and accounts due to writers, agents, or procurators. Theſe debts may, by this act, be proved after the three years, either by the writing or oath of the debtor; ſo that they preſcribe only as to the mean of proof by witneſſes; but after the three years, it behoves the creditor to refer to the debtor's oath, not only the conſtitution, but the ſubſiſtence of the debt. In the preſcription of houſe-rents, ſervants fees, and alimony, each term's rent, fee, or alimony, runs a ſeparate courſe of preſcription; ſo that in an action for theſe the claim will be reſtricted to the arrears incurred within the three years immediately

before the citation: But, in accounts, preſcription does not begin till the laſt article; for a ſingle article cannot be called an account. Actions of removing muſt alſo be purſued within three years after the warning. Reductions of erroneous retours preſcribe, if not purſued within 20 years.

Of miniſters ſtipends, &c.

7. Miniſters ſtipends and multures preſcribe in five years after they are due; and arrears of rent, five years after the tenant's removing from the lands. As the preſcription of mails and duties was introduced in favour of poor tenants, that they might not ſuffer by neglecting to preſerve their diſcharges, a proprietor of lands ſubject to a liferent, who had obtained a leaſe of all the liferented lands from the liferenter, is not intitled to plead it, nor a tackſman of one's whole eſtate, who had by the leaſe a power of removing tenants. Bargains concerning moveables, or ſums of money which are proveable by witneſſes, preſcribe in five years after the bargain. Under theſe are included ſales, locations, and all other conſenſual contracts, to the conſtitution of which writing is not neceſſary. But all the abovementioned debts, may, after the five years, be proved, either by the oath or the writing of the debtor; of which above, (par. 6.) A quinquennial preſcription is eſtabliſhed in arreſtments, whether on decrees or depending actions: The firſt preſcribe in five years after uſing the arreſtment, and the laſt in five years after ſentence is pronounced on the depending action.

Limitation of cautionry.

8. No perſon binding for or with another, either as cautioner or co-principal, in a bond or contract for a ſum of money, continues bound after ſeven years from the date of the bond, provided he has either a clauſe of relief in the bond, or a ſeparate bond of relief, intimated to the creditor, at his receiving the bond. But all diligence uſed within the ſeven years againſt the cautioner ſhall ſtand good. As this is a public law, intended to prevent the bad conſequences of raſh engagements, its benefit cannot, before the lapſe of the ſeven years, be renounced by the cautioner. As it is correctory, it is ſtrictly interpreted: Thus, bonds bearing a mutual clauſe of relief *pro rata*, fall not under it; nor bonds of corroboration nor obligations, where the condition is not purified, or the term of payment not come within the ſeven years; becauſe no diligence can be uſed on theſe. The ſtatute excludes all cautionries for the faithful diſcharge of offices; theſe not being obligations in a bond or contract for ſums of money. And practice has denied the benefit of it to all judicial cautioners, as cautioners in a ſuſpenſion.—Actions of count and reckoning, competent either to minors againſt their tutors or curators, or *vice verſa*, preſcribe in ten years after the majority or death of the minor.

Preſcription of holograph writings.

9. Holograph bonds, miſſive letters, and books of account, not atteſted by witneſſes, preſcribe in 20 years, unleſs the creditor ſhall thereafter prove the verity of the ſubſcription by the debtor's oath. It is therefore ſufficient to ſave from the effect of this preſcription, that the conſtitution of the debt be proved by the party's oath after the 20 years; whereas, in ſtipends, merchants accounts, &c. not only the conſtitution, but the ſubſiſtence of the debt, muſt be proved by writing or the debtor's oath, after the term of preſcription. Some lawyers extend this preſcription of holograph writings to all obligations for ſums not exceeding L. 100 *Scots*, which are not atteſted by witneſſes; becauſe though theſe are in practice ſuſtained, yet they ought not to have the ſame duration with deeds atteſted by witneſſes. Though in the ſhort preſcriptions of debts, the right of action is for ever loſt, if not exerciſed within the time limited; yet where action was brought on any of thoſe debts, before the preſcription was run, it ſubſiſted, like any other right, for 40 years. As this defeated the purpoſe of the acts eſtabliſhing theſe preſcriptions, all proceſſes upon warnings, ſpuilzies, ejections, or arreſtments, or for payment of the debts contained in act 1669, *c.* 9. are by the ſaid act, joined with 1685, *c.* 14. declared to preſcribe in five years, if not wakened within that time; ſee N° clxxxiii. 26.

Extinction of obligations by taciturnity.

10. Certain obligations are loſt by the lapſe of leſs than 40 years, without the aid of ſtatute, where the nature of the obligation, and the circumſtances of parties, juſtify it: thus, bills which are not intended for laſting ſecurities, produced no action, where the creditor had been long ſilent, unleſs the ſubſtance of the debt be proved by the debtor's oath; but the preciſe time was not fixed by practice. But the duration of bills is now limited to ſix years by the 12 Geo. III.; rendered perpetual by 23 Geo. III. Thus alſo, a receipt for bills granted by a writer to his employer, not inſiſted upon for 23 years, was found not productive of an action. The preſcriptions of the reſtitution of minors, of the benefit of inventory, &c. are explained in their proper places.

Bona fides preſcription.

11. In the poſitive preſcription, as eſtabliſhed by the act 1617, the continued poſſeſſion for 40 years, proceeding upon a title of property not chargeable with falſehood, ſecures the poſſeſſor againſt all other grounds of challenge, and ſo preſumes *bona fides, præſumptione juris et de jure.* In the long negative preſcription, *bona fides* in the debtor is not required: the creditor's neglecting to inſiſt for ſo long a time, is conſtrued as an abandoning of his debt, and ſo is equivalent to a diſcharge. Hence, though the ſubſiſtence of the debt ſhould be referred to the debtor's own oath, after the 40 years, he is not liable.

Preſcription, againſt whom it runs.

12. Preſcription runs *de momento in momentum*: the whole time defined by law muſt be completed, before a right can be either acquired or loſt by it; ſo that interruption, made on the laſt day of the 40th year, breaks its courſe. The poſitive preſcription runs againſt the ſovereign himſelf, even as to his annexed property; but it is generally thought he cannot ſuffer by the negative: he is ſecured againſt the negligence of his officers in the management of proceſſes, by expreſs ſtatute, 1600, *c.* 14. The negative, as well as the poſitive preſcription, runs againſt the church, though churchmen have but a temporary intereſt in their benefices. But becauſe the rights of beneficiaries to their ſtipends are liable to accidents, through the frequent change of incumbents, 13 years poſſeſſion does, by a rule of the Roman chancery which is adopted in law, found a preſumptive title in the beneficiary; but this is not properly preſcription; for if by titles recovered, perhaps out of the incumbent's own hands, it ſhall appear that he has poſſeſſed tithes or other ſubjects to a greater extent than he ought, his poſſeſſion will be reſtricted accordingly. This right

muſt not be confounded with that eſtabliſhed in favour of churchmen, which is confined to church lands and rents, and conſtitutes a proper preſcription upon a poſſeſſion of 30 years.

13. The clauſe in the act 1617, ſaving minors from preſcription, is extended to the poſitive, as well as to the negative preſcription; but the exception of minority is not admitted in caſe of hoſpitals for children, where there is a continual ſucceſſion of minors, that being a *caſus inſolitus*. Minors are expreſsly excepted in ſeveral of the ſhort preſcriptions, as 1579, *c.* 18.——1669, *c.* 9.; but where law leaves them in the common caſe, they muſt be ſubject to the common rules.

14. Preſcription does not run *contra non valentem agere*, againſt one who is barred, by ſome legal incapacity, from purſuing; for in ſuch caſe, neither negligence nor dereliction can be imputed to him. This rule is, by a favourable interpretation, extended to wives, who *ex reverentia maritali* forbear to purſue actions competent to them againſt their huſbands. On the ſame ground, preſcription runs only from the time that the debt or right could be ſued upon. Thus, inhibition preſcribes only from the publiſhing of the deed granted to the inhibiter's prejudice; and in the preſcription of removings, the years are computed only from the term at which the defender is warned to remove. Neither can preſcription run againſt perſons who are already in poſſeſſion, and ſo can gain nothing by a purſuit. Thus, where a perſon, who has two adjudications affecting the ſame lands, is in poſſeſſion upon one of them, preſcription cannot run againſt the other during ſuch poſſeſſion.

Certain rights incapable of preſcription.

15. Certain rights are incapable of preſcription: (1.) Things that law has exempted from commerce. (2.) *Res meræ facultatis*, e. g. a faculty to charge a ſubject with debts, to revoke, &c. cannot be loſt by preſcription; for faculties may, by their nature, be exerciſed at any time; hence, a proprietor's right of uſing any act of property on his own grounds, cannot be loſt by the greateſt length of time. (3.) Exceptions competent to a perſon for eliding an action, cannot preſcribe, unleſs the exception is founded on a right productive of an action, *e. g.* compenſation; ſuch right muſt be inſiſted on within the years of preſcription. (4.) Obligations of yearly penſions or payments, though no demand has been made on them for 40 years, do not ſuffer a total preſcription, but ſtill ſubſiſt as to the arrears fallen due within that period; becauſe preſcription cannot run againſt an obligation till it be payable, and each year's penſion or payment is conſidered as a ſeparate debt.

16. No right can be loſt *non utendo* by one, unleſs the effect of that preſcription be to eſtabliſh it in another. Hence the rule ariſes, *juri ſanguinis nunquam præſcribitur*. Hence alſo, a proprietor of land cannot loſe his property by the negative preſcription, unleſs he who objects it can himſelf plead the poſitive. On the ſame ground, a ſuperior's right of feu-duties cannot be loſt *non utendo*; becauſe, being inherent in the ſuperiority, it is truly a right of lands that cannot ſuffer the negative preſcription, except in favour of one who can plead the poſitive; which the vaſſal cannot do, being deſtitute of a title. This rule applies alſo to parſonage tithes, which are an inherent burden upon all lands not ſpecially exempted; and from which therefore the perſon liable cannot preſcribe an immunity; by bare non payment: but ſuch vicarage tithes as are only due where they are eſtabliſhed by uſage, may be loſt by preſcription. In all theſe caſes, though the radical right cannot ſuffer the negative preſcription, the bygone duties, not demanded within the 40 years, are loſt to the proprietor, ſuperior, or titular.

Interruption of preſcription.

17. Preſcription may be interrupted by any deed whereby the proprietor or creditor uſes his right or ground of debt. In all interruptions, notice muſt be given to the poſſeſſor of the ſubject, or the debtor, that the proprietor or creditor intends to ſue upon his right. All writings whereby the debtor himſelf acknowledges the debt, and all proceſſes for payment brought, or diligences uſed againſt him upon his obligation, by horning, inhibition, arreſtment, &c. muſt be effectual to interrupt preſcription.

18. Interruptions, by citation upon libelled ſummonſes, where they are not uſed by a minor, preſcribe, if not renewed every ſeven years: but where the appearance of parties, or any judicial act has followed thereupon, it is no longer a bare citation, but an action which ſubſiſts for 40 years. It has been found, that the ſexennial preſcription of bills is not interrupted by a blank citation, as practiſed in the court of admiralty. Citations for interrupting the preſcription of real rights muſt be given by meſſengers; and the ſummonſes, on which ſuch citations proceed, muſt paſs the ſignet upon the bill, and be regiſtered within 60 days after the execution, in a particular regiſter appointed for that purpoſe: and where interruption of real rights is made *via facti*, an inſtrument muſt be taken upon it, and recorded in the ſaid regiſter; otherwiſe it can have no effect againſt ſingular ſucceſſors.

19. Interruption has the effect to cut off the courſe of preſcription, ſo that the perſon preſcribing can avail himſelf of no part of the former time, but muſt begin a new courſe, commencing from the date of the interruption. Minority, therefore, is no proper interruption: for it neither breaks the courſe of preſcription, nor is it a document or evidence taken by the minor on his right: it is a perſonal privilege competent to him, by which the operation of the preſcription is indeed ſupended during the years of minority, which are therefore diſcounted from it; but it continues to run after majority, and the years before and after the minority may be conjoined to complete it. The ſame doctrine applies to the privilege ariſing from one's incapacity to act.

20. Diligence uſed upon a debt, againſt any one of two or more co-obligants, preſerves the debt itſelf, and ſo interrupts preſcription againſt all of them; except in the ſpecial caſe of cautioners, who are not affected by any diligence uſed againſt the principal debtor. In the ſame manner, a right of annualrent, conſtituted upon two ſeparate tenements, is preſerved as to both from the negative preſcription, by diligence uſed againſt either of them. But whether ſuch diligence has alſo the effect to hinder the poſſeſſor of the other tenement by ſingular titles from the benefit of the poſitive preſcription, may be doubted.

III. OF SUCCESSION.

Sect. XX. *Of ſucceſſion in heritable rights.*

Succeſſors ſingular and univerſal.

Singular ſucceſſors are thoſe who ſucceed to a perſon yet alive, in a ſpecial ſubject by ſingular titles; but ſucceſſion, in its proper ſenſe, is a method of tranſmitting rights from the dead to the living. Heritable rights deſcend by ſucceſſion to the *heir* properly ſo called; moveable rights to the *executors*, who are ſometimes ſaid to be heirs in moveables. Succeſſion is either by *ſpecial deſtination*, which deſcends to thoſe, named by the proprietor himſelf; or *legal*, which devolves upon the perſons whom the law marks out for ſucceſſors, from a preſumption, that the proprietor would have named them had he made a deſtination. The firſt is in all caſes preferred to the other, as preſumption muſt yield to truth.

Order of ſucceſſion in heritage.

2. In the ſucceſſion of heritage, the heirs at law are otherwiſe called heirs general, heirs whatſoever, or heirs of line; and they ſucceed by the right of blood, in the following order. Firſt, deſcendents; among theſe, ſons are preferred to daughters, and the eldeſt ſon to all the younger. Where there are daughters only, they ſucceed equally, and are called heirs-portioners. Failing immediate deſcendents, grandchildren ſucceed; and in default of them, great-grandchildren; and ſo on *in infinitum:* preferring, as in the former caſe, males to females, and the eldeſt male to the younger.

Collaterals.

3. Next after deſcendents, collaterals ſucceed; among whom the brothers *german* of the deceaſed have the firſt place. But as, in no caſe, the legal ſucceſſion of heritage is, by the law of Scotland, divided into parts, unleſs where it deſcends to females; the immediate younger brother of the deceaſed excludes the reſt, according to the rule, *heritage deſcends*. Where the deceaſed is himſelf the youngeſt, the ſucceſſion goes to the immediate elder brother, as being the leaſt deviation from this rule. If there are no brothers german, the ſiſters german ſucceed equally: then brothers *conſanguinean*, in the ſame order as brothers german; and failing them, ſiſters *conſanguinean* equally. Next, the father ſucceeds. After him, his brothers and ſiſters, according to the rules already explained; then the grand-father; failing him, his brothers and ſiſters; and ſo upwards, as far back as propinquity can be proved.

No ſucceſſion by the mother.

Though children ſucceed to their mother, a mother cannot to her child; nor is there any ſucceſſion by the law through the mother of the deceaſed; in ſo much that one brother *uterine, i. e.* by the mother only, cannot ſucceed to another, even in that eſtate which flowed originally from their common mother.

Succeſſion *in capita* and *in ſtirpe.*

4. In heritage there is a *right of repreſentation*, by which one ſucceeds, not from any title in himſelf, but in the place, and as repreſenting ſome of his deceaſed aſcendents. Thus, where one leaves a younger ſon, and a grandchild by his eldeſt, the grandchild, though farther removed in degree from the deceaſed than his uncle, excludes him, as coming in place of his father the eldeſt ſon. Hence ariſes the diſtinction between ſucceſſion *in capita*, where the diviſion is made into as many equal parts as there are *capita* or heirs, which is the caſe of heirs-portioners; and ſucceſſion *in ſtirpes*, where the remoter heirs draw no more among them than the ſhare belonging to their aſcendent or *ſtirps*, whom they repreſent; an example of which may be figured in the caſe of one who leaves behind him a daughter alive, and two grand-daughters by a daughter deceaſed. In which caſe the two grand-daughters would ſucceed equally to that half which would have belonged to their mother had ſhe been alive.

Succeſſion of heirs-portioners.

4. In the ſucceſſion of heirs-portioners, indiviſible rights, *e. g.* titles of dignity, fall to the eldeſt ſiſter. A ſingle right of ſuperiority goes alſo to the eldeſt; for it hardly admits a diviſion, and the condition of the vaſſal ought not to be made worſe by multiplying ſuperiors upon him. Where there are more ſuch rights, the eldeſt may perhaps have her election of the beſt; but the younger ſiſters are intitled to a recompence, in ſo far as the diviſions are unequal; at leaſt, where the ſuperiorities yield a conſtant yearly rent. The principal ſeat of the family falls to the eldeſt, with the garden and orchard belonging to it, without recompence to the younger ſiſters; but all other houſes are divided amongſt them, together with the lands on which they are built, as parts and pertinents of theſe lands. A *præcipuum*, however, is due only in the caſe of ſucceſſion of heirs-portioners *ab inteſtato*; and therefore there is no place for it where the ſucceſſion is taken under a deed.

Heir of conqueſt.

6. Thoſe heritable rights, to which the deceaſed did himſelf ſucceed as heir to his father or other anceſtor, get ſometimes the name of heritage in a ſtrict ſenſe, in oppoſition to the *feuda nova*, or feus of conqueſt, which he had acquired by ſingular titles, and which deſcend, not to his heir of line, but of conqueſt. This diſtinction obtains only where two or more brothers or uncles, or their iſſue, are next in ſucceſſion; in which caſe, the immediate younger brother, as heir of line, ſucceeds to the proper heritage, becauſe that deſcends; whereas the conqueſt aſcends to the immediate elder brother. It has no place in female ſucceſſion, which the law divides equally among the heirs-portioners. Where the deceaſed was the younger brother, the immediate elder brother is heir both of line and of conqueſt. An eſtate diſponed by a father to his eldeſt ſon, is not conqueſt in the ſon's perſon, but heritage; becauſe the ſon would have ſucceeded to it, though there had been no diſpoſition. The heir of conqueſt ſucceeds to all rights affecting land, which require ſeiſin to perfect them. But teinds go to the heir of line; becauſe they are merely a burden on the fruits, not on the land. Tacks do not fall under conqueſt, becauſe they are complete rights without ſeiſin; nor perſonal bonds taken to heirs ſecluding executors.

Heirſhip-moabvees.

7. The heir of line is intitled to the ſucceſſion, not only of ſubjects properly heritable, but to that ſort of moveables called *heirſhip*, which is the beſt of certain kinds. This doctrine has been probably introduced, that the heir might not have an houſe and eſtate to ſucceed to, quite diſmantled by the executor. In that ſort which goes by pairs or dozens, the beſt pair or dozen is the heirſhip. There is no heirſhip in fungibles, or things eſtimated by quantity; as grain, hay, current money, &c. To intitle an heir to this privilege, the deceaſed muſt have been either, (1.) A prelate: (2.) A

baron, *i. e.* who ſtood inſeft at his death in lands, tho' not erected into a barony; or even in a right of annualrent: Or, (3.) A burgeſs; not an honorary one, but a trading burgeſs of a royal borough, or at leaſt one intitled to enter burgeſs in the right of his anceſtor. Neither the heir of conqueſt, nor of tailzie, has right to heirſhip-moveables.

Succeſſion by deſtination.

8. As to ſucceſſion by deſtination, no proprietor can ſettle any heritable eſtate, in the proper form a teſtament; not even bonds ſecluding executors, tho' theſe are not heritable *ex ſua natura*: But, where a teſtament is in part drawn up in the ſtyle of a deed *inter vivos*, ſuch part of it may contain a ſettlement of heritage, though executors ſhould be named in the teſtamentary part. The common method of ſettling the ſucceſſion of heritage is by diſpoſition, contract of marriage, or ſimple procuratory of reſignation: and, tho' a diſpoſition ſettling heritage ſhould have neither precept nor procuratory, it founds an action againſt the heir of line to complete his titles to the eſtate; and thereafter diveſt himſelf in favour of the diſponee. The appellation of tailzie, or entail, is chiefly uſed in the caſe of a land eſtate, which is ſettled on a long ſeries of heirs ſubſtituted one after another. The perſon firſt called in the tailzie, is the inſtitute; the reſt, the heirs of tailzie, or the ſubſtitutes.

Tailzies.

9. Tailzies, when conſidered in relation to their ſeveral degrees of force, are either, (1.) Simple deſtinations: (2.) Tailzies with prohibitory clauſes (3.) Tailzies with prohibitory, reſolutive, and irritant clauſes. That is a ſimple deſtination, where the perſons called to the ſucceſſion are ſubſtituted one after another, without any reſtraint laid on the exerciſe of their property. The heirs, therefore, ſucceeding to ſuch eſtate, are abſolute fiars, and conſequently may alter the deſtination at pleaſure.

10. In tailzies with clauſes prohibitory, *e. g.* declaring that it ſhall not be lawful to the heirs to contract debts or alien the lands in prejudice of the ſucceſſion, none of the heirs can alien gratuitouſly. But the members of entail may contract debts which will be effectual to the creditors, or may diſpoſe of the eſtate for onerous cauſes. In both theſe ſorts, the maker himſelf may alter the tailzie; except, (1.) Where it has been granted for an onerous cauſe, as in mutual tailzies; or (2.) Where the maker is expreſsly diſabled, as well as the inſtitute or the heirs.

Their requiſites.

11. Where a tailzie is guarded with irritant and reſolutive clauſes, the eſtate entailed cannot be carried off by the debt, or deed, of any of the heirs ſucceeding thereto, in prejudice of the ſubſtitutes. It was long doubted, whether ſuch tailzies ought to be effectual, even where the ſuperior's conſent was adhibited; becauſe they ſunk the property of eſtates, and created a perpetuity of liferents. They were firſt explicitly authoriſed by 1685, *c.* 22. By this ſtatute, the entail muſt be regiſtered in a ſpecial regiſter eſtabliſhed for that purpoſe; and the irritant and reſolutive clauſes muſt be inſerted, not only in the procuratories, precepts, and ſeiſins, by which the tailzies are firſt conſtituted, but in all the after conveyances thereof; otherwiſe they can have no force againſt ſingular ſucceſſors, But a tailzie, even without theſe requiſites, is effectual againſt the heir of the granter, or againſt the inſtitute who accepts of it. It has been found, that an entail, tho' completed by infeſtment before the act 1685, was ineffectual, becauſe not recorded in terms of the act.

Heirs of entail, their powers and reſtrictions.

12. An heir of entail has full power over the entailed eſtate, except in ſo far as he is expreſsly fettered; and as entails are an unfavourable reſtraint upon property, and a frequent ſnare to trading people, they are *ſtrictiſſimi juris*: ſo that no prohibition or irritancies are to be inferred by implication. By 10 George III. *c.* 51. heirs of entail are intitled (notwithſtanding any reſtrictions in the deed of entail) to improve their eſtates by granting leaſes, building farm-houſes, draining, incloſing, and excambing, under certain limitations, and to claim repayment of three-fourths of the expence from the next heir of entail.—This act extends to all tailzies, whether made prior or poſterior to the 1685.

Contravention, by whom inferred.

13. An heir, who counteracts the directions of the tailzie, by alienating any part of the eſtate, charging it with debt, &c is ſaid to contravene. It is not the ſimple contracting of debt that infers contravention; the lands entailed muſt be actually adjudged upon the debt contracted. An heir may, where he is not expreſsly barred, ſettle rational proviſions on his wife and children, without incurring contravention. It is not quite clear whether the heirs alſo of the contravener would forfeit their right from the acts or deeds of their predeceſſor where there is no expreſs clauſe in the entail ſettling it; and though the words of the act 1685 (which declares, that entails executed according to the directions of it, ſhall be effectual not only againſt the contravener and his heirs, but againſt creditors), may ſeem to favour the idea that heirs alſo would forfeit, the more favourable opinion has received the ſanction of the ſupreme court. For the greater ſecurity, however, a clauſe is now uſually inſerted in tailzies, declaring, that the contravention of the heir in poſſeſſion ſhall not affect his deſcendants, when ſuch is the intention of the granter.

In what caſes an heir may ſell.

14. When the heirs of the laſt perſon ſpecially called in a tailzie come to ſucceed, the irritancies have no longer any perſon in favour of whom they can operate; and conſequently, the fee, which was before tailzied, becomes ſimple and unlimited in the perſon of ſuch heirs. By the late act 20th Geo. II. for aboliſhing wardholdings, the king may purchaſe lands within Scotland, notwithſtanding the ſtricteſt entail; and where the lands are in the hands of minors or fatuous perſons, his majeſty may purchaſe them from the curators or guardians. And heirs of entail may ſell to their vaſſals the ſuperiorities belonging to the entailed eſtate; but in all theſe caſes, the price is to be ſettled in the ſame manner that the lands or ſuperiorities ſold were ſettled before the ſale.

Rights taken in conjunct fee.

15. Rights, not only of land-eſtates, but of bonds, are ſometimes granted to two or more perſons in conjunct fee. Where a right is ſo granted to two ſtrangers, without any ſpecial clauſe adjected to it, each of them has an equal intereſt in the fee, and the part of the deceaſed deſcends to his own heir. If the right be taken to the two jointly, and the *longeſt liver* and their heirs, the ſeveral ſhares of the conjunct fiars are affectable by their creditors during their lives: but, on the death of any one of them, the ſurvivor has the fee of the whole, in ſo far as the ſhare of the predeceaſed remains free, after payment of his debts. Where the right is taken to the two in conjunct fee, and to the

heirs of one of them, he to whoſe heirs the right is taken is the only fiar; the right of the other reſolves into a ſimple liferent: yet where a father takes a right to himſelf and his ſon jointly, and to the ſon's heirs, ſuch right being gratuitous, is not underſtood to ſtrip the father of the fee, unleſs a contrary intention ſhall plainly appear from the tenor of the right.

16. Where a right is taken to a huſband and wife, in conjunct fee and liferent, the huſband, as the *perſona dignior*, is the only fiar: the wife's right reſolves into a liferent, unleſs it be preſumable, from ſpecial circumſtances, that the fee was intended to be in the wife. Where a right of moveables is taken to huſband and wife, the heirs of both ſucceed equally, according to the natural meaning of the words.

Heirs of proviſion.

17. Heirs of proviſion are thoſe who ſucceed to any ſubject, in virtue of a proviſion in the inveſtiture, or other deed of ſettlement. This appellation is given moſt commonly to heirs of a marriage. Theſe are more favourably regarded than heirs by ſimple deſtination, who have only the hope of ſucceſſion; for heirs of a marriage, becauſe their proviſions are conſtituted by an onerous contract, cannot be diſappointed of them by any gratuitous deed of the father. Nevertheleſs, as their right is only a right of ſucceſſion, which is not deſigned to reſtrain the father from granting onerous or rational deeds, he continues to have the full power of ſelling the ſubject, or charging it with debts, unleſs a proper right of credit be given to the heir by the marriage contract, *e. g.* if the father ſhould oblige himſelf to infeſt the heir in the lands, or make payment of the ſum provided againſt a day certain, or when the child attains a certain age, &c.; for ſuch rights, when perfected by infeſtment, or ſecured by diligence, are effectual againſt all the poſterior deeds of the father, even onerous.

Effects of proviſions to children.

18. Though all proviſions to children, by a marriage contract conceived in the ordinary form, being merely rights of ſucceſſion, are poſtponed to every onerous debt of the granter, even to thoſe contracted poſterior to the proviſions; yet where a father executes a bond of proviſion to a child actually exiſting, whether ſuch child be the heir of a marriage or not, a proper debt is thereby created, which, though it be without doubt gratuitous, is not only effectual againſt the father himſelf and his heirs, but is not reducible at the inſtance even of his prior onerous creditors, if he was ſolvent at the time of granting it. A father may notwithſtanding a firſt marriage-contract, ſettle a jointure on a ſecond wife, or provide for the children of a ſecond marriage; for ſuch ſettlements are deemed onerous; but where they are exorbitant, they will be reſtricted to what is rational: and in all ſuch ſettlements, where the proviſions of the firſt marriage-contract are encroached upon, the heirs of that marriage have recourſe againſt the father, in caſe he ſhould afterwards acquire a ſeparate eſtate, which may enable him to fulfil both obligations.

Proviſion to heirs.

19. In marriage-contracts, the conqueſt, or a certain part of it, is frequently provided to the iſſue; by which is underſtood whatever real addition ſhall be made to the father's eſtate during the marriage by purchaſe or donation. Conqueſt therefore muſt be free, *i. e.* what remains after payment of debts due by the father. As in other proviſions, ſo in conqueſt: the father is ſtill fiar, and may therefore diſpoſe of it for onerous or rational cauſes. Where heritable rights are provided to the *heirs* of a marriage, they fall to the eldeſt ſon, for he is the heir at law in heritage. Where a ſum of money is ſo provided, the word *heir* is applied to the ſubject of the proviſion, and ſo marks out the executor, who is the heir in moveables. When an heritable right is provided to the *bairns* (or iſſue) of a marriage, it is divided equally among the children, if no diviſion be made by the father; for ſuch deſtination cuts off the excluſive right of the legal heir. No proviſion granted to bairns, gives a ſpecial right of credit to any one child, as long as the father lives: the right is granted *familiæ*; ſo that the whole muſt indeed go to one or other of them; but the father has a power inherent in him, to divide it among them, in ſuch proportions as he thinks beſt, yet ſo as none of them may be entirely excluded, except in extraordinay caſes.

To bairns.

Clauſe of return.

20. A clauſe of return is that, by which a ſum in a bond or other right, is in a certain event limited to return to the granter himſelf, or his heirs. When a right is granted for onerous cauſes, the creditor may defeat the clauſe of return, even gratuitouſly. But, where the ſum in the right flows from the granter, or where there is any other reaſonable cauſe for the proviſion of return in his favour, the receiver cannot diſappoint it gratuitouſly. Yet ſince he is fiar, the ſum may be either aſſigned by him for an onerous cauſe, or affected by his creditors.

Heirs.

21. An heir is, in the judgment of law, *eadem perſona cum defuncto*, and ſo repreſents the deceaſed univerſally, not only in his rights, but in his debts: in the firſt view, he is ſaid to be heir *activè*; in the ſecond, *paſſivè*. From this general rule are excepted, heirs ſubſtituted in a ſpecial bond, and even ſubſtituted in a diſpoſition *omnium bonorum*, to take effect at the granter's death; for ſuch ſubſtitutes are conſidered as ſingular ſucceſſors, and their right as an univerſal legacy, which does not ſubject the legatee *ultra valorem*, but heirs male or of tailzie, though their right be limited to ſpecial ſubjects, are liable, not merely to the extent of the ſubject entailed or provided, but *in ſolidum*; becauſe ſuch rights are deſigned to carry an univerſal character, and ſo infer an univerſal repreſentation of the granter. The heir of line is primarily liable for the debts of his predeceſſor; for he is the moſt proper heir, and ſo muſt be diſcuſſed before any other can be purſued; next to him the heir of conqueſt, becauſe he alſo ſucceeds to the *univerſitas* of the whole heritable rights which his predeceſſor had acquired by ſingular titles; then, the heir male, or of a mariage; for their propinquity of blood ſubjects them more directly than any other heir of tailzie, who may poſſibly be a ſtranger; and who for that reaſon is not liable to be diſcuſed, except for ſuch of the predeceſſor's debts or deeds as relate ſpecially to the lands tailzied; as to which he is liable even before the heir of line. Heirs portioners are liable *pro rata* for their predeceſſors debts; but if any of them prove inſolvent, the creditor may, after diſcuſſing her, inſiſt for her ſhare againſt the reſt, who will be liable in ſo far as they are *lucratæ* by the ſucceſſion. Where an heir, liable *ſubſidiare*, pays the predeceſſor's debt, he has relief againſt the heir who is more directly liable, in reſpect of whom he is not co-heir, but creditor.

Apparent heirs.

22. Before an heir can have an active title to his anceſtor's rights, he muſt be entered by ſervice and retour. He who is intitled to enter heir, is, before his actual entry, called *apparent heir.* The bare right of apparency carries certain privileges with it. An apparent heir may defend his anceſtor's titles againſt any third party who brings them under challenge. Tenants may ſafely pay him their rents; and after they have once acknowledged him by payment, he may compel them to continue it; and the rents not uplifted by the apparent heir belong to his executors, upon his death.

Jus deliberandi

23. As an heir is, by his entry, ſubjected univerſally to his anceſtor's debts, apparent heirs have therefore a year *(annus deliberandi)* allowed to them from the anceſtor's deceaſe, to deliberate whether they will enter or not; till the expiry of which, though they may be charged by creditors to enter, they cannot be ſued in any proceſs founded upon ſuch charge. Though declaratory actions, and others which contain no perſonal concluſion, may be purſued againſt the apparent heir without a previous charge; action does not lie even upon theſe, within the year, if the heir cannot make the proper defences without incurring a paſſive title. But judicial ſales, commenced againſt an anceſtor, may by ſpecial act of ſederunt be continued upon a citation of the heir, without waiting the year of deliberating. This *annus deliberandi* is computed, in the caſe of a poſthumous heir, from the birth of ſuch heir. An apparent heir, who, by immixing with the eſtate of his anceſtor, is as much ſubjected to his debts as if he had entered, can have no longer a right to deliberate whether he will enter or not.

Service of heirs,

24. All ſervices proceed on brieves from the chancery, which are called *brieves of inqueſt*, and have been long known in Scotland. The judge, to whom the brief is directed, is required to try the matter by an inqueſt of 15 ſworn men. The inqueſt, if they find the claim verified, muſt declare the claimant heir to the deceaſed, by a verdict or ſervice, which the judge muſt atteſt, and return the brief, with the ſervice proceeding on it, to the chancery; from which an extract is obtained called the *retour of the ſervice.*

general and ſpecial.

25. The ſervice of heirs is either *general* or *ſpecial.* A *general* ſervice veſts the heir in the right of all heritable ſubjects, which either do not require ſeiſin or which have not been perfected by ſeiſin in the perſon of the anceſtor. A public right, therefore, according to the feudal law, though followed by ſeiſin, having no legal effects till it be confirmed by the ſuperior, muſt, as a perſonal right, be carried by a general ſervice. A *ſpecial* ſervice, followed by ſeiſin, veſts the heir in the right of the ſpecial ſubjects in which the anceſtor died infeſt.

Entry by inventory.

26. If an heir, doubtful whether the eſtate of his anceſtor be ſufficient for clearing his debts, ſhall, at any time within the *annus deliberandi*, exhibit upon oath a full inventory of all his anceſtor's heritable ſubjects, to the clerk of the ſhire where the lands lie; or, if there is no heritage, requiring ſeiſin, to the clerk of the ſhire where he died; and if, after the ſame is ſubſcribed by the ſheriff or ſheriff-depute, the clerk, and himſelf, and regiſtered in the ſheriff's books, the extract thereof ſhall be regiſtered within forty days after expiry of the *annus deliberandi* in the general regiſter appointed for that purpoſe, his ſubſequent entry will ſubject him no farther than to the value of ſuch inventory. If the inventory be given up and regiſtered within the time preſcribed, the heir may ſerve on it, even after the year.

27. Creditors are not obliged to acquieſce in the value of the eſtate given up by the heir; but, if they be real creditors, may bring the eſtate to a public ſale, in order to diſcover its true value; ſince an eſtate is always worth what can be got for it. An heir by inventory, as he is in effect a truſtee for the creditors, muſt account for that value to which the eſtate may have been improved ſince the death of the anceſtor, and he muſt communicate to all the creditors the eaſes he has got in tranſacting with any one of them.

Entry upon a precept of *clare conſtat.*

28. Practice has introduced an anomalous ſort of entry, without the interpoſition of an inqueſt, by the ſole conſent of the ſuperior; who, if he be ſatisfied that the perſon applying to him is the next heir, grants him a perſon (called of *clare conſtat*, from the firſt words of its recital), commanding his bailie to infeſt him in the ſubjects that belonged to his anceſtor. The heir, by taking ſeiſin on this precept, becomes *paſſive*, liable for all the debts of his anceſtor; and on the other hand, acquires an active title, as to the ſubjects contained in the precept in queſtions with the ſuperior or his heirs; and they may, when followed by ſeiſin, afford a title of preſcription: But as no perſon can be declared an heir by private authority, they cannot bar the true heir from entering after 20 years, as a legal entry would have done; the true heir, in ſuch caſe, having it ſtill in his power to ſet aſide that right, and obtain himſelf regularly ſerved at any time within the years of preſcription. Of the ſame nature is the entry by haſp and ſtaple, commonly uſed in burgage tenements of houſes; by which the bailie, without calling an inqueſt, cognoſces or declares a perſon heir, upon evidence brought before himſelf; and, at the ſame time infeſts him in the ſubject, by the ſymbol of the haſp and ſtaple of the door. Charges given by creditors to apparent heirs to enter, ſtand in the place of an actual entry, ſo as to ſupport the creditor's diligence (clxxii. 2.).

Entry by haſp and ſtaple.

A ſpecial ſervice includes a general one.

29. A general ſervice cannot include a ſpecial one; ſince it has no relation to any ſpecial ſubject, and carries only that claſs of rights on which ſeiſin has not proceeded; but a ſpecial ſervice implies a general one of the ſame kind or character, and conſequently carries even ſuch rights as have not been perfected by ſeiſin. Service is not required to eſtabliſh the heir's right in titles of honour, or offices of the higheſt dignity; for theſe deſcend *jure ſanguinis.*

Paſſive titles.

30. An heir, by immixing with his anceſtor's eſtate without entry, ſubjects himſelf to his debts, as if he had entered; or, in the law-phraſe, incurs a paſſive title. The only paſſive title by which an apparent heir becomes liable univerſally for all his anceſtor's debts, is *geſtio pro hærede*, or his behaving as none but an heir has right to do. Behaviour as heir is inferred from the apparent heir's intromiſſion, after the death of the anceſtor, with any part of the lands or other heritable ſubjects belonging to the deceaſed, to which he himſelf might have completed an active title by entry.

Geſtio pro hærede.

31. This paſſive title is excluded, if the heir's intromiſſion be by order of law; or if it be founded on

ſingular titles, and not as heir to the deceaſed. But an apparent heir's purchaſing any right to his anceſtor's eſtate, otherwiſe than at public roup (auction), or his poſſeſſing it in virtue of rights ſettled in the perſon of any near relation of the anceſtor, to whom he himſelf may ſucceed as heir, otherwiſe than upon purchaſe by public ſale, is deemed behaviour as heir.

32. Behaviour as heir is alſo excluded, where the intromiſſion is ſmall, unleſs an intention to defraud the anceſtor's creditors be preſumable from the circumſtances attending it. Neither is behaviour inferred againſt the apparent heir, from the payment of his anceſtor's debt, which is a voluntary act, and profitable to the creditors: nor by his taking out of brieves to ſerve; for one may alter his purpoſe, while it is not completed: nor by his aſſuming the titles of honour belonging to his anceſtor, or exerciſing an honorary office hereditary in the family; for theſe are rights annexed to the blood, which may be uſed without proper repreſentation. But the exerciſing an heritable office of profit, which may paſs by voluntary conveyance, and conſequently is adjudgeable, may reaſonably be thought to infer a paſſive title. Laſtly, as paſſive titles have been introduced, merely for the ſecurity of creditors; therefore, where queſtions concerning behaviour ariſe among the different orders of heirs, they are liable to one another no farther than *in valorem* of their ſeveral intromiſſions.

Præceptio hæreditatis.

33. Another paſſive title in heritage, may be incurred by the apparent heir's accepting a gratuitous right from the anceſtor, to any part of the eſtate to which he himſelf might have ſucceeded as heir; and it is called *præceptio hereditatis*, becauſe it is a taking of the ſucceſſion by the heir before it opens to him by the death of his anceſtor. If the right be onerous, there is no paſſive title; if the conſideration paid for it does not amount to its full value, the creditors of the deceaſed may reduce it, in ſo far as it is gratuitous, but ſtill it infers no paſſive title.

34. The heir incurring this paſſive title is no farther liable, than if he had at the time of his acceptance entered heir to the granter, and ſo ſubjected himſelf to the debts that were then chargeable againſt him; but with the poſterior debts he has nothing to do, not even with thoſe contracted between the date of the right and the infeftment taken upon it, and he is therefore called *ſucceſſor titulo lucrativo poſt contractum debitum*.

35. Neither of theſe paſſive titles takes place, unleſs the ſubject intermeddled with or diſponed be ſuch as the intromitter or receiver would ſucceed to as heir. In this alſo, theſe two paſſive titles agree, that the intromiſſion in both muſt be after the death of the anceſtor; for there can be no *termini habiles* of a paſſive title, while the anceſtor is alive. But in the following reſpect they differ: *Geſtio pro herede*, being a vicious paſſive title founded upon a quaſi delict, cannot be objected againſt the delinquent's heir, if proceſs has not been litiſconteſted while the delinquent himſelf was alive; whereas the *ſucceſſor titulo lucrativo* is by the acceptance of the diſpoſition underſtood to have entered into a tacit contract with the granter's creditors, by which he undertakes the burden of their debts; and all actions founded on contract are tranſmiſſible againſt heirs.

Other paſſive titles.

36. An apparent heir, who is cited by the anceſtor's creditor in a proceſs for payment, if he offers any peremptory defence againſt the debt, incurs a paſſive title; for he can have no intereſt to object againſt it, but in the character of heir. In the ſame manner, the heir's not renouncing upon a charge to enter heir, infers it: But the effect of both theſe is limited to the ſpecial debt purſued for, or charged upon. This paſſive title, which is inferred from the heir's not renouncing, has no effect till decree paſs againſt him; and even a renunciation offered after decree, if the decree be in abſence, will intitle the heir to a ſuſpenſion of all diligence againſt his perſon and eſtate, competent upon his anceſtor's debts.

37. By the principles of the feudal law, an heir, when he is to complete his titles by ſpecial ſervice, muſt neceſſarily paſs over his immediate anceſtor, *e. g.* his father, if he was not infeſt; and ſerve heir to that anceſtor who was laſt veſt and ſeiſed in the right, and in whoſe *hæreditas jacens* the right muſt remain, till a title be connected thereto from him. As this bore hard upon creditors who might think themſelves ſecure in contracting with a perſon whom they ſaw for ſome time in the poſſeſſion of an eſtate, and from thence concluded that it was legally veſted in him; it is therefore provided by act 1695, that every perſon, paſſing over his immediate anceſtor who had been three years in poſſeſſion, and ſerving heir to one more remote, ſhall be liable for the debts and deeds of the perſon interjected, to the value of the eſtate to which he is ſerved. This being correctory of the feudal maxims, has been ſtrictly interpreted, ſo as not to extend to the gratuitous deeds of the perſon interjected, nor to the caſe where the interjected perſon was a naked fiar, and poſſeſſed only civilly through the liferenter.

Reduction by the heir *ex capite lecti.*

38. The law, from its jealouſy of the weakneſs of mankind while under ſickneſs, and of the importunity of friends on that occaſion, has declared that all deeds affecting heritage, if they be granted by a perſon on deathbed, (*i. e.* after contracting that ſickneſs which ends in death), to the damage of the heir, are ineffectual, except where the debts of the granter have laid him under a neceſſity to alien his lands. As this law of deathbed is founded ſolely in the privilege of the heir, deathbed-deeds, when conſented to by the heir, are not reducible. The term properly oppoſed to deathbed is *liege pouſtie*, by which is underſtood a ſtate of health; and it gets the name, becauſe perſons in health have the *legitima poteſtas*, or lawful power, of diſpoſing of their property at pleaſure.

What conſtitutes a deathbed deed.

36. The two extremes being proved, of the granter's ſickneſs immediately before ſigning, and of his death following it, though at the greateſt diſtance of time, did, by the former law, found a preſumption that the deed was granted on deathbed, which could not have been elided but by a poſitive proof of the granter's convaleſcence; but now the allegation of deathbed is alſo excluded, by his having lived 60 days after ſigning the deed. The legal evidence of convaleſcence is the granter's having been, after the date of the deed, at kirk OR market unſupported, for a proof of either will ſecure the deed from challenge. The going to kirk or market muſt be performed when the people are met together in the church or churchyard for any public meeting, civil or eccleſiaſtical, or in the mar-

kept-place at the time of public market. No other proof of convaleſcence is receivable, becauſe at kirk and market there are always preſent unſuſpected witneſſes, which we can hardly be ſure of in any other caſe.

To what heirs this reduction is competent.

40. The privilege of ſetting aſide deeds *ex capite lecti*, is competent to all heirs, not to heirs of line only, but of conqueſt, tailzie, or proviſion; not only to the immediate, but to remoter heirs as ſoon as the ſucceſſion opens to them. But, where it is conſented to or ratified by the immediate heir, it is ſecured againſt all challenge, even from the remoter. Yet the immediate heir cannot, by any antecedent writing, renounce his right of reduction, and thereby give ſtrength to deeds that may be afterwards granted *in lecto* to his hurt; for no private renunciation can authoriſe a perſon to act contrary to a public law; and ſuch renunciation is preſumed to be extorted through the fear of exheredation. If the heir ſhould not uſe this privilege of reduction, his creditor may, by adjudication, transfer it to himſelf; or he may, without adjudication reduce the deed, libelling upon his intereſt as creditor to the heir: But the granter's creditors have no right to this privilege, in regard that the law of deathbed was introduced, not in behalf of the granter himſelf, but of his heir.

What rights may be thus ſet aſide.

41. The law of deathbed ſtrikes againſt diſpoſitions of every ſubject to which the heir would have ſucceeded, or from which he would have had any benefit, had it not been ſo diſponed. Deathbed-deeds granted in conſequence of a full or proper obligation in *liege pouſtie*, are not ſubject to reduction; but, where the antecedent obligation is merely natural, they are reducible. By ſtronger reaſon, the deceaſed cannot, by a deed merely voluntary, alter the nature of his eſtate on deathbed to the prejudice of his heir, ſo as for heritable to make it moveable; but if he ſhould, in *liege pouſtie*, exclude his apparent heir, by an irrevocable deed containing reſerved faculties, the heir cannot be heard to quarrel the exerciſe of theſe faculties on death-bed.

24. In a competition between the creditors of the deceaſed and of the heir, the law (act 1661) has juſtly preferred the creditors of the deceaſed, as every man's eſtate ought to be liable, in the firſt place, for his own debt. But this preference is, by the ſtatute, limited to the caſe where the creditors of the deceaſed have uſed diligence againſt their debtor's eſtate, within three years from his death; and therefore the heir's creditors may, after that period, affect it for their own payment. All diſpoſitions by an heir, of the anceſtor's eſtate, within a year after his death, are null, in ſo far as they are hurtful to the creditors of the anceſtor. This takes place, though theſe creditors ſhould have uſed no diligence, and even where the diſpoſitions are granted after the year: It is thought they are ineffectual againſt the creditors of the deceaſed who have uſed diligence within the three years.

clxxi.

SECT. XXI. *Of Succeſſion in Moveables.*

Moveable ſucceſſion by law.

In the ſucceſſion of moveable rights, it is an univerſal rule, that the next in degree to the deceaſed (or next of kin) ſucceeds to the whole; and if there are two or more equally near, all of them ſucceed by equal parts, without that prerogative, which takes place in heritage, of the eldeſt ſon over the younger, or of males over females. Neither does the right of repreſentation (explained n° clxxx. 4.) obtain in the ſucceſſion of moveables, except in the ſingle caſe of a competition between the full blood and the half blood; for a niece by the full blood will be preferred before a brother by the half blood, though ſhe is by one degree more remote from the deceaſed than her uncle. Where the eſtate of a perſon deceaſed conſiſts partly of heritage, and partly of moveables, the heir in the heritage has no ſhare of the moveables, if there are others as near in degree to the deceaſed as himſelf: But where the heir, in ſuch caſe, finds it his intereſt to renounce his excluſive claim to the heritage, and betake himſelf to his right as one of the next of kin, he may collate or communicate the heritage with the others, who in their turn muſt collate the moveables with him; ſo that the whole is thrown into one maſs, and divided equally among all of them. This doctrine holds, not only in the line of deſcendants, but of collaterals; for it was introduced, that the heir might in no caſe be worſe than the other next of kin.

Succeſſion in moveables by deſtination.

2. One may ſettle his moveable eſtate upon whom he pleaſes, excluding the legal ſucceſſor, by a teſtament; which is a written declaration of what a perſon wills to be done with his moveable eſtate after his death. No teſtamentary deed is effectual till the death of the teſtator; who may therefore revoke it at pleaſure, or make a new one, by which the firſt loſes its force, according to the rule, *voluntas teſtatoris eſt ambulatoria uſque ad mortem*; and hence teſtaments are called *laſt* or *latter wills*. Teſtaments, in their ſtrict acceptation, muſt contain a nomination of executors, *i. e.* of perſons appointed to adminiſter the ſucceſſion according to the will of the deceaſed: Yet nothing hinders one from making a ſettlement of moveables, in favour of an univerſal legatee, though he ſhould not have appointed executors; and on the other part, a teſtament where executors are appointed is valid, though the perſon who is to have the right of ſucceſſion ſhould not be named. In this laſt caſe, if the executor nominated be a ſtranger, *i. e.* one who has no legal intereſt in the moveable eſtate, he is merely a truſtee, accountable to the next of kin; but he may retain a third of the dead's part (explained par. 6.) for his trouble in executing the teſtament; in payment of which, legacies, if any be left to him, muſt be imputed. The heir, if he be named executor, has right to the third as a ſtranger; but if one be named who has an intereſt in the legal ſucceſſion, he has no allowance, unleſs ſuch intereſt be leſs than a third. Nuncupative or verbal teſtaments are not, by the law of Scotland, effectual for ſupporting the nomination of an executor, let the ſubject of the ſucceſſion be ever ſo ſmall: But verbal legacies, not exceeding L. 100 *Scots*, are ſuſtained; and even where they are granted for more, they are ineffectual only as to the exceſs.

Legacy.

3. A legacy is a donation by the deceaſed, to be paid by the executor to the legatee. It may be granted either in the teſtament or in a ſeparate writing. Legacies are not due till the granter's death; and conſequently they can tranſmit no right to the executors of the legatee, in the event that the granter ſurvives him. A caſe occurred ſome years ago, where a teſtator left a legacy *payable when* the legatee arrived at a certain age. The legatee ſurvived the teſtator,

tor, but died before the legacy was payable. It was found, chiefly upon the authority of the Roman law, that the legacy veſted in the legatee *a morte teſtatoris*, and upon his deceaſe was due to the legatee's next of kin.

4. Legacies, where they are general, *i. e.* of a certain ſum of money indefinitely, give the legatee no right in any one debt or ſubject; he can only inſiſt in a perſonal action againſt the executor, for payment out of the teſtator's effects. A ſpecial legacy, *i. e.* of a particular debt due to the deceaſed, or of a particular ſubject belonging to him, is of the nature of an aſſignation, by which the property of the ſpecial debt or ſubject veſts, upon the teſtator's death in the legatee, who can therefore directly ſue the debtor or poſſeſſor: Yet as no legacy can be claimed till the debts are paid, the executor muſt be cited in ſuch proceſs, that it may be known, whether there are free effects ſufficient for anſwering the legacy. Where there is not enough for payment of all the legacies, each of the general legatees muſt ſuffer a proportional abatement: But a ſpecial legatee gets his legacy entire, though there ſhould be nothing over for payment of the reſt; and, on the contrary, he has no claim, if the debt or ſubject bequeathed ſhould periſh, whatever the extent of the free executry may be.

Who can teſt, and under what reſtrictions

5. Minors, after puberty, can teſt without their curators, wives without their huſbands, and perſons interdicted without their interdictors: but baſtards cannot teſt, except in the caſes afterwards ſet forth N° clxxxii. 3. As a certain ſhare of the goods, falling under the communion that is conſequent on marriage, belongs, upon the huſband's deceaſe, to his widow, *jure relictæ*, and a certain ſhare to the children, called the *legitime*, *portion-natural*, or *bairns part of gear;* one who has a wife or children, though he be the abſolute adminiſtrator of all theſe goods during his life, and conſequently may alien them by a deed *inter vivos*, in *liege pouſtie*, even gratuitouſly, if no fraudulent intention to diſappoint the wife or children ſhall appear, yet cannot impair their ſhares gratuitouſly on death-bed; nor can he diſpoſe of his moveables to their prejudice by teſtament, though it ſhould be made in *liege pouſtie;* ſince teſtaments do not operate till the death of the teſtator, at which period the diviſion of the goods in communion have their full effect in favour of the widow and children

Diviſion of a teſtament

6. If a perſon deceaſed leaves a widow, but no child, his teſtament, or, in other words, the goods in communion, divide in two: one half goes to the widow; the other is the dead's part, *i. e.* the abſolute property of the deceaſed, on which he can teſt, and which falls to his next of kin, if he dies inteſtate. Where he leaves children, one or more, but no widow, the children get one half as their legitime: the other half is the dead's part; which falls alſo to the children, if the father has not teſted upon it. If he leaves both widow and children, the diviſion is tripartite: the wife takes one third by herſelf; another falls, as legitime, to the children equally among them, or even to an only child, though he ſhould ſucceed to the heritage; the remaining third is the dead's part. Where the wife predeceaſes without children, one half is retained by the huſband, the other falls to her next of kin: Where ſhe leaves children, the diviſion ought alſo to be bipartite, by the common rules of ſociety, ſince no legitime is truly due on a mother's death: yet it is in practice tripartite; two thirds remain with the ſurviving father, as if one third were due to him *proprio nomine*, and another as adminiſtrator of the legitime for his children; the remaining third, being the wife's ſhare, goes to her children, whether of that or any former marriage; for they are all equally her next of kin.

What debts affect the executry.

7. Before a teſtament can be divided, the debts owing by the deceaſed are to be deducted; for all executry muſt be free. As the huſband has the full power of burdening the goods in communion, his debts affect the whole, and ſo leſſen the legitime and the ſhare of the relict, as well as the dead's part. His funeral charges, and the mournings and alimony due to the widow, are conſidered as his proper debts; but the legacies, or other gratuitous rights granted by him on death-bed, affect only the dead's part. Bonds bearing intereſt, due by the deceaſed, cannot diminiſh the relict's ſhare, becauſe ſuch bonds, when due to the deceaſed, do not increaſe it. The funeral charges of the wife predeceaſing, fall wholly on her executors who have right to her ſhare. Where the deceaſed leaves no family, neither huſband, wife, nor child, the teſtament ſuffers no diviſion, but all is the dead's part.

8. The whole iſſue of the huſband, not only by that marriage which was diſſolved by his death, but by any former marriage, has an equal intereſt in the legitime; otherwiſe the children of the firſt marriage would be cut out, as they could not claim the legitime during their father's life. But no legitime is due, (1.) Upon the death of a mother. (2.) Neither is it due to grandchildren, upon the death of a grandfather. Nor, (3.) To children foriſfamiliated. *i. e.* to ſuch as, by having renounced the legitime, are no longer conſidered as *in familia*, and ſo are excluded from any farther ſhare of the moveable eſtate than they have already received.

Renunciation of the legitime.

9. As the right of legitime is ſtrongly founded in nature, the renunciation of it is not to be inferred by implication. Renunciation by a child of his claim of legitime has the ſame effect as his death, in favour of the other children intitled thereto; and conſequently the ſhare of the renouncer divides among the reſt; but he does not thereby loſe his right to the dead's part, if he does not alſo renounce his ſhare in the father's executry. Nay, his renunciation of the legitime, where he is the only younger child, has the effect to convert the whole ſubject thereof into dead's part, which will therefore fall to the renouncer himſelf as next of kin, if the heir be not willing to collate the heritage with him. Yet it has been found that the renunciation of the only younger child made the whole legitime accrue to the heir without collation.

Collation among younger children.

10. For preſerving an equality among all the children who continue intitled to the legitime, we have adopted the Roman doctrine of *collatio bonorum;* whereby the child, who has got a proviſion from his father, is obliged to collate it with the others, and impute it towards his own ſhare of the legitime; but if from the deed of proviſion, the father ſhall appear to have intended it as a *præcipuum* to the child, collation is excluded. A child is not bound to collate an heritable ſubject provided to him, becauſe the legitime is not impaired by ſuch proviſion. As this collation takes place only in queſtions among children who are intitled to

the legitime, the relict is not bound to collate donations given her by her huſband, in order to increaſe the legitime; and on the other part, the children are not obliged to collate their proviſions, in order to increaſe her ſhare.

Confirmation.

11. As an heir in heritage muſt complete his titles by entry, ſo an executor is not veſted in the right of the moveable eſtate of the deceaſed without confirmation. Confirmation is a ſentence of the commiſſary or biſhop's court, impowering an executor, one or more, upon making inventory of the moveables pertaining to the deceaſed, to recover, poſſeſs, and adminiſter them, either in behalf of themſelves, or of others intereſted therein. Teſtaments muſt be confirmed in the commiſſariot where the deceaſed had his principal dwelling houſe at his death. If he had no fixed reſidence, or died in a foreign country, the confirmation muſt be at *Edinburgh*, as the *commune forum*; but if he went abroad with an intention to return, the commiſſariot within which he reſided before he left Scotland, is the only proper court.

12. Confirmation proceeds upon an edict, which is affixed on the door of the pariſh-church where the deceaſed dwelt, and ſerves to intimate to all concerned the day of confirmation, which muſt be nine days at leaſt after publiſhing the edict. In a competition for the office of executor, the commiſſary prefers, *primo loco*, the perſon named to it by the deceaſed himſelf, whoſe nomination he ratifies or confirms, without any previous decerniture: this is called the confirmation of a teſtament-teſtamentary. In default of an executor named by the deceaſed, univerſal diſponees are by the preſent practice preferred; after them, the next of kin; then the relict; then creditors; and, laſtly, ſpecial legatees. All theſe muſt be decerned executors, by a ſentence called a *decree-dative*; and if afterwards they incline to confirm, the commiſſary authoriſes them to adminiſter, upon their making inventory, and giving ſecurity to make the ſubject thereof forthcoming to all having intereſt; which is called the confirmation of a teſtament-dative.

Confirmation *qua* executor-creditor.

13. A creditor, whoſe debtor's teſtament is already confirmed, may ſue the executor, who holds the office for all concerned, to make payment of his debt. Where there is no confirmation, he himſelf may apply for the office, and confirm as executor-creditor; which intitles him to ſue for and receive the ſubject confirmed, for his own payment: and where one applies for a confirmation as executor-creditor, every co-creditor may apply to be conjoined with him in the office. As this kind of confirmation is ſimply a form of diligence, creditors are exempted from the neceſſity of confirming more than the amount of their debts.

14. A creditor whoſe debt has not been conſtituted or his claim not cloſed by decree, during the life of his debtor, has no title to demand directly the office of executor *qua* creditor: but he may charge the next of kin who ſtands off, to confirm, who muſt either renounce within twenty days after the charge, or be liable for the debt; and if the next of kin renounces, the purſuer may conſtitute his debt, and obtain a decree *cognitionis cauſa*, againſt the *hæreditas jacens* of the moveables, upon which he may confirm as executor-creditor to the deceaſed. Where one is creditor, not to the deceaſed, but to his next of kin who ſtands off from confirming, he may affect the moveables of the deceaſed, by obtaining himſelf decerned executor-dative to the deceaſed, as if he were creditor to him, and not to his next of kin.

Confirmation *ad omiſſa*, &c.

15. Where an executor has either omitted to give up any of the effects belonging to the deceaſed in inventory, or has eſtimated them below their juſt value, there is place for a new confirmation, *ad omiſſa, vel male appretiata*, at the ſuit of any having intereſt; and if it appears that he has not omitted or undervalued any ſubject *doloſé*, the commiſſary will ordain the ſubjects omitted, or the difference between the eſtimations in the principal teſtament and the true values, to be added thereto; but if dole ſhall be preſumed, the whole ſubject of the teſtament *ad omiſſa vel male appretiata*, will be carried to him who confirms it, to the excluſion of the executor in the principal teſtament.

Legitime, &c. tranſmit without confirmation.

16. The legitime and relict's ſhare, becauſe they are rights ariſing *ex lege*, operate *ipſo jure*, upon the father's death, in favour of the relict and children; and conſequently paſs from them, though they ſhould die before confirmation, to their next of kin: whereas the dead's part, which falls to the children or other next of kin in the way of ſucceſſion, remains, if they ſhould die before confirming, *in bonis* of the firſt deceaſed; and ſo does not deſcend to their next of kin, but may be confirmed by the perſon who, at the time of confirmation, is the next of kin to the firſt deceaſed. Special aſſignations, though neither intimated nor made public during the life of the granter, carry to the aſſignee the full right of the ſubjects aſſigned, without confirmation. Special legacies are really aſſignations, and ſo fall under this rule. The next of kin, by the bare poſſeſſion of the *ipſa corpora* of moveables, acquires the property thereof without confirmation, and tranſmits it to his executors.

Partial confirmation.

17. The confirmation of any one ſubject by the next of kin, as it proves his right of blood, has been adjudged to carry the whole executry out of the teſtament of the deceaſed, even what was omitted, and to tranſmit all to his own executors. The confirmation of a ſtranger, who is executor nominated, as it is merely a truſt for the next of kin, has the effect to eſtabliſh the right of the next of kin to the ſubjects confirmed, in the ſame manner as if himſelf had confirmed them.

Executors, how far liable.

18. Executry, though it carries a certain degree of repreſentation of the deceaſed, is properly an office: executors therefore are not ſubjected to the debts due by the deceaſed, beyond the value of the inventory; but, at the ſame time, they are liable in diligence for making the inventory effectual to all having intereſt. An executor-creditor who confirms more than his debt amounts to, is liable in diligence for what he confirms. Executors are not liable in intereſt, even upon ſuch bonds recovered by them as carried intereſt to the deceaſed, becauſe their office obliges them to retain the ſums they have made effectual, in order to a diſtribution thereof among all having intereſt. This holds though they ſhould again lend out the money upon intereſt, as they do it at their own riſk.

In what caſes they may pay without ſentence.

19. There are certain debts of the deceaſed called privileged debts, which were always preferable to every other. Under that name are comprehended, medicines furniſhed to the deceaſed on deathbed, phyſicians fees

during that period, funeral charges, and the rent of his houſe, and his ſervants wages for the year or term current at his death. Theſe the executors are in ſafety to pay on demand. All the other creditors, who either obtain themſelves confirmed, or who cite the executor already confirmed, within ſix months after their debtor's death, are preferred, *pari paſſu*, with thoſe who have done more timely diligence; and therefore no executor can either retain for his own debt, or pay a teſtamentary debt, ſo as to exclude any creditor, who ſhall uſe diligence within the ſix months, from the benefit of the *pari paſſu* preference; neither can a decree for payment of debt be obtained, in that period, againſt an executor, becauſe, till that term be elapſed, it cannot be known how many creditors may be intitled to the fund in his hands. If no diligence be uſed within the ſix months, the executor may retain for his own debt, and pay the reſidue *primo venienti*. Such creditors of the deceaſed as have uſed diligence within a year after their debtor's death, are preferable on the ſubject of his teſtament to the creditors of his next of kin.

Vitious intromiſſion.

20. The only paſſive title in moveables is vitious intromiſſion; which may be defined, an unwarrantable intermeddling with the moveable eſtate of a perſon deceaſed, without the order of law. This is not confined, as the paſſive titles in heritage are, to the perſons intereſted in the ſucceſſion, but ſtrikes againſt all intromitters whatever. Where an executor confirmed intromits with more than he has confirmed, he incurs a paſſive title; fraud being in the common caſe preſumed from his not giving up in inventory the full ſubject intermeddled with. Vitious intromiſſion is alſo preſumed, where the repoſitories of a dying perſon are not ſealed up, as ſoon as he becomes incapable of ſenſe, by his neareſt relations; or, if he dies in a houſe not his own, they muſt be ſealed by the maſter of ſuch houſe, and the keys delivered to the judge-ordinary, to be kept by him, for the benefit of all having intereſt.

21. The paſſive title of vitious intromiſſion does not take place where there is any probable title or circumſtance that takes off the preſumption of fraud. In conſequence of this rule, neceſſary intromiſſion, or *cuſtodiæ cauſa*, by the wife or children, who only continue the poſſeſſion of the deceaſed, in order to preſerve his goods for the benefit of all concerned, infers no paſſive title. And, upon the ſame principle, an intromitter, by confirming himſelf executor, and thereby ſubjecting himſelf to account, before action be brought againſt him on the paſſive titles, purges the vitioſity of his prior intromiſſion: and where the intromitter is one who is intereſted in the ſucceſſion, *e. g.* next of kin, his confirmation, at any time within a year from the death of the deceaſed, will exclude the paſſive title, notwithſtanding a prior citation. As this paſſive title was intended only for the ſecurity of creditors, it cannot be ſued upon by legatees; and ſince it ariſes *ex delicto*, it cannot be pleaded againſt the heir of the intromitter. As in delicts, any one of many delinquents may be ſubjected to the whole puniſhment, ſo any one of many intromitters may be ſued *in ſolidum* for the purſuer's debt, without calling the reſt; but the intromitter who pays has an action of relief againſt the others for their ſhare of it. If the intromitters are ſued jointly, they are liable, not *pro rata* of their ſeveral intromiſſions, but *pro virili*.

Mutual relief betwixt the heir and executor.

28. The whole of a debtor's eſtate is ſubjected to the payment of his debts; and therefore, both his heirs and executors are liable for them, in a queſtion with creditors: but as ſucceſſion is by law divided into the heritable and the moveable eſtate, each of theſe ought, in a queſtion between the ſeveral ſucceſſors, to bear the burdens which naturally affect it. Action of relief is accordingly competent to the heir who has paid a moveable debt, againſt the executor; and *vice verſa*. This relief is not cut off by the deceaſed's having diſponed either his land-eſtate or his moveables, with the burden of his *whole* debts; for ſuch burden is not to be conſtrued as an alteration of the legal ſucceſſion, but merely as a farther ſecurity to creditors, unleſs the contrary ſhall be preſumed from the ſpecial ſtyle of the diſpoſition.

IV. OF LAST HEIRS AND BASTARDS.

clxxxii.

Where there is no heir, the king ſucceeds.

By the ancient practice, feudal grants taken to the vaſſal, and to a ſpecial order of heirs, without ſettling the laſt termination upon *heirs whatſoever*, returned to the ſuperior, upon failure of the ſpecial heirs therein contained: but now that feus are become patrimonial rights, the ſuperior is, by the general opinion, held to be fully diveſted by ſuch grant, and the right deſcends to the vaſſal's heirs at law. And even where a vaſſal dies without leaving any heir who can prove the remoteſt propinquity to him, it is not the ſuperior, as the old law ſtood, but the king, who ſucceeds as laſt heir, both in the heritable and moveable eſtate of the deceaſed, in conſequence of the rule, *Quod nullius eſt, cedit domino Regi*.

2. If the lands, to which the king ſucceeds, be holden immediately of himſelf, the property is conſolidated with the ſuperiority, as if reſignation had been made in the ſovereign's hands. If they are holden of a ſubject, the king, who cannot be vaſſal to his own ſubject, names a donatory; who, to complete his title, muſt obtain a decree of declarator; and thereafter he is preſented to the ſuperior, by letters of preſentation from the king under the quarter-ſeal, in which the ſuperior is charged to enter the donatory. The whole eſtate of the deceaſed is, in this caſe, ſubjected to his debts, and to the widow's legal proviſions. Neither the king nor his donatory is liable beyond the value of the ſucceſſion. A perſon who has no heir to ſucceed to him, cannot alien his heritage *in lecto*, to the prejudice of the king, who is intitled to ſet aſide ſuch deed, in the character of *ultimus heres*.

King ſucceeds as *ultimus hæres* to the baſtard.

3. A baſtard can have no legal heirs, except thoſe of his own body; ſince there is no ſucceſſion but by the father, and a baſtard has no certain father. The king therefore ſucceeds to him, failing his lawful iſſue, as laſt heir. Though the baſtard, as abſolute proprietor of his own eſtate, can diſpoſe of his heritage in *liege pouſtie*, and of his moveables by any deed *inter vivos*; yet he is diſabled, *ex defectu natalium*, from bequeathing by teſtament, without letters of legitimation from the ſovereign. If the baſtard has lawful children, he may teſt without ſuch letters, and name tutors and curators to his iſſue. Letters of legitimation, let their clauſes be ever ſo ſtrong, cannot enable the

baſtard to ſucceed to his natural father, to the excluſion of lawful heirs.

Baſtards incapable of legal, but not of deſtined, ſucceſſion.

4. The legal rights of ſucceſſion, being founded in marriage, can be claimed only by thoſe who are born in lawful marriage; the iſſue therefore of an unlawful marriage are incapable of ſucceſſion. A baſtard is excluded, (1.) From his father's ſucceſſion; becauſe law knows no father who is not marked out by marriage. (2.) From all heritable ſucceſſion, whether by the father or mother; becauſe he cannot be pronounced lawful heir by the inqueſt, in terms of the brief. And, (3.) From the moveable ſucceſſion of his mother; for though the mother be known, the baſtard is not her lawful child, and legitimacy is implied in all ſucceſſion conferred by law. A baſtard, though he cannot ſucceed *jure ſanguinis*, may ſucceed by deſtination, where he is ſpecially called to the ſucceſſion by an entail or teſtament.

Aliens cannot ſucceed in feudal rights;

nor Papiſts.

5. Certain perſons, though born in lawful marriage, are incapable of ſucceſſion. Aliens are, from their allegiance to a foreign prince, incapable of ſucceeding in *feudal rights*, without naturalization. Children born in a foreign ſtate, whoſe fathers were natural born ſubjects, and not attainted, are held to be natural born ſubjects. Perſons educated in, or profeſſing, the Popiſh religion, if they ſhall neglect, upon their attaining the age of 15, to renounce its doctrines by a ſigned declaration, cannot ſucceed in *heritage*; but muſt give place to the next Proteſtant heir, who will hold the eſtate irredeemably, if the Popiſh heir does not, within ten years after incurring the irritancy, ſign the *formula* preſcribed by the ſtatute 1700, c. 3.

CHAP. III.

Of ACTIONS.

HITHERTO of *Perſons* and *Rights*, the two firſt objects of law: *Actions* are its third object, whereby perſons make their rights effectual.

clxxxiii.

SECT. I. *Nature, diviſion, &c. of actions.*

An action, what.

AN action may be defined, A demand regularly made and inſiſted in, before the judge-competent, for the attaining or recovering of a right; and it ſuffers ſeveral diviſions, according to the different natures of the rights purſued upon.

Diviſion of actions.

2. Actions are either real or perſonal. A real action is that which ariſes from a right in the thing itſelf, and which therefore may be directed againſt all poſſeſſors of that thing: thus, an action for the recovery, even of a moveable ſubject, when founded on a *jus in re*, is in the proper acceptation real; but real actions are, in vulgar ſpeech, confined to ſuch as are directed againſt heritable ſubjects. A perſonal action is founded only on an obligation undertaken for the performance of ſome fact, or the delivery of ſome ſubject; and therefore can be carried on againſt no other than the perſon obliged, or his heirs.

Reduction-improbation.

3. Actions, again, are either ordinary or reſciſſory. All actions are, in the ſenſe of this diviſion, ordinary, which are not reſciſſory. Reſciſſory actions are divided, (1.) Into actions of proper improbation. (2.) Actions of reduction improbation. (3.) Actions of ſimple reduction. Proper improbations, which are brought for declaring writings falſe or forged, are noticed below, N° clxxxvi. 32. Reduction-improbation is an action, whereby a perſon who may be hurt or affected by a writing, inſiſts for producing or exhibiting it in court, in order to have it ſet aſide, or its effect aſcertained, under the certification that the writing, if not produced, ſhall be declared falſe and forged. This certification is a fiction of law, introduced that the production of writings may be the more effectually forced, and therefore it operates only in favour of the purſuer. Becauſe the ſummons in this action proceeds on alleged grounds of falſehood, his majeſty's advocate, who is the public proſecutor of crimes, muſt concur in it.

4. As the certification in this proceſs draws after it ſo heavy conſequences, two terms are aſſigned to the defenders for production. After the ſecond term is elapſed, intimation muſt be made judicially to the defender, to ſatisfy the production within ten days; and till theſe are expired, no certification can be pronounced. Certification cannot paſs againſt deeds recorded in the books of ſeſſion, if the defender ſhall, before the ſecond term, offer a condeſcendence of the dates of their regiſtration, unleſs falſehood be objected: in which caſe, the original muſt be brought from the record to the court. But an extract from the inferior court is no bar to certification; the principal writing muſt be laid before the court of ſeſſion on a proper warrant.

Simple reduction.

5. In an action of ſimple reduction the certification is only temporary, declaring the writings called for null, until they be produced; ſo that they recover their full force after production, even againſt the purſuer himſelf; for which reaſon, that proceſs is now ſeldom uſed. Becauſe its certification is not ſo ſevere as in reduction-improbation, there is but one term aſſigned to the defender for producing the deeds called for.

Grounds of reduction.

6. The moſt uſual grounds of reduction of writings are, the want of the requiſite ſolemnities; that the granter was minor, or interdicted, or inhibited; or that he ſigned the deed on death-bed, or was compelled or frightened into it, or was circumvented; or that he granted it in prejudice of his lawful creditors.

7. In reductions on the head of force, or fear, or fraud and circumvention, the purſuer muſt libel the particular circumſtances from which his allegation is to be proved. Reduction is not competent upon every degree of force or fear; it muſt be ſuch as would ſhake a man of conſtancy and reſolution. Neither is it competent, on that fear which ariſes from the juſt authority of huſbands or parents over their wives or children, nor upon the fear ariſing from the regular execution of lawful diligence by caption, provided the deeds granted under that fear relate to the ground of debt contained in the diligence; but if they have no relation to that debt, they are reducible *ex metu*.

8. Alienations granted by debtors after contracting of lawful debts, in favour of conjunct or confident perſons, without juſt and neceſſary cauſes, and without a juſt price really paid, are, by the act 1621, declared to be null. One is deemed a prior creditor, whoſe ground of debt exiſted before the right granted

by the debtor; though the written voucher of the debt ſhould bear a date poſterior to it. Perſons are accounted conjunct, whoſe relation to the granter is ſo near, as to bar them from judging in his cauſe. Confident perſons are thoſe who appear to be in the granter's confidence, by being employed in his affairs, or about his perſon; as a doer, ſteward, or domeſtic ſervant.

9. Rights, though gratuitous, are not reducible, if the granter had, at the date thereof, a ſufficient fund for the payment of his creditors. Proviſions to children are, in the judgement of law, gratuitous; ſo that their effect, in a queſtion with creditors, depends on the ſolvency of the granter: but ſettlements to wives, either in marriage-contracts, or even after marriage, are onerous, in ſo far as they are rational; and conſequently are not reducible, even though the granter was inſolvent. This rule holds alſo in rational tochers contracted to huſbands: but it muſt, in all caſes, be qualified with this limitation, *if the inſolvency of the granter was not publickly known*; for if it was, fraud is preſumed in the receiver of the right, by contracting with the bankrupt.

10. The receiver of the deed, if he be a conjunct or confident perſon, muſt inſtruct or ſupport the onerous cauſe of his right, not merely by his own oath, but by ſome circumſtances or adminicles. But where a right is granted to a ſtranger, the narrative of it expreſſing an onerous cauſe, is ſufficient *per ſe* to ſecure it againſt reduction.

11. All voluntary payments or rights made by a bankrupt to one creditor, to diſappoint the more timeous diligence of another, are reducible at the inſtance of that creditor who has uſed the prior diligence. A creditor, though his diligence be but begun by citation, may inſiſt in a reduction of all poſterior voluntary rights granted to his prejudice; but the creditor who negelects to complete his begun diligence within a reaſonable time, is not intitled to reduce any right granted by the debtor, after the time that the diligence is conſidered as abandoned.

12. A prohibited alienation, when conveyed by the receiver to another who is not privy to the fraud, ſubſiſts in the perſon of the *bona fide* purchaſer. In the caſe of moveable rights, this nullity is receivable by exception; but it muſt be declared by reduction where the right is heritable.

13. By act 1696, *c.* 5. all alienations by a bankrupt, within 60 days before his bankruptcy, to one creditor in preference to another, are reducible, at the inſtance even of ſuch co-creditors as had not uſed the leaſt ſtep of diligence. A bankrupt is there deſcribed by the following characters; diligence uſed againſt him by horning and caption; and inſolvency, joined either with impriſonment, retiring to the ſanctuary, abſconding, or forcibly defending himſelf from diligence. It is ſufficient that a caption is raiſed againſt the debtor, though it be not executed, provided he has retired to ſhun it. And by the late bankrupt ſtatute 23d Geo. III. it is declared, that in all actions and queſtions ariſing upon the conſtruction and effect of the act 1696; when a debtor is out of Scotland, or not liable to be impriſoned by reaſon of privilege or perſonal protection, a charge of horning executed againſt him, together with either an arreſtment of any of his perſonal effects not looſed or diſcharged within fifteen days, or on poinding executed of any of his moveables, or a decree of adjudication of any part of his heritable eſtate, or ſequeſtration by the act of a proper court, of all or any part of his eſtate or effects, heritable or moveable, for payment of debt, ſhall, when joined with inſolvency, be held as ſufficient proof of notour bankruptcy; and from and after the laſt ſtep of ſuch diligence, the ſaid debtor, if inſolvent, ſhall be held bankrupt. It is provided (by ſaid act 1696), that all heritable bonds or rights on which ſeiſin may follow, ſhall be reckoned, in a queſtion with the granter's other creditors upon this act, to be of the date of the ſeiſin following thereon. But this act was found to relate only to ſecurities for former debts, and not to *nova debita*.

Actions either *rei perſecutoriæ*, or penal.

14. Actions are divided into *rei perſecutoriæ*, and *pœnales*. By the firſt, the purſuer inſiſts barely to recover the ſubject that is his, or the debt due to him: and this includes the damage ſuſtained; for one is as truly a ſufferer in his patrimonial intereſt by that damage, as by the loſs of the ſubject itſelf. In penal actions, which always ariſe *ex delicto*, ſomething is alſo demanded by way of penalty.

Spuilzie.

15. Actions of ſpuilzie, ejection, and intruſion, are penal. An action of ſpuilzie is competent to one diſpoſſeſſed of a moveable ſubject violently, or without order of law, againſt the perſon diſpoſſeſſing: not only for being reſtored to the poſſeſſion of the ſubject, if extant, or for the value, if it be deſtroyed, but alſo for the violent profits, in caſe the action be brought within three years from the ſpoliation. Ejection and intruſion are, in heritable ſubjects, what ſpuilzie is in moveables. The difference between the two firſt is, that in ejection, violence is uſed; whereas the intruder enters into the void poſſeſſion, without either a title from the proprietor, or the warrant of a judge. The actions ariſing from all the three are of the ſame general nature.

Contravention of law borrows.

16. The action of contravention of law-borrows is alſo penal. It proceeds on letters of law-borrows, (from *borgh*, a cautioner), which contain a warrant to charge the party complained upon, that he may give ſecurity not to hurt the complainer in his perſon, family, or eſtate. Theſe letters do not require the previous citation of the party complained upon, becauſe the caution which the law requires is only for doing what is every man's duty; but, before the letters are executed againſt him, the complainer muſt make oath that he dreads bodily harm from him. The penalty of contravention is aſcertained to a ſpecial ſum, according to the offender's quality; the half to be applied to the fiſk, and the half to the complainer. Contravention is not incurred by the uttering of reproachful words, where they are not accompanied, either with acts of violence, or at leaſt a real injury; and as the action is penal, it is elided by any probable ground of excuſe.

Penal actions, whether tranſmiſſible againſt the purſuer.

17. Penalties are the conſequences of delict, or tranſgreſſion; and as no heir ought to be accountable for the delict of his anceſtor, farther than the injured perſon has really ſuffered by it, penal actions die with the delinquent, and are not tranſmiſſible againſt heirs. Yet the action, if it has been commenced and litiſconteſted in the delinquent's lifetime, may be continued

nued againſt the heir, though the delinquent ſhould die during the dependence. Some actions are *rei perſecutoriæ* on the part of the purſuer, when he inſiſts for ſimple reſtitution; which yet may be penal in reſpect of the defender: *e. g.* the action on the paſſive title of vitious intromiſſion; by which the purſuer frequently recovers the debt due to him by the deceaſed, tho' it ſhould exceed the value of the goods intermeddled with by the defenders.

Actions petitory.

18. The moſt celebrated diviſion of actions in Scots law is into *petitory*, *poſſeſſory*, and *declaratory*. *Petitory* actions are thoſe, where ſomething is demanded from the defender, in conſequence of a right of property, or of credit in the purſuer: Thus, actions for reſtitution of moveables, actions of poinding, of forthcoming, and indeed all perſonal actions upon contracts or quaſi-contracts, are petitory. *Poſſeſſory* actions are thoſe which are founded, either upon poſſeſſion alone, as ſpuilzies; or upon poſſeſſion joined with another title, as removings; and they are competent either for getting into poſſeſſion, for holding it, or for recovering it; analogous to the interdicts of the Roman law, *quorum bonorum, uti poſſidetis*, and *unde vi*.

poſſeſſory.

Of moleſtation.

19. An action of moleſtation is a poſſeſſory action, competent to the proprietor of a land-eſtate, againſt thoſe who diſturb his poſſeſſion. It is chiefly uſed in queſtions of commonty, or of controverted marches. Where a declarator of property is conjoined with a proceſs of moleſtation, the ſeſſion alone is competent to the action. Actions on brieves of perambulation, have the ſame tendency with moleſtations, viz. the ſettling of marches between conterminous lands.

Of mails and duties.

20. The actions of mails and duties is ſometimes petitory, and ſometimes poſſeſſory. In either caſe, it is directed againſt the tenants and natural poſſeſſors of land-eſtates, for payment to the purſuer of the rents remaining due by them for paſt crops, and of the full rent for the future. It is competent, not only to a proprietor whoſe right is perfected by ſeiſin, but to a ſimple diſponee, for a diſpoſition of lands includes a right to the mails and duties; and conſequently to an adjudger, for an adjudication is a judicial diſpoſition. In the petitory action, the purſuer, ſince he founds upon right, not poſſeſſion, muſt make the proprietor, from whom the tenants derive their right, party to the ſuit; and he muſt ſupport his claim by titles of property or diligences, preferable to thoſe in the perſon of his competitor. In the poſſeſſory, the purſuer who libels that he, his anceſtors, or authors, have been ſeven years in poſſeſſion, and that therefore he has the benefit of a poſſeſſory judgment, need produce no other title than a ſeiſin, which is a title ſufficient to make the poſſeſſion of heritage lawful; and it is enough, if he calls the natural poſſeſſors, though he ſhould neglect the proprietor. A poſſeſſory judgment founded on ſeven years poſſeſſion, in conſequence either of a ſeiſin or a tack, has this effect, that though one ſhould claim under a title preferable to that of the poſſeſſor, he cannot compete with him in the poſſeſſion, till in a formal proceſs of reduction he ſhall obtain the poſſeſſor's title declared void.

Petitory.

Poſſeſſory.

Poſſeſſory judgment.

Declaratory action.

21. A *declaratory* action is that, in which ſome right is craved to be declared in favour of the purſuer, but nothing ſought to be paid or performed by the defender, ſuch as declarators of marriage, of irritancy, of expiry of the legal reverſion, &c. Under this claſs may be alſo comprehended reſciſſory actions, which, without any perſonal concluſion againſt the defender, tend ſimply to ſet aſide the rights or writings libelled, in conſequence of which a contrary right or immunity ariſes to the purſuer. Decrees upon actions that are properly declaratory confer no new right; they only declare what was the purſuer's right before, and ſo have a retroſpect to the period at which that right firſt commenced. Declarators, becauſe they have no perſonal concluſion againſt the defender, may be purſued againſt an apparent heir without a previous charge given him to enter to his anceſtor; unleſs where ſpecial circumſtances require a charge.

Action for proving the tenor.

22. An action for proving the tenor, whereby a writing, which is deſtroyed or amiſſing, is endeavoured to be revived, is in effect declaratory. In obligations that are extinguiſhable barely by the debtor's retiring or cancelling them, the purſuer, before a proof of a tenor is admitted, muſt condeſcend on ſuch a *caſus amiſſionis*, or accident by which the writing was deſtroyed, as ſhows it was loſt when in the creditor's poſſeſſion; otherwiſe bonds that have been cancelled by the debtor on payment, might be reared up as ſtill ſubſiſting againſt him: But in writings which require contrary deeds to extinguiſh their effect, as aſſignations, diſpoſitions, charters, &c. it is ſufficient to libel that they were loſt, even *caſu fortuito*.

Adminicles in writing.

23. Regularly, no deed can be revived by this action, without ſome adminicle in writing, referring to that which is libelled; for no written obligation ought to be raiſed up barely on the teſtimony of witneſſes. If theſe adminicles afford ſufficient conviction that the deed libelled did once exiſt, the tenor is admitted to be proved by witneſſes, who muſt depoſe, either that they were preſent at ſigning the deed, or that they afterwards ſaw it duly ſubſcribed. Where the relative writings contain all the ſubſtantial clauſes of that which is loſt, the tenor is ſometimes ſuſtained without witneſſes. In a writing which is libelled to have contained uncommon clauſes, all theſe muſt appear by the adminicles. Actions of proving the tenor are, on account of their importance, appropriated to the court of ſeſſion; and by the old form, the teſtimony of the witneſſes could not be received but in preſence of all the judges.

Multiple-poinding.

24. The action of double or multiple-poinding may be alſo reckoned *declaratory*. It is competent to a debtor who is diſtreſſed, or threatened with diſtreſs, by two or more perſons claiming right to the debt, and who therefore brings the ſeveral claimants into the field, in order to debate and ſettle their ſeveral preferences, that ſo he may pay ſecurely to him whoſe right ſhall be found preferable. This action is daily purſued by an arreſtee, in the caſe of ſeveral arreſtments uſed in his hands for the ſame debt: or by tenants in the caſe of ſeveral adjudgers, all of whom claim right to the ſame rents. In theſe competitions, any of the competitors may bring an action of multiple-poinding in name of the tenants, or other debtors, without their conſent, or even though they ſhould diſclaim the proceſs; ſince the law has introduced it as the proper remedy for getting ſuch competitions determined: And while the ſubject in controverſy continues *in medio*, any third perſon who conceives he has a right to it, may,

though he ſhould not be cited as a defender, produce his titles, as if he were an original party to the ſuit, and will be admitted for his intereſt in the competition. By the foreſaid bankrupt ſtatute, however, it is competent, in the caſe of a forthcoming or multiple-poinding raiſed on an arreſtment uſed within thirty days prior, or four kalendar months ſubſequent to a bankruptcy, for any other creditor producing his intereſt, and making his claim, in the proceſs at any time before the expiration of the four months, to be ranked in the ſame manner as if he had uſed the form of arreſtment.

Acceſſory actions.

25 Certain actions may be called *acceſſory*, becauſe they are merely preparatory or ſubſervient to other actions. Thus, exhibitions *ad deliberandum*, at the inſtance of an heir againſt the creditors or cuſtodiers of his anceſtor's writings, are intended only to pave the way for future proceſſes. An action of *transference* is alſo of this ſort, whereby an action, during the pendency of which the defender happens to die, is craved to be transferred againſt his repreſentative, in the ſame condition in which it ſtood formerly. Upon the purſuer's death his heir may inſiſt in a cauſe againſt the defender, upon producing either a retour or a confirmed teſtament, according as the ſubject is heritable or moveable. Transferences being but incidental to other actions, can be pronounced by that inferior judge alone before whom the principal cauſe depended; but where the repreſentatives of the deceaſed live in another territory, it is the ſupreme court muſt transfer. Obligations may now be regiſtered ſummarily after the creditor's death; which before was not admitted, without a ſeparate proceſs of regiſtration, to which the granter was neceſſarily to be made a party.

Transference.

Wakening.

26. A proceſs of *wakening* is likewiſe acceſſory. An action is ſaid to ſleep, when it lies over not inſiſted in for a year, in which caſe its effect is ſuſpended: but even then it may, at any time within the years of preſcription, be revived or wakened by a ſummons, in which the purſuer recites the laſt ſtep of the proceſs, and concludes that it may be again carried on as if it had not been diſcontinued. An action that ſtands upon any of the inner-houſe rolls cannot ſleep; nor an action in which decree is pronounced, becauſe it has got its full completion: Conſequently the decree may be extracted after the year, without the neceſſity of a wakening.

Tranſumpt.

27. An action of *tranſumpt* falls under the ſame claſs. It is competent to thoſe who have a partial intereſt in writings that are not in their own cuſtody, againſt the poſſeſſors thereof, for exhibiting them, that they may be tranſumed for their behoof. Tho' the ordinary title in this proceſs be an obligation by the defender to grant tranſumpts to the purſuer, it is ſufficient if the purſuer can ſhow that he has an intereſt in the writings; but in this caſe, he muſt tranſume them on his own charges. Actions of tranſumpt may be purſued before any judge-ordinary. After the writings to be tranſumed are exhibited, full duplicates are made out, collated, and ſigned, by one of the clerks of court, which are called *tranſumpts*, and are as effectual as an extract from the regiſter.

Brieves.

28. Actions proceeded anciently upon brieves iſſuing from the chancery, directed to the juſticiary or judge ordinary, who tried the matter by a jury, upon whoſe verdict judgment was pronounced: And to this day are retained certain brievies, as of *inqueſt*, *terce*, *idiotry*, *tutory*, *perambulation*, and perhaps two or three others: But ſummonſes were, immediately upon the inſtitution of the college of juſtice, introduced in the place of brieves. A ſummons, when applied to actions purſued before the ſeſſion, is a writ in the king's name, iſſuing from his ſignet upon the purſuer's complaint, authoriſing meſſengers to cite the defender to appear before the court and make his defences; with certification, if he fail to appear, that decree will be pronounced againſt him in terms of the certification of the ſummons.

Summonſes.

Induciæ legales.

29. The days indulged by law to a defender, between his citation and appearance, to prepare for his defence, are called *induciæ legales*. If he is within the kingdom, 21 and 6 days, for the firſt and ſecond diets of appearance, muſt be allowed him for that purpoſe; and if out of it, 60 and 15. Defenders reſiding in Orkney or Zetland muſt be cited on 40 days. In certain ſummonſes which are privileged, the *induciæ* are ſhortened: Spuilzies and ejections proceed on 15 days; wakenings and transferences, being but incidental, on ſix; (ſee the liſt of privileged ſummonſes, in act of ſederunt June 29th 1672.) A ſummons muſt be executed, *i. e.* ſerved againſt the defender, ſo as the laſt diet of appearance may be within a year after the date of the ſummons; and it muſt be called within a year after that diet, otherwiſe it falls for ever. Offence againſt the authority of the court, acts of malverſation in office by any member of the college of juſtice, and acts of violence and oppreſſion committed during the dependence of a ſuit by any of the parties, may be tried without a ſummons, by a ſummary complaint.

Concourſe of actions.

30. Though the Romans acknowledged a concourſe of actions in their proceedings, it is not known in the law of Scotland. Therefore, where an action is in part penal, *e. g.* a removing, ſpuilzie, &c. a purſuer who reſtricts his demand to, and obtains a decree merely for, reſtitution, cannot thereafter bring a new proceſs for the violent profits. Yet the ſame fact may be the foundation both of a criminal and civil action, becauſe theſe two are intended for different purpoſes; the one for ſatisfying the public juſtice, the other for indemnifying the private party: And though the defender ſhould be abſolved in the criminal trial, for want of evidence, the party injured may bring an action *ad civilem effectum*, in which he is intitled to refer the libel to the defender's oath.

Accumulation of actions.

31. One libel or ſummons may contain different concluſions on the ſame ground of right, reſciſſory, declaratory, petitory, &c. if they be not repugnant to each other: Nay, though different ſums be due to one, upon diſtinct grounds of debt, or even by different debtors, the creditor may inſiſt againſt them all in the ſame ſummons.

Defences.

32. Defences are pleas offered by a defender for eliding an action. They are either *dilatory*, Which do not enter into the cauſe itſelf, and ſo can only procure an abſolvitor from the *lis pendens*; Or *peremptory*, which entirely cut off the purſuer's right of action. The firſt, becauſe they relate to the forms of proceeding, muſt be offered *in limine judicii*, and all of them at once. But peremptory defences may be proponed at any time before ſentence. By a late act of ſederunt,

however (1787), all defences, both dilatory and peremptory, ſo far as they are known, muſt be proponed at returning the ſummons, under penalty; and the ſame enactment extends to the caſes of ſuſpenſions and advocations. The writings to be founded upon by the parties alſo muſt be produced; the intention of the court, in framing the act of ſederunt, being to accelerate as much as poſſible the deciſion of cauſes.

Litiſconteſtation.

33. A cauſe, after the parties had litigated it before the judge, was ſaid by the Romans to be litiſconteſted. By litiſconteſtation a judicial contract is underſtood to be entered into by the litigants, by which the action is perpetuated againſt heirs, even when it ariſes *ex delicto*. By the law litiſconteſtation is not formed till an act is extracted, admitting the libel or defences to proof.

clxxixv.

Sect. II. *Of Probation.*

Probation, *prout de jure*; by ſingle combat;

All allegations by parties to a ſuit, muſt be ſupported by proper proof. Probation is either by writing, by the party's own oath, or by witneſſes. In the caſe of allegations, which may be proved by either of the three ways, a proof is ſaid to be admitted *prout de jure*; becauſe, in ſuch caſe, all the legal methods of probation are competent to the party; if the proof he brings by writing be lame, he may have recourſe either to witneſſes or to his adverſary's oath; but, if he ſhould firſt take himſelf to the proof by oath, he cannot thereafter uſe any other probation (for the reaſon aſſigned par. 3.); and, on the contrary, a purſuer who has brought a proof by witneſſes, on an extracted act, is not allowed to recur to the oath of the defender. Single combat, as a ſort of appeal to Providence, was, by the ancient law, admitted as evidence, in matters both civil and criminal. It was afterwards reſtricted to the caſe of ſuch capital crimes where no other proof could be had; ſome traces of this blind method of trial remained even in the reign of James VI. who, by 1600, *c.* 12 might authoriſe duels on weighty occaſions.

by writing.

2. As obligations or deeds ſigned by the party himſelf, or his anceſtors or authors, muſt be, of all evidence, the leaſt liable to exception; therefore every debt or allegation may be proved by proper evidence in writing. The ſolemnities eſſential to probative deeds have been already explained, (n° clxxiv. 3. *et ſeq.*) Books of account kept by merchants, tradeſmen, and other dealers in buſineſs, though not ſubſcribed, are probative againſt him who keeps them; and, in caſe of furniſhing by a ſhop-keeper, ſuch books, if they are regularly kept by him, ſupported by the teſtimony of a ſingle witneſs, afford a *ſemiplena probatio* in his favour, which becomes full evidence by his own oath in ſupplement. Notorial inſtruments and executions by meſſengers bear full evidence, that the ſolemnities therein ſet forth were uſed, not to be invalidated otherwiſe than by a proof of falſehood; but they do not prove any other extrinſic facts therein averred, againſt third parties.

Probation oath of party in reference.

3. Regularly, no perſon's right can be proved by his own oath, nor taken away by that of his adverſary; becauſe theſe are the bare averments of parties in their own favour. But, where the matter in iſſue is referred by one of the parties to the oath of the other, ſuch oath, though made in favour of the deponent himſelf, is deciſive of the point; becauſe the reference is a virtual contract between the litigants, by which they are underſtood to put the iſſue of the cauſe upon what ſhall be depoſed: and this contract is ſo ſtrictly regarded, that the party who refers to the oath of the other cannot afterwards, in a civil action, plead upon any deed againſt the party depoſing, inconſiſtent with his oath. To obviate the ſnares that may be laid for perjury, he, to whoſe oath of verity a point is referred, may refuſe to depoſe, till his adverſary ſwear that he can bring no other evidence in proof of his allegation.

4. A defender, though he cannot be compelled to ſwear to facts in a libel properly criminal; yet may, in treſpaſſes, where the concluſion is limited to a fine, or to damages. In general, an oath of party cannot either hurt or benefit third parties; being, as to them, *res inter alios acta*.

Qualified oaths.

5. An oath upon reference is ſometimes qualified by ſpecial limitations reſtricting it. The qualities which are admitted by the judge as part of the oath, are called *intrinſic*; thoſe which the judge rejects or ſeparates from the oath, *extrinſic*. Where the quality makes a part of the allegation which is revelantly referred to oath, it is intrinſic. Thus, becauſe a merchant, ſuing for furniſhings after the three years, muſt, in order to make a relevancy, offer to prove by the defender's oath, not only the delivery of the goods, but that the price is ſtill due; therefore, though the defender ſhould acknowledge upon oath his having received the goods, yet, if he adds, that he paid the price, this laſt part being a denial that the debt ſubſiſts, is intrinſic, ſince it is truly the point referred to oath. Where the quality does not import an extinction of the debt, but barely a counter claim, or *mutua petitio*, againſt the purſuer, it is held as extrinſic, and muſt be proved *aliunde*. Neither can a defender who in his oath admits the conſtitution of a debt, get off by adjecting the quality of payment, where the payment ought by its nature to be vouched by written evidence.

Oaths in ſupplement

6. Oaths of verity are ſometimes referred by the judge to either party, *ex officio*; which, becauſe they are not founded on any implied contract between the litigants, are not finally deciſive, but may be traverſed on proper evidence afterwards produced. Theſe oaths are commonly put by the judge for ſupplying a lame or imperfect proof, and are therefore called *oaths in ſupplement*. (See par. 2.)

Oath of calumny

7. To prevent groundleſs allegations, oaths of calumny have been introduced, by which either party may demand his adverſary's oath, that he believes the fact contained in his libel or defences to be juſt and true. As this is an oath, not of verity, but only of opinion, the party who puts it to his adverſary does not renounce other probation; and therefore no party is bound to give an oath of calumny, on recent facts of his own, for ſuch oath is really an oath of verity. Theſe oaths have not been ſo frequent ſince the act of ſederunt, Feb. 1. 1715, whereby any party, againſt whom a fact ſhall be alleged, is obliged, without making oath, to confeſs or deny it: and, in caſe of calumnious denial, is ſubjected to the expence that the other party has thereby incurred.

8. In all oaths, whether of verity or calumny, the citation carries, or at leaſt implies, a certification, that if the party does not appear at the day aſſigned for depoſing, he ſhall be held *pro confeſſo*; from a preſumption

tion of his conſciouſneſs, that the fact upon which he declines to ſwear makes againſt him; but no party can be held *pro confeſſo*, if he be in the kingdom, without a previous perſonal citation uſed againſt him. Though an oath which reſolves into a *non memini*, cannot be ſaid to prove any point; yet where one ſo depoſes upon a recent fact, to which he himſelf was privy, his oath is conſidered as a diſſembling of the truth, and he is held *pro confeſſo*, as if he had refuſed to ſwear.

A *non memini* oath.

Oath *in litem*.

9. An oath *in litem*, is that which the judge refers to a purſuer, for aſcertaining either the quantity or the value of goods which have been taken from him by the defender without order of law, or the extent of his damages. An oath *in litem*, as it is the affirmation of a party in his own behalf, is only allowed where there is proof that the other party has been engaged in ſome illegal act, or where the public policy has made it neceſſary, (ſee n° clxxiii. 11.) This oath, as to the quantities, is not admitted, where there is a concurring teſtimony of witneſſes brought in proof of it. When it is put as to the value of goods, it is only an oath of credulity; and therefore it has always been ſubject to the modification of the court.

Probation by witneſſes, in what caſes rejected,

10. The law of Scotland rejects the teſtimony of witneſſes, (1.) In payment of any ſum above L. 100 Scots, all which muſt be proved either *ſcripto vel juramento.* (2.) In all gratuitous promiſes, though for the ſmalleſt trifle. (3.) In all contracts, where writing is either eſſential to their conſtitution, (ſee n° clxxiv. 2.) or where it is uſually adhibited as in the borrowing of money. And it is a general rule, ſubject to the reſtrictions mentioned in the next par. that no debt or right, once conſtituted by writing, can be taken away by witneſſes.

in what admitted.

11. On the other part, probation by witneſſes is admitted to the extent of L. 100 Scots, in payments, nuncupative legacies, and verbal agreements which contain mutual obligations. And it is received to the higheſt extent, (1.) In all bargains which have known engagements naturally ariſing from them, concerning moveable goods. (2.) In facts performed in ſatisfaction, even of a written obligation, where ſuch obligation binds the party preciſely to the performance of them. (3.) In facts which with difficulty admit of a proof by writing, even though the effect of ſuch proof ſhould be the extinction of a written obligation, eſpecially if the facts import fraud or violence; thus, a bond is reducible *ex dolo*, on a proof by witneſſes. Laſtly, all intromiſſion by a creditor with the rents of his debtor's eſtate payable in grain, may be proved by witneſſes; and even intromiſſion with the ſilver-rent, where the creditor has entered into the total poſſeſſion of the debtor's lands.

What perſons rejected as witneſſes.

12. No perſon, whoſe near relation to another bars him from being a judge in his cauſe, can be admitted as a witneſs for him; but he may againſt him, except a wife or child, who cannot be compelled to give teſtimony againſt the huſband or parent *ob reverentiam perſonæ, et metum perjurii.* Though the witneſs, whoſe propinquity to one of the parties is objected to, be as nearly related to the other, the objection ſtands good.

13. The teſtimony of infamous perſons is rejected, *i. e.* perſons who have been guilty of crimes that law declares to infer infamy, or who have been declared infamous by the ſentence of a judge; but *infamia facti* does not diſqualify a witneſs. Pupils are inhabile witneſſes; being, in the judgment of law, incapable of the impreſſions of an oath. And in general witneſſes otherwiſe exceptionable may, where there is a penury of witneſſes ariſing from the nature or circumſtances of the fact, be received *cum nota;* that is, their teſtimony, though not quite free from ſuſpicion, is to be conjoined with the other evidence, and to have ſuch weight given it as the judge ſhall think it deſerves.

Purgation of witneſſes.

14. All witneſſes, before they are examined in the cauſe, are purged of partial counſel; that is, they muſt declare, that they have no intereſt in the ſuit, nor have given advice how to conduct it; that they have got neither bribe nor promiſe, nor have been inſtructed how to depoſe; and that they bear no enmity to either of the parties. Theſe, becauſe they are the points put to a witneſs before his making oath, are called *initialia teſtimonii.* Where a party can bring preſent proof of a witneſs's partial counſel, in any of the above particulars, he ought to offer it before the witneſs be ſworn; but, becauſe ſuch objection, if it cannot be inſtantly verified, will be no bar to the examination, law allows the party in that caſe to proteſt for *reprobator*, before the witneſs is examined; *i. e.* that he may be afterwards allowed to bring evidence of his enmity, or other inability. Reprobator is competent even after ſentence, where proteſtation is duly entered; but in that caſe, the party inſiſting muſt conſign L. 100 *Scots*, which he forfeits if he ſuccumb. This action muſt have the concurrence of the king's advocate, becauſe the concluſion of it imports perjury; and for this reaſon, the witneſs muſt be made a party to it.

Diligence againſt witneſſes.

15. The interlocutory ſentence or warrant, by which parties are authoriſed to bring their proof, is either by way of act, or of incident diligence. In an act, the lord ordinary who pronounces it is no longer judge in the proceſs; but in an incident diligence, which is commonly granted upon ſpecial points, that do not exhauſt the cauſe, the lord ordinary continues judge. If a witneſs does not appear at the day fixed by the warrant of citation, a ſecond warrant is granted of the nature of a caption, containing a command to meſſengers to apprehend and bring him before the court. Where the party to whom a proof is granted, brings none within the term allowed by the warrant, an interlocutor is pronounced, circumducing the term, and precluding him from bringing evidence thereafter. Where evidence is brought, if it be upon an act, the lord ordinary on the acts, after the term for proving is elapſed, declares the proof concluded; and thereupon a ſtate of the caſe is prepared by the ordinary on concluded cauſes, which muſt be judged by the whole lords; but if the proof be taken upon an incident diligence, the import of it may be determined by the lord ordinary in the cauſe.

Circumduction.

Preſumptions.

16. Where facts do not admit a direct proof, preſumptions are received as evidence which in many caſes, make as convincing a proof as the direct. Preſumptions are conſequences deduced from facts known or proved, which infer the certainty, or at leaſt a ſtrong probability, of another fact to be proved. This kind of probation is therefore called *artificial*, becauſe it requires a reaſoning to infer the truth of the point in queſtion, from the facts that already appear in proof. Preſumptions are either, 1. *juris et de jure;* 2. *juris;* or, 3. *ho-*

minis or *judicis*. The firſt ſort obtains, where ſtatute or cuſtom eſtabliſhes the truth of any point upon a preſumption; and it is ſo ſtrong, that it rejects all proof that may be brought to elide it in ſpecial caſes. Thus, the teſtimony of a witneſs, who forwardly offers himſelf without being cited, is, from a preſumption of his partiality, rejected, let his character be ever ſo fair; and thus alſo, a minor, becauſe he is by law preſumed incapable of conducting his own affairs, is upon that preſumption diſabled from acting without the conſent of his curators, though he ſhould be known to behave with the greateſt prudence. Many ſuch preſumptions are fixed by ſtatute.

17. *Præſumptiones juris* are thoſe which the law-books or deciſions have eſtabliſhed, without founding any particular conſequence upon them, or ſtatuting *ſuper præſumpto*. Moſt of this kind are not proper preſumptions inferred from poſitive facts, but are founded merely on the want of a contrary proof; thus, the legal preſumptions for freedom, for life, for innocence, &c. are in effect ſo many negative propoſitions, that ſervitude, death, and guilt, are not to be preſumed, without evidence brought by him who makes the allegation. All of them, whether they be of this ſort, or proper preſumptions, as they are only conjectures formed from what commonly happens, may be elided, not only by direct evidence, but by other conjectures, affording a ſtronger degree of probability to the contrary. *Præſumptiones hominis* or *judicis*, are thoſe which ariſe daily from the circumſtances of particular caſes; the ſtrength of which is to be weighed by the judge.

Fictio juris.

18. A *fictio juris* differs from a preſumption. Things are preſumed, which are likely to be true; but a fiction of law aſſumes for truth what is either certainly falſe, or at leaſt is as probably falſe as true. Thus an heir is feigned or conſidered in law as the ſame perſon with his anceſtor. Fictions of law muſt, in their effects, be always limited to the ſpecial purpoſes of equity for which they were introduced; ſee an example, Nº clxxxiii. 3.

clxxxv.

Sect. III. *Of Sentences and their Executions.*

Res judicatæ.

Property would be moſt uncertain, if debateable points might, after receiving a definitive judgment, be brought again in queſtion, at the pleaſure of either of the parties: every ſtate has therefore fixed the character of final to certain ſentences or decrees, which in the Roman law are called *res judicatæ*, and which exclude all review or rehearing.

Decrees *in foro.*

2. Decrees of the court of ſeſſion, are either *in foro contradictorio*, where both parties have litigated the cauſe, or in abſence of the defender. Decrees of the ſeſſion *in foro* cannot, in the general caſe, be again brought under the review of the court, either on points which the parties neglected to plead before ſentence (which we call *competent* and *omitted*), or upon points pleaded and found inſufficient (proponed and repelled). But decrees, though *in foro*, are reverſible by the court, where either they labour under eſſential nullities; *e. g.* where they are *ultra petita*, or not conformable to their grounds and warrants, or founded on an error in calcul, *&c.*; or where the party againſt whom the decree is obtained has thereafter recovered evidence ſufficient to overturn it, of which he knew not before.

Two conſecutive interlocutors are final.

3. As parties might formerly reclaim againſt the ſentences of the ſeſſion, at any time before extracting the decree, no judgment was final till extract; but now, a ſentence of the inner-houſe, either not reclaimed againſt within ſix ſederunt days after its date, or adhered to upon a reclaiming bill, though it cannot receive execution till extract, makes the judgement final as to the court of ſeſſion. And, by an order of the houſe of lords, March 24. 1725, no appeal is to be received by them from ſentences of the ſeſſion, after five years from extracting the ſentence; unleſs the perſon intitled to ſuch appeal be minor, clothed with a huſband, *non compos mentis*, impriſoned, or out of the kingdom. Sentences pronounced by the lord ordinary have the ſame effect, if not reclaimed againſt, as if they were pronounced in preſence; and all petitions againſt the interlocutor of an ordinary muſt be preferred within eight ſederunt days after ſigning ſuch interlocutor.

Time limited for appeals.

Decrees in abſence.

4. Decrees, in abſence of the defender, have not the force of *res judicatæ* as to him; for where the defender does not appear, he cannot be ſaid to have ſubjected himſelf by the judicial contract which is implied in litiſconteſtation; a party therefore may be reſtored againſt theſe, upon paying to the other his coſts in recovering them. The ſentences of inferior courts may be reviewed by the court of ſeſſion,—before decree, by advocation,—and after decree, by ſuſpenſion or reduction; which two laſt are alſo the methods of calling in queſtion ſuch decrees of the ſeſſion itſelf, as can again be brought under the review of the court.

Decrees reviewed either by reduction or ſuſpenſion.

5. Reduction is the proper remedy, either where the decree has already received full execution by payment, or where it decrees nothing to be paid or performed, but ſimply declares a right in favour of the purſuer. Suſpenſion is that form of law by which the effect of a ſentence condemnatory, that has not yet received execution, is ſtayed or poſtponed till the cauſe be again conſidered. The firſt ſtep towards ſuſpenſion is a bill preferred to the lord ordinary on the bills. This bill, when the deſire of it is granted, is a warrant for iſſuing letters of ſuſpenſion which paſs the ſignet; but if the preſenter of the bill ſhall not, within 14 days after paſſing it, expedite the letters, execution may by act of ſederunt 1677 proceed on the ſentence. In practice, however, it is uſual for the charger to put up a proteſtation in the minute-book for production of the ſuſpenſion, which may be expedited at any time before this is done; and if the ſuſpender ſhall allow the proteſtation to be extracted, the ſiſt falls. Suſpenſions of decrees *in foro* cannot paſs, but by the whole lords in time of ſeſſion, and by three in vacation time; but other decrees may be ſuſpended by any one of the judges. By the late act of ſederunt (1787), in order to remedy the abuſe of preſenting a multiplicity of bills of ſuſpenſion of the decrees of inferior judges in ſmall cauſes which have paſſed in abſence, it is declared, that all bills of ſuſpenſion of decreets by inferior judges in abſence of the defenders in cauſes under 12 l. ſterling value, ſhall be refuſed and remitted to the inferior judge if competent; the ſuſpender, however, before being heard in the inferior court, reimburſing

ſing the charger of the expences incurred by him previous to the remit.

Suſpenders muſt give caution.

6. As ſuſpenſion has the effect of ſtaying the execution of the creditor's legal diligence, it cannot, in the general caſe, paſs without caution given by the ſuſpender to pay the debt, in the event it ſhall be found due. Where the ſuſpender cannot, from his low or ſuſpected circumſtances, procure unqueſtionable ſecurity, the lords admit juratory caution, *i. e.* ſuch as the ſuſpender ſwears is the beſt he can offer; but the reaſons of ſuſpenſion are, in that caſe, to be conſidered with particular accuracy at paſſing the bill. Decrees in favour of the clergy, of univerſities, hoſpitals, or pariſh-ſchoolmaſters, for their ſtipends, rents, or ſalaries, cannot be ſuſpended, but upon production of diſcharges, or on conſignation of the ſums charged for. A charger, who thinks himſelf ſecure without a cautioner, and wants diſpatch, may, where a ſuſpenſion of his diligence is ſought, apply to the court to get the reaſons of ſuſpenſion ſummarily diſcuſſed on the bill.

Suſpenſion, when competent.

7. Though he, in whoſe favour the decree ſuſpended is pronounced, be always called the charger, yet a decree may be ſuſpended before a charge be given on it. Nay, ſuſpenſion is competent even where there is no decree, for putting a ſtop to any illegal act whatſoever: thus, a building, or the exerciſe of a power which one aſſumes unwarrantably, is a proper ſubject of ſuſpenſion. Letters of ſuſpenſion are conſidered merely as a prohibitory diligence; ſo that the ſuſpender, if he would turn provoker, muſt bring an action of reduction. If, upon diſcuſſing the letters of ſuſpenſion, the reaſons ſhall be ſuſtained, a decree is pronounced, ſuſpending the letters of diligence on which the charge was given *ſimpliciter*; which is called a *decree of ſuſpenſion*, and takes off the effect of the decree ſuſpended. If the reaſons of ſuſpenſion be repelled, the court find the letters of diligence orderly proceeded, *i. e.* regularly carried on; and they ordain them to be put to farther execution.

Extraction of decrees.

8. Decrees are carried into execution, by diligence, either againſt the perſon or againſt the eſtate of the debtor. The firſt ſtep of perſonal execution is by letters of horning, which paſs by warrant of the court of ſeſſion, on the decrees of magiſtrates of boroughs, ſheriffs, admirals, and commiſſaries. If the debtor does not obey the will of the letters of horning within the days of the charge, the charger, after denouncing him rebel, and regiſtering the horning, may apply for letters of caption, which contain a command, not only to meſſengers, but to magiſtrates, to apprehend and impriſon the debtor. All meſſengers and magiſtrates, who refuſe their aſſiſtance in executing the caption, are liable *ſubſidiariè* for the debt; and ſuch ſubſidiary action is ſupported by the execution of the meſſenger employed by the creditor, expreſſing that they were charged to concur, and would not. Letters of caption contain an expreſs warrant to the meſſenger, in caſe he cannot get acceſs, to break open all doors and other lock-faſt places.

What perſons ſecured againſt caption.

9. Law ſecures peers, married women, and pupils, againſt perſonal execution by caption upon civil debts. Such commoners alſo as are elected to ſerve in parliament, are ſecured againſt perſonal execution by the privilege of parliament. No caption can be executed againſt a debtor within the precincts of the king's palace of Holyroodhouſe: but this privilege of ſanctuary afforded no ſecurity to criminals, as that did which was, by the canon law, conferred on churches and religious houſes. Where the perſonal preſence of a debtor, under caption, is neceſſary in any of the ſupreme courts, the judges are empowered to grant him a protection, for ſuch time as may be ſufficient for his coming and going, not exceeding a month. Protection from diligence is alſo granted by the court of ſeſſion under the late bankrupt ſtatute, where it is applied for, with concurrence of the truſtee, or a certain number of the creditors as the caſe may require.

Priſoners muſt be chiefly confined.

10. After a debtor is impriſoned, he ought not to be indulged the benefit of the air, not even under a guard; for creditors have an intereſt, that their debtors be kept under cloſe confinement, that, by the *ſqualor carceris*, they may be brought to pay their debt: and any magiſtrate or jailor, who ſhall ſuffer the priſoner to go abroad, without a proper atteſtation, upon oath, of the dangerous ſtate of his health, is liable *ſubſidiariè* for the debt. Magiſtrates are in like manner liable, if they ſhall ſuffer a priſoner to eſcape through the inſufficiency of their priſon: but, if he ſhall eſcape under night, by the uſe of inſtruments, or by open force, or by any other accident which cannot be imputed to the magiſtrates or jailor, they are not chargeable with the debt; provided they ſhall have, immediately after his eſcape, made all poſſible ſearch for him. A caſe lately occurred where a meſſenger having apprehended a perſon for a debt, upon letters of caption, delivered him over to the provoſt of the burgh, and took a receipt for him. The provoſt allowed him to remain at the inn all night, and afterwards allowed him what is called *open gaol*, by which he had acceſs to the court-houſe, under the ſame roof with the priſon, where he tranſacted buſineſs. As the perſon at whoſe inſtance he was apprehended upon the caption, conſidered that the magiſtrates had not kept the debtor in priſon as commanded by the letter, brought an action againſt them for the debt, although the debtor had not ſo much as attempted to make his eſcape. It was contended by the magiſtrates, that they were not liable, having only followed the uſual practice of the burgh: but the court of ſeſſion, conſidering the magiſtrates as principal keepers of the priſon, and as ſuch having no diſcretionary power, were of opinion, that the debtor had never been impriſoned in the eye of law, and therefore found the magiſtrates liable; and their judgment was affirmed upon appeal. Regularly, no priſoner for debt upon letters of caption, though he ſhould have made payment, could be releaſed without letters of ſuſpenſion, containing a charge to the jailor to ſet him at liberty, becauſe the creditor's diſcharge could not take off the penalty incurred by the debtor for contempt of the king's authority: but to ſave unneceſſary expence to debtors in ſmall debts, jailors are empowered to let go priſoners where the debt does not exceed 200 merks Scots, upon production of a diſcharge, in which the creditor conſents to his releaſe.

Form of liberating a priſoner.

Liberation upon a *ceſſio bonorum*.

11. The law, for a conſideration of compaſſion, allows inſolvent debtors to apply for a releaſe from priſon upon a *ceſſio bonorum*, *i. e.* upon their making over to the creditors all their eſtate real and perſonal This muſt be inſiſted for by way of action, to which all the

creditors of the priſoner ought to be made parties. The priſoner muſt, in this action, which is cogniſable only by the court of ſeſſion, exhibit a particular inventory of his eſtate, and make oath that he has no other eſtate than is therein contained, and that he has made no conveyance of any part of it, ſince his impriſonment, to the hurt of his creditors. He muſt alſo make oath, whether he has granted any diſpoſition of his effects before his impriſonment, and condeſcend on the perſons to whom, and on the cauſe of granting it; that the court may judge, whether, by any colluſive practice, he has forfeited his claim to liberty.

not competent to delinquents.

12. A fraudulent bankrupt is not allowed this privilege; nor a criminal who is liable in any aſſythment or indemnification to the party injured or his executors, though the crime itſelf ſhould be extinguiſhed by a pardon. A diſpoſition granted on a *ceſſio bonorum* is merely in farther ſecurity to the creditors, not in ſatisfaction or *in ſolutum* of the debts. If, therefore, the debtor ſhall acquire any eſtate after his releaſe, ſuch eſtate may be attached by his creditors, as if there had been no *ceſſio*, except in ſo far as is neceſſary for his ſubſiſtence. Debtors, who are ſet free on a *ceſſio bonorum*, are obliged to wear a habit proper to dyvours or bankrupts. The lords are prohibited to diſpenſe with this mark of ignominy, unleſs, in the ſummons and proceſs of *ceſſio*, it be libelled, ſuſtained, and proved, that the bankruptcy proceeds from misfortune. And bankrupts are condemned to ſubmit to the habit, even where no ſuſpicion of fraud lies againſt them, if they have been dealers in an illicit trade.

Dyvour's habit.

13. Where a priſoner for debt declares upon oath, before the magiſtrate of the juriſdiction, that he has not wherewith to maintain himſelf, the magiſtrate may ſet him at liberty, if the creditor, in conſequence of whoſe diligence he was impriſoned, does not aliment him within ten days after intimation made for that purpoſe. But the magiſtrate may, in ſuch caſe, detain him in priſon, if the creditor chuſes to bear the burden of the aliment rather than releaſe him. The ſtatute authoriſing this releaſe, which is uſually called the *act of grace*, is limited to the caſe of priſoners for civil debts.

Aliment.

Act of grace.

Execution againſt the debtor's eſtate.

14. Decrees are executed againſt the moveable eſtate of the debtor by arreſtment or poinding; and againſt his heritable eſtate, by inhibition, or adjudication. If one be condemned, in a removing or other proceſs, to quit the poſſeſſion of lands, and refuſe, notwithſtanding a charge, letters of ejection are granted of courſe, ordaining the ſheriff to eject him, and to enter the obtainer of the decree into poſſeſſion. Where one oppoſes by violence the execution of a decree, or of any lawful diligence, which the civil magiſtrate is not able by himſelf and his officers to make good, the execution is enforced *vanu militari*.

Decrees arbitral.

15. A decree arbitral, which is a ſentence proceeding on a ſubmiſſion to arbiters, has ſome affinity with a judicial ſentence, though in moſt reſpects the two differ. A ſubmiſſion is a contract entered into by two or more parties who have diſputable rights or claims, whereby they refer their differences to the final determination of an arbiter or arbiters, and oblige themſelves to acquieſce in what ſhall be decided. Where the day within which the arbiters are to decide, is left blank in the ſubmiſſion, practice has limited the arbiters power of deciding to a year. As this has proceeded from the ordinary words of ſtyle, empowering the arbiters to determine betwixt and the day of next to come; therefore, where a ſubmiſſion is indefinite, without ſpecifying any time, like all other contracts or obligations, it ſubſiſts for 40 years. Submiſſions, like mandates, expire by the death of any of the parties-ſubmitters before ſentence. As arbiters are not veſted with juriſdiction, they cannot compel witneſſes to make oath before them, or havers of writings to exhibit them; but this defect is ſupplied by the court of ſeſſion, who, at the ſuit of the arbiters, or of either of the parties, will grant warrant for citing witneſſes, or for the exhibition of writings. For the ſame reaſon, the power of arbiters is barely to decide; the execution of the decree belongs to the judge. Where the ſubmitters conſent to the regiſtration of the decree-arbitral, performance may be enforced by ſummary diligence.

Submiſſion.

Powers of arbiters.

17. The power of arbiters is wholly derived from the conſent of parties. Hence where their powers are limited to a certain day, they cannot pronounce ſentence after that day. Nor can they ſubject parties to a penalty higher than that which they have agreed to in the ſubmiſſion. And where a ſubmiſſion is limited to ſpecial claims, ſentence pronounced on ſubjects not ſpecified in the ſubmiſſion is null, as being *ultra vires compromiſſi*.

Decrees arbitral, how far reducible.

17. But on the other hand, as ſubmiſſions are deſigned for a moſt favourable purpoſe, the amicable compoſing of differences, the powers thereby conferred on arbiters receive an ample interpretation. Decrees-arbitral are not reducible upon any ground, except corruption, bribery, or falſehood.

Sect. IV. *Of Crimes.*

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Crimes, public, and private.

The word *crime*, in its moſt general ſenſe, includes every breach either of the law of God or of our country; in a more reſtricted meaning, it ſignifies ſuch tranſgreſſions of law as are puniſhable by courts of juſtice. Crimes were, by the Roman law, divided into public and private. Public crimes were thoſe that were expreſsly declared ſuch by ſome law or conſtitution, and which, on account of their more atrocious nature and hurtful conſequences, might be proſecuted by any member of the community. Private crimes could be purſued only by the party injured, and were generally puniſhed by a pecuniary fine to be applied to his uſe. By the law of Scotland, no private party, except the perſon injured, or his next of kin, can accuſe criminally: but the king's advocate, who in this queſtion repreſents the community, has a right to proſecute all crimes *in vindictam publicam*, though the party injured ſhould refuſe to concur. Smaller offences, as petty riots, injuries, &c. which do not demand the public vengeance, paſs generally by the appellation of *delicts*, and are puniſhed either by fine or impriſonment.

What eſſential to crimes.

2. The eſſence of a crime is, that there be an intention in the actor to commit; for an action in which the will of the agent has no part, is not a proper object either of rewards or puniſhments: hence ariſes the rule *crimen dolo contrahitur*. Simple negligence does not therefore conſtitute a proper crime. Yet where it is extremely groſs, it may be puniſhed arbitrarily. Far leſs can we reckon in the number of crimes, thoſe com-

mitted by an idiot or furious perſon: but leſſer degrees of fatuity, which only darken reaſon, will not afford a total defence, though they may ſave from the *pœna ordinaria*. Actions committed in drunkenneſs are not to be conſidered as involuntary, ſeeing the drunkenneſs itſelf, which was the firſt cauſe of the action, is both voluntary and criminal.

3. On the ſame principle, ſuch as are in a ſtate of infancy, or in the confines of it, are incapable of a criminal action, dole not being incident to the age; but the preciſe age at which a perſon becomes capable of dole, being fixed neither by nature nor by ſtatute, is by practice to be gathered by the judge, as he beſt can, from the underſtanding and manners of the perſon accuſed. Where the guilt of a crime ariſes chiefly from ſtatute, the actor, if he is under puberty, can hardly be found guilty; but, where nature itſelf points out its deformity, he may, if he is *proximus pubertati*, be more eaſily preſumed capable of committing it: yet, even in that caſe, he will not be puniſhed *pœna ordinaria*.

Acceſſories, or art and part,

4. One may be guilty of a crime, not only by perpetrating it himſelf, but being acceſſory to a crime committed by another; which laſt is by civilians ſtyled *ope et conſilio*, and, in the law-phraſe *art and part*. A perſon may be guilty, art and part, either by giving advice or council to commit the crime; or, 2. By giving warrant or mandate to commit it; or, 3. By actually aſſiſting the criminal in the execution. It is generally agreed by doctors, that, in the more atrocious crimes, the adviſer is equally puniſhable with the criminal; and that, in the ſlighter, the circumſtances ariſing from the adviſer's leſſer age, the jocular or careleſs manner of giving advice, &c. may be received as pleas for ſoftening the puniſhment. One who gives mandate to commit a crime, as he is the firſt ſpring of action, ſeems more guilty than the perſon employed as the inſtrument in executing it; yet the actor cannot excuſe himſelf under the pretence of orders which he ought not to have obeyed.

5. Aſſiſtance may be given to the committer of a crime, not only in the actual execution, but previous to it, by furniſhing him, intentionally, with poiſon, arms, or the other means of perpetrating it. That ſort of aſſiſtance which is not given till after the criminal act, and which is commonly called *abetting*, though it be of itſelf criminal, does not infer art and part of the principal crime; as if one ſhould favour the eſcape of a criminal knowing him to be ſuch, or conceal him from juſtice.

Puniſhment of crimes.

6. Thoſe crimes that are in their conſequences moſt hurtful to ſociety, are puniſhed capitally, or by death; others eſcape with a leſſer puniſhment, ſometimes fixed by ſtatute, and ſometimes arbitrary, *i. e.* left to the diſcretion of the judge, who may exerciſe his juriſdiction, either by fine, impriſonment, or a corporal puniſhment. Where the puniſhment is left, by law, to the diſcretion of the judge, he can in no caſe extend it to death. The ſingle eſcheat of the criminal falls on conviction, in all capital trials, though the ſentence ſhould not expreſs it.

Blaſphemy

7. Certain crimes are committed more immediately againſt god himſelf; others, againſt the ſtate; and a third kind, againſt particular perſons. The chief crime in the firſt claſs, cogniſable by temporal courts, is *blaſphemy*, under which may be included *atheiſm*. This crime conſiſts in the denying or viliſying the Deity, by ſpeech or writing. All who curſe God or any of the perſons of the bleſſed Trinity, are to ſuffer death, even for a ſingle act; and thoſe who deny him, if they perſiſt in their denial. The denial of a Providence, or of the authority of the holy Scriptures, is puniſhable capitally for the third offence.

8. No proſecution can now be carried on for witchcraft or conjuration. But all who undertake, from their ſkill in any occult ſcience, to *tell fortunes, or diſcover ſtolen goods*, are to ſuffer impriſonment for a year, ſtand in the pillory four times in that year, and find ſurety for their future good behaviour.

Treaſon.

9. Some crimes againſt the ſtate are levelled directly againſt the ſupreme power, and ſtrike at the conſtitution itſelf: others diſcover ſuch a contempt of law, as tends to baffle authority, or ſlacken the reins of government. *Treaſon, crimen majeſtatis*, is that crime which is aimed againſt the majeſty of the ſtate; and can be committed only by thoſe who are ſubjects of that ſtate either by birth or reſidence. Soon after the union of the two kingdoms in 1707, the laws of treaſon, then in force in England, were extended to Scotland by 7 *Ann. c.* 21. both with regard to the facts conſtituting that crime, to the forms of trial, the corruption of blood, and all the penalties and forfeitures conſequent on it.

10. [illegible] is high treaſon, by the law of England, to imagine the death of the King, Queen-conſort, or of the heir apparent of the crown; to levy war againſt the King, or adhere to his enemies; to counterfeit the king's coin, or his great or privy ſeal; to kill the chancellor, treaſurer, or any of the 12 judges of England, while they are doing their offices: which laſt article is by the forenamed act 7 *Ann.* applied to Scotland, in the caſe of ſlaying any judge of the ſeſſion or of juſticiary ſitting in judgment. Thoſe who waſh, clip, or lighten, the proper money of the realm; who adviſedly affirm by writing or printing, that the Pretender has any right to the crown, that the king and parliament cannot limit the ſucceſſion to it, or who hold correſpondence with the Pretender, or any perſon employed by him, are alſo guilty of treaſon.

Pains of treaſon.

11. The forms of proceeding in the trial of treaſon, whether againſt peers or commoners, are ſet forth in a ſmall treatiſe, publiſhed by order of the houſe of lords in 1709, ſubjoined to a collection of ſtatutes concerning treaſon. By the conviction upon this trial, the whole eſtate of the traitor forfeits to the crown. His blood is alſo corrupted, ſo that, on the death of an anceſtor, he cannot inherit; and the eſtate which he cannot take, falls to the immediate ſuperior as eſcheat, *ob defectum heredis*, without diſtinguiſhing whether the lands hold of the crown, or of a ſubject. No attainder for treaſon ſhall after the death of the Pretender and all his ſons, hurt the right of any perſon, other than that of the offender, during his natural life; the rights of creditors and other third parties, in the caſe of forfeiture on treaſon, muſt be determined by the law of England.

Miſpriſion of treaſon.

12. *Miſpriſion of treaſon*, from *meprendre* is the overlooking or concealing of treaſon. It is inferred by one's bare knowledge of the crime, and not diſcovering it to a magiſtrate or other perſon intitled by his

office to take examination; though he ſhould not in the leaſt degree aſſent to it. The foreſaid act 7 *Ann.* makes the Engliſh Law of miſpriſion apply. Its puniſhment is, by the law of England, perpetual impriſonment, together with the forfeiture of the offender's moveables, and of the profits of his heritable eſtate, during his life; that is, in the ſtyle of the law, his ſingle and liferent eſcheat.

Sedition.

13. The crime of *ſedition* conſiſts in the raiſing commotions or diſturbances in the ſtate. It is either verbal or real. Verbal ſedition, or leaſing making, is inferred from the utterring of words tending to create diſcord between the king and his people. It is puniſhed either by impriſonment, fine or baniſhment, at the diſcretion of the judge. Real ſedition is generally committed by convocating together any conſiderable number of people, without lawful authority, under the pretence of redreſſing ſome public grievance, to the diſturbance of the public peace. Thoſe who are convicted of this crime are puniſhed by the confiſcation of their goods; and their lives are at the king's will. If any perſons, to the number of 12, ſhall aſſemble, and being required by a magiſtrate or conſtable to diſperſe, ſhall nevertheleſs continue together for an hour after ſuch command, the perſons diſobeying ſhall ſuffer death and confiſcation of moveables.

Corruption in judges.

14. Judges, who, wilfully or through corruption, uſe their authority as a cover to injuſtice or oppreſſion, are puniſhed with the loſs of honour, fame, and dignity. Under this head may be claſſed *theſtbote* (from *bote*, "compenſation"), which is the taking a conſideration in money or goods from a thief to exempt him from puniſhment, or connive at his eſcape from juſtice. A ſheriff or other judge, guilty of this crime, forfeits his life and goods. And even a private perſon, who takes theſtbote, ſuffers as the principal thief. The buying of diſputed claims, concerning which there is a pending proceſs, by any judge or member either of the ſeſſion or of an inferior court, is puniſhed by the loſs of the delinquent's office, and all the privileges thereto belonging.

Deforcement.

15. Deforcement is the oppoſition given, or reſiſtance made, to meſſengers or other officers, while they are employed in executing the law. The court of ſeſſion is competent to this crime. It is puniſhable with the confiſcation of moveables, the one half to the king, and the other to the creditor at whoſe ſuit the diligence was uſed. Armed perſons, to the number of three or more, aſſiſting in the illegal running, landing, or exporting of prohibited or uncuſtomed goods, or any who ſhall reſiſt, wound, or maim any officer of the revenue, in the execution of his office, are puniſhable with death and the confiſcation of moveables.

Breach of arreſtment.

16. *Breach of arreſtment* (ſee N° lxxviii. 5.) is a crime of the ſame nature with deforcement, as it imports a contempt of the law and of the judges. It ſubjects to an arbitrary corporal puniſhment, and the eſcheat of moveables: with a preference to the creditor for his debt, and for ſuch farther ſum as ſhall be modified to him by the judge. Under this head of crimes againſt good government and police, may be reckoned the *foreſtalling of markets*; that is, the buying of goods intended for a public market, before they are carried there; which for the third criminal act infers the eſcheat of moveables; as alſo ſlaying ſalmon in forbidden time, deſtroying plough graith in time of tillage, ſlaying or houghing horſes or cows in time of harveſt, and deſtroying or ſpoiling growing timber; as to the puniſhment of which, ſee ſtatutes 1503, *c.* 72. —1587, *c.* 82. and 1689, *c.* 16.—1 *Geo.* I. *St.* 2. *c.* 48.

Foreſtalling, &c.

Murder.

17. Crimes againſt particular perſons may be directed either againſt life, limb, liberty, chaſtity, goods, or reputation. *Murder* is the wilful taking away of a perſon's life, without a neceſſary cauſe. The law makes no diſtinction betwixt premediated and ſudden homicide: both are puniſhed capitally. Caſual homicide, where the actor is in ſome degree blameable; and homicide in ſelf-defence, where the juſt bounds of defence have been exceeded; are puniſhed arbitrarily: but the ſlaughter of night-thieves, houſe-breakers, aſſiſtants in maſterful depredations, or rebels denounced for capital crimes, may be committed with impunity. The crime of *demembration*, or the cutting off of a member, is joined with that of murder; but in practice, its puniſhment has been reſtricted to the eſcheat of moveables, and an aſſythment or indemnification to the party. *Mutilation*, or the diſabling of a member, is puniſhed at the diſcretion of the judge.

Self-murder.

18. *Self-Murder* is as highly criminal as the killing our neighbour; and for this reaſon, the law has, contrary to the rule *crimina morte extinguuntur*, allowed a proof of the crime, after the offender's death, that his ſingle eſcheat might fall to the king or his donatory. To this end, an action muſt be brought, not before the juſticiary, but the ſeſſion, becauſe it is only intended *ad civilem effectum*, for proving and declaring the ſelf-murder; and the next of kin to the deceaſed muſt be made party to it.

Parricide.

19. The puniſhment of parricide, or of the murder of a parent, is not confined, by the law, to the criminal himſelf. All his poſterity in the right line are declared incapable of inheriting; and the ſucceſſion devolves on the next collateral heir. Even the curſing or beating of a parent infers death, if the perſon guilty be above 16 years: and an arbitrary puniſhment, if he is under it. A preſumptive or ſtatutory murder is conſtituted by 1690, *c.* 21. by which any woman who ſhall conceal her pregnancy, during its whole courſe, and ſhall not call for, or make uſe of, help in the birth, is to be reputed the murderer, if the child be dead, or amiſſing. This act was intended to diſcourage the unnatural practice of women making away with their children begotten in fornication, to avoid church-cenſures.

Duelling.

20. *Duelling*, is the crime of fighting in ſingle combat, on previous challenges given and received. Fighting in a duel, without licences from the king, is puniſhable by death; and whatever perſon, principal or ſecond, ſhall give a challenge to fight a duel, or ſhall accept a challenge, or otherwiſe engage therein, is puniſhed by baniſhment and eſcheat of moveables, though no actual fighting ſhould enſue.

Haimſucken.

21. *Haimſucken* (from *haim* "home," and *ſocken* "to ſeek or purſue.") is the aſſaulting or beating of a perſon in his own houſe. The puniſhment of this crime is nowhere defined, except in the books of the Majeſty, which make it the ſame as that of a rape; and it is, like rape, capital by practice. The aſſault muſt be made in the proper houſe of the perſon aſſaulted,

where he lies and riſes daily and nightly ; ſo that neither a public houſe, nor even a private, where one is only tranſiently, falls within the law.

Battery.

22. Any party to a law-ſuit, who ſhall ſlay, wound, or otherwiſe invade his adverſary, at any period of time between executing the ſummons and the complete execution of the decree, or ſhall be acceſſory to ſuch invaſion, ſhall loſe his cauſe. The ſentence pronounced on this trial, againſt him who has committed the battery, is not ſubject to reduction, either on the head of minority, or on any other ground whatever: and if the perſon proſecuted for this crime ſhall be denounced for not appearing, his liferent, as well as ſingle eſcheat, falls upon the denunciation.

Wrongous impriſonment.

23. The crime of *wrongous impriſonment* is inferred, by granting warrants of commitment in order to trial, proceeding on informations not ſubſcribed, or without expreſſing the cauſe of commitment; by receiving or detaining priſoners on ſuch warrants; by refuſing to a priſoner a copy of the warrant of commitment; by detaining him in cloſe confinement, above eight days after his commitment; by not releaſing him on bail, where the crime is bailable; and by tranſporting perſons out of the kingdom, without either their own conſent, or a lawful ſentence. The perſons guilty of a wrongous impriſonment are puniſhed by a pecuniary mulct, from L. 6000 down to L. 400 *Scots*, according to the rank of the perſon detained; and the judge, or other perſon guilty, is over and above ſubjected to pay to the perſon detained a certain ſum *per diem*, proportioned to his rank, and is declared incapable of public truſt. All theſe penalties may be inſiſted for by a ſummary action before the ſeſſion, and are ſubject to no modification.

Adultery.

24. *Adultery*, is the crime by which the marriage-bed is polluted. This crime could neither by the Roman nor Jewiſh law be committed, but where the guilty woman was the wife of another: by ours, it is adultery, if either the man or woman be married. We diſtinguiſh between ſimple adultery, and that which is notorious or manifeſt. Open and manifeſt adulterers, who continue incorrigible, notwithſtanding the cenſures of the church, are puniſhed capitally. This crime is diſtinguiſhed by one or other of the following characters: where there is iſſue procreated between the adulterers; or where they keep bed and company together notoriouſly; or where they give ſcandal to the church, and are upon their obſtinate refuſing to liſten to its admonitions, excommunicated. The puniſhment of ſimple adultery, not being defined by ſtatute, is left to the diſcretion of the judge; but cuſtom has made the falling of the ſingle eſcheat one of its penalties.

Bigamy.

25. *Bigamy*, is a perſons entering into the engagements of a ſecond marriage, in violation of a former marriage-vow ſtill ſubſiſting. Bigamy, on the part of the man, has been tolerated in many ſtates, before the eſtabliſhment of Chriſtianity, even by the Jews themſelves; but it is prohibited by the precepts of the goſpel, and it is puniſhed by the law, whether on the part of the man or of the woman, with the pains of perjury.

Inceſt.

26. *Inceſt*, is committed by perſons who ſtand within the degrees of kindred forbidden in *Lev.* xvii. and is puniſhed capitally. The ſame degrees are prohibited in affinity, as in conſanguinity, *Lev.* xviii. 13. *et ſeq.* As this crime is repugnant to nature, all children, whether lawful or natural, ſtand on an equal footing: *civilis ratio civilia jura corrumpere poteſt, non vero naturalia.* It is difficult indeed to bring a legal proof of a relation merely natural, on the ſide of the father; but the mother may be certainly known without marriage.

Rape.

27. There is no explicit ſtatute making rape, or the raviſhing of women, capital; but it is plainly ſuppoſed in act 1612. *c.* 4. by which the raviſher is exempted from the pains of death, only in the caſe of the woman's ſubſequent conſent, or her declaration that ſhe went off with him of her own free-will; and even then, he is to ſuffer an arbitrary puniſhment, either by impriſonment, confiſcation of goods, or a pecuniary fine.

Theft.

28. *Theft* is defined, A fraudulent intermeddling with the property of another, with a view of making gain. The ancient law proportioned the puniſhment of the theft to the value of the goods ſtolen; heightening it gradually, from a ſlight corporal puniſhment to a capital, if the value amounted to thirty-two pennies Scots, which in the reign of David I. was the price of two ſheep. In ſeveral latter acts, it is taken for granted, that this crime is capital. But where the thing ſtolen is of ſmall value, we conſider it not as theft but as pickery, which is puniſhed either corporally or by baniſhment. The breaking of orchards, and the ſtealing of green wood, is puniſhed by a fine, which riſes as the crime is repeated.

Reſet of theft.

29. Theft may be aggravated into a capital crime, though the value of the thing ſtolen be trifling; as theft twice repeated, or committed in the night, or by landed men; or of things ſet apart for ſacred uſes. The receivers and concealers of ſtolen goods, knowing them to be ſuch, ſuffer as thieves. Thoſe who barely harbour the perſon of the criminal within 48 hours either before or after committing the crime, are puniſhed as partakers of the theft. Such as ſell goods belonging to thieves or lawleſs perſons who dare not themſelves come to market, are puniſhed with baniſhment and the eſcheat of moveables.

Robbery, &c.

30. Theft attended with violence is called *robbery*; and in the old ſtatutes, *rief* or *ſtouthrief*; under which claſs may be included *ſorning*, or the taking of meat and drink by force, without paying for it. Stouthrief came at laſt to be committed ſo audaciouſly, by bands of men aſſociated together, that it was thought neceſſary to veſt all the freeholders with a power of holding courts upon ſorners and rievers, and condemning them to death. Nay, all were capitally puniſhed, who, to ſecure their lands from depredation, payed to the rievers a yearly contribution, which got the name of *black-mail.* An act alſo paſſed, commanding to baniſhment a band of ſorners, who were originally from *Egypt* called *gypſies*, and adjudging to death all that ſhould be reputed *Egyptians*, if found thereafter within the kingdom. Robbery committed on the ſeas is called *piracy*, and is puniſhed capitally by the high admiral. Several of the facts which conſtitute this crime are ſet forth in a Britiſh ſtatute, 8 *Geo. I. c.* 24.

Falſehood.

31. *Falſehood*, in a large ſenſe, is the fraudulent imitation or ſuppreſſion of truth, to the damage of another. The lives and goods of perſons convicted of uſing falſe weights or meaſures were, by the old law, in the king's

Forgery.

mercy; and their heirs could not inherit but upon a remiſſion. The lateſt ſtatute againſt this crime, puniſhes it by confiſcation of moveables. That particular ſpecies of falſehood, which conſiſts in the falſifying of writings, paſſes by the name of *forgery*. The practice has now of a long time, agreeably to the Roman law, made this crime capital; unleſs the forgery be of executions, or other writings of ſmaller moment; in which caſe, it is puniſhed arbitrarily.

32. The writing muſt not only be fabricated, but put to uſe or founded on, in order to infer this crime. And though it be ſtrictly criminal, yet the trial of it is proper to the court of ſeſſion; but where improbation is moved againſt a deed by way of exception, the inferior judge, before whom the action lies, is competent to it *ad civilem effectum*. When it is pleaded as an exception, the practice, to diſcourage affected delays, obliges the defender, who moves it, to conſign L. 40 Scots; which he forfeits, if his plea ſhall appear calumnious.

33. Where a perſon, found guilty of forgery by the court of ſeſſion, is by them remitted to the juſticiary, an indictment is there exhibited againſt him, and a jury ſworn, before whom the decree of ſeſſion is produced, in place of all other evidence of the crime, in reſpect of which the jury find the pannel guilty; ſo that that decree being pronounced by a competent court, is held as full proof, or, in the ſtyle of the bar, as *probatio probata*.

Perjury.

34. *Perjury*, which is the judicial affirmation of a falſehood on oath, really coſtitutes the *crimem falſi*; for he who is guilty of it does, in the moſt ſolemn manner, ſubſtitute falſehood in the place of truth. To conſtitute this crime, the violation of truth muſt be deliberately intended by the ſwearer; and therefore reaſonable allowances ought to be given to forgetfulneſs or miſapprehenſion, according to his age, health, and other circumſtances. The breach of a promiſſory oath, does not infer this crime; for he who promiſes on oath, may ſincerely intend performance when he ſwears, and ſo cannot be ſaid to call on God to atteſt a falſehood. Though an oath, however falſe, if made upon reference in a civil queſtion, concludes the cauſe, the perſon perjured is liable to a criminal trial; for the effect of the reference can go no further than the private right of the parties.

35. Nowithſtanding the miſchievous conſequences of perjury to ſociety, it is not puniſhed capitally, but by confiſcation of moveables, impriſonment for a year, and infamy. The court of ſeſſion is competent to perjury *incidenter*, when, in any examination upon oath, taken in a cauſe depending before them, a perſon appears to have ſworn falſely: but in the common caſe, that trial is proper to the juſticiary. *Subornation of perjury* conſiſts in tampering with perſons who are to ſwear in judgement, by directing them how they are to depoſe; and it is puniſhed with the pains of perjury.

Stellionate.

36. The crime of *ſtellionate* from *ſtellio*, includes every fraud which is not diſtinguiſhed by a ſpecial name; but is chiefly applied to conveyances of the ſame numerical right, granted by the proprietor to different diſponees. The puniſhment of ſtellionate muſt neceſſarily be arbitrary, to adapt it to the various natures and different aggravations of the fraudulent acts. The perſons guilty of that kind of it, which conſiſts in granting double conveyances, are by the law declared infamous, and their lives and goods at the king's mercy. The cogniſance of *fraudulent bankruptcy* is appropriated to the court of ſeſſion, who may inflict any puniſhment on the offender that appears proportioned to his guilt, death excepted.

Uſury.

37. The crime of *uſury*, before the reformation, conſiſted in the taking of *any* intereſt for the uſe of money; and now in taking an higher rate of intereſt than is authoriſed by law. It is divided into *uſura manifeſta*, or direct; and *velata*, or covered. One may be guilty of the firſt kind, either where he covenants with the debtor for more than the lawful intereſt on the loan-money: or where one receives the intereſt of a ſum before it is due, ſince thereby he takes a conſideration for the uſe of money before the debtor has really got the uſe of it. Where a debt is clogged with an uncertain condition, by which the creditor runs the hazard of loſing his ſum, he may covenant for an higher intereſt than the legal, without the crime of uſury; for there, the intereſt is not given merely in conſideration of the uſe of the money, but of the danger undertaken by the creditor.

38. Covered uſury, is that which is committed under the maſk not of a loan but of ſome other contract; *e. g.* a ſale or an improper wadſet. And in general, all obligations entered into with an intention of getting more than the legal intereſt for the uſe of money, however they may be diſguiſed, are uſurious. As a farther gaurd againſt this crime, the taking more than the legal intereſt for the forbearance of payment of money, merchandiſe, or other commodities, by way of loan, exchange, or other contrivance whatever, or the taking a bribe for the loan of money, or for delaying its payment when lent, is declared uſury. Where uſury is proved, the uſurious obligation is not only declared void, but the creditor, if he has received any unlawful profits, forfeits the treble value of the ſums or goods lent. Uſury, when it is to be purſued criminally, muſt be tried by the juſticiary; but where the libel concludes only for voiding the debt, or reſtitution, the ſeſſion is the proper court.

Injury.

39. *Injury*, in its proper acceptation, is the reproaching or affronting our neighbour. Injuries are either verbal or real. A verbal injury, when directed againſt a private perſon, conſiſts in the uttering contumelious words, which tend to expoſe our neighbour's character by making him little or ridiculous. It does not ſeem that the twitting one with natural defects, without any ſarcaſtical reflections, though it be inhuman, falls under this deſcription, as theſe imply no real reproach in the juſt opinion of mankind. Where the injurious expreſſions have a tendency to blacken one's moral character, or fix ſome particular guilt upon him, and are deliberately repeated in different companies, or handed about in whiſpers to confidents, it then grows up to the crime of ſlander: and where a perſon's moral character is thus attacked, the *animus injuriandi* is commonly inferred from the injurious words themſelves, unleſs ſpecial circumſtances be offered to take off the preſumption, *ex. gr.* that the words were uttered in judgment in one's own defence, or by way of information to a magiſtrate, and had ſome foundation in fact. Though the cognizance of ſlander is proper to the commiſſaries,

miſſaries, who, as the *judices Chriſtianitatis*, are the only judges of ſcandal; yet, for ſome time paſt, bare verbal injuries have been tried by other criminal judges, and even by the ſeſſion. It is puniſhed either by a fine, proportioned to the condition of the perſons injuring and injured, and the circumſtances of time and place; or if the injury import ſcandal, by publicly acknowledging the offence; and frequently the two are conjoined. The calling one a bankrupt is not, in ſtrict ſpeech, a verbal injury, as it does not affect the perſon's moral character; yet, as it may hurt his credit in the way of buſineſs, it founds him in an action of damages, which muſt be brought before the judge-ordinary. A real injury is inflicted by any fact by which a perſon's honour or dignity is affected; as ſtriking one with a cane, or even aiming a blow without ſtriking; ſpitting in one's face; aſſuming a coat of arms, or any other mark of diſtinction proper to another, &c. The compoſing and publiſhing defamatory libels may be reckoned of this kind. Real injuries are tried by the judge-ordinary, and puniſhed either by fine or impriſonment, according to the demerit of the offenders.

Criminal juriſdiction

40. After having ſhortly explained the ſeveral crimes puniſhable by the law, this treatiſe may be concluded with a few obſervations on criminal juriſdiction, the forms of trial, and the methods by which crimes may be extinguiſhed. Criminal juriſdiction is founded, 1. *Ratione domicilii*, if the defender dwells within the territory of the judge. Vagabonds, who have no certain *domicile*, may be tried wherever they are apprehended. 2. *Ratione delicti*, if the crime was committed within the territory. Treaſon is triable, by the Engliſh law, in any country that the king ſhould appoint; and, by a temporary act now expired, treaſon committed in certain Scots counties, was made triable by the court of juſticiary, wherever it ſhould ſit.

What perſons are not triable.

41. No criminal trial can proceed, unleſs the perſon accuſed is capable of making his defence. Abſents therefore cannot be tried; nor fatuous nor furious perſons, *durante furore*, even for crimes committed while they were in their ſenſes. For a like reaſon, minors who had no curators, could not, by the Roman law, be tried criminally; but preſent practice conſiders every perſon who is capable of dole, to be alſo ſufficiently qualified for making his defence in a criminal trial.

Commitment.

42. No perſon can be impriſoned in order to ſtand trial for any crime, without a warrant in writing expreſſing the cauſe, and proceeding upon a ſubſcribed information, unleſs in the caſe of indignities done to judges, riots, and the other offences ſpecially mentioned in 1701. *c*. 6. Every priſoner committed in order to trial, if the crime of which he is accuſed be not capital, is entitled to be releaſed upon bail, the extent of which is to be modified by the judge, not exceeding 12,000 merks Scots for a nobleman, 6000 for a landed gentleman, 2000 for every other gentleman or burgeſs, and 600 for any other inferior perſon. That perſons who, either from the nature of the crime with which they are charged, or from their low circumſtances, cannot procure bail, may not lie for ever in priſon untried, it is lawful for every ſuch priſoner to apply to the criminal judge, that his trial may be brought on. The judge muſt, within 24 hours after ſuch application, iſſue letters directed to meſſengers, for intimating to the proſecutor to fix a diet for the priſoner's trial, within 60 days after the intimation, under the pain of wrongous impriſonment: And if the perſecutor does not inſiſt within that time, or if the trial is not finiſhed in forty days more when carried on before the Juſticiary, or in thirty when before any other judge; the priſoner is, upon a ſecond application, ſetting forth that the legal time is elapſed, entitled to his freedom, under the ſame penalty.

Precognition.

43. Upon one's committing any of the groſſer crimes, it is uſual for a juſtice of the peace, ſheriff, or other judge, to take a precognition of the facts, *i. e.* to examine thoſe who were preſent at the criminal act, upon the ſpecial circumſtances attending it, in order to know whether there is ground for a trial, and to ſerve as a direction to the proſecutor, how to ſet forth the facts in the libel; but the perſons examined may inſiſt to have their declarations cancelled before they give teſtimony at the trial. Juſtices of the peace, ſheriffs, and magiſtrates of boroughs, are alſo authoriſed to receive informations, concerning crimes to be tried in the circuit-courts; which informations are to be tranſmitted to the juſtice-clerk 40 days before the ſitting of the reſpective courts. To diſcourage groundleſs criminal trials, all proſecutors, where the defender was abſolved, were condemned by ſtatute, in coſts, as they ſhould be modified by the judge, and beſides were ſubjected to a ſmall fine, to be divided between the fiſc and the defender: And where the king's advocate was the only purſuer, his informer was made liable. This ſufficiently warrants the preſent practice of condemning vexatious proſecutors in a pecuniary mulct, though far exceeding the ſtatutory ſum.

Form of trial.

44. The forms of trial upon criminal accuſations, differ much from thoſe obſerved in civil actions, if we except the caſe of ſuch crimes as the court of ſeſſion is competent to, and of leſſer offences tried before inferior courts. The trial of crimes proceeds either upon indictment, which is ſometimes uſed when the perſon to be tried is in priſon; or by criminal letters iſſuing from the ſignet of the juſticiary. In either caſe, the defender muſt be ſerved with a full copy of the indictment or letters, and with a liſt of the witneſſes to be brought againſt him, and of the perſons who are to paſs on the inqueſt, and 15 free days muſt intervene between his being ſo ſerved and the day of appearance. When the trial proceeds upon criminal letters, the private proſecutor muſt give ſecurity, at raiſing the letters, that he will report them duly executed to the juſticiary, in terms of 1535, *c*. 35.; and the defender, if he be not already in priſon, is, by the letters, required to give caution, within a certain number of days after his citation, for his appearance upon the day fixed for his trial: And if he gives none within the days of the charge, he may be denounced rebel, which infers the forfeiture of his moveables.

45. That part of the indictment, or of the criminal letters, which contains the ground of the charge againſt the defender, and the nature or degree of the puniſhment he ought to ſuffer, is called the *libel*. All libels muſt be ſpecial, ſetting forth the particular facts inferring the guilt, and the particular place where

theſe facts were done. The time of committing the crime may be libelled in more general terms, with an alternative as to the month, or day of the month: but as it is not practicable, in moſt caſes, to libel upon the preciſe circumſtances of acceſſion that may appear in proof, libels againſt acceſſories are ſufficient, if they mention, in general, that the perſons proſecuted are guilty art and part.

46. The defender in a criminal trial may raiſe letters of exculpation, for citing witneſſes in proof of his defences againſt the libel, or of his objections againſt any of the jury or witneſſes; which muſt be executed to the ſame day of appearance with that of the indictment or criminal letters.

Diets of appearance

47. The diets of appearance, in the court of juſticiary, are peremptory: the criminal letters muſt be called on the very day to which the defender is cited; and hence, if no accuſer appears, their effect is loſt, *inſtantia perit*, and new letters muſt be raiſed. If the libel, or any of the executions, ſhall to the proſecutor appear informal, or if he be diffident of the proof, from the abſconding of a neceſſary witneſs, the court will, upon a motion made by him, deſert the diet *pro loco et tempore*; after which new letters become alſo neceſſary. A defender, who does not appear on the very day to which he is cited, is declared fugitive; in conſequence of which, his ſingle eſcheat falls. The defender, after his appearance in court, is called the *pannel*.

48. The two things to be chiefly regarded in a criminal libel, are, 1. The relevancy of the facts, *i. e.* their ſufficiency to infer the concluſion; 2. Their truth. The conſideration of the firſt belongs to the judge of the court; that of the other, to the jury or aſſize. If the facts libelled be found irrelevant, the pannel is diſmiſſed from the bar; if relevant, the court remits the proof thereof to be determined by the jury; which muſt conſiſt of 15 men picked out by the court from a greater number not exceeding 45, who have been all ſummoned, and given in liſt to the defender at ſerving him with a copy of the libel.

Probation of crimes.

49. Crimes cannot, like debts, be referred to the defender's oath; for no perſon is compellable to ſwear againſt himſelf, where his life, limb, liberty, or eſtate is concerned, nor even in crimes which infer infamy; becauſe one's good name is, in right eſtimation, as valuable as his life. There is one exception however to this rule in trying the crime of uſury, which may be proved by the uſurer's own oath, notwithſtanding the rule, *Nemo tenetur jurare in ſuam turpitudinem*. Crimes therefore are in the general caſe proveable only by the defender's free confeſſion, or by writing, or by witneſſes. No extrajudicial confeſſion, unleſs it is adhered to by the pannel in judgement, can be admitted as evidence.

Socii criminis.

50. All objections relevant againſt a witneſs in civil caſes are alſo relevant in criminal. No witneſs is admitted, who may gain or loſe by the event of the trial. *Socii criminis*, or aſſociates in the ſame crime, are not admitted againſt one another, except either in crimes againſt the ſtate, as treaſon; in occult crimes, where other witneſſes cannot be had, as forgery, or in thefts or depradations committed in the Highlands. The teſtimony of the private party injured may be received againſt the pannel, where the king's advocate is the only proſecutor, if from the nature of the crime, there muſt needs be a penury of witneſſes, as in rape, robbery, &c.

Verdict of aſſiſe.

51. After all the witneſſes have been examined in court, the jury are ſhut up in a room by themſelves, where they muſt continue, excluded from all correſpondence, till their verdict or judgment be ſubſcribed by the foreman (or chancellor) and clerk; and according to this verdict the court pronounces ſentence, either abſolving or condemning. It is not neceſſary, by the law of Scotland, that a jury ſhould be unanimous in finding a perſon guilty; the narroweſt majority is as ſufficient againſt the pannel, as for him. Juries cannot be puniſhed on account of an erroneous verdict, either for or againſt the pannel.

Powers of a jury.

52. Though the proper buſineſs of a jury be to inquire into the truth of the facts found relevant by the court, for which reaſon they are ſometimes called the *inqueſt*; yet, in many caſes, they judge alſo in matters of law or relevancy. Thus, though an objection againſt a witneſs ſhall be repelled by the court, the jury are under no neceſſity to give more credit to his teſtimony than they think juſt: And in all trials of art and part, where ſpecial facts are not libelled, the jury, if they return a general verdict, are indeed judges not only of the truth, but of the relevancy of the facts that are ſworn to by the witneſſes. A general verdict, is that which finds in general terms, that the pannel is guilty or not guilty, or that the libel or defences are proved or not proved. In a ſpecial verdict, the jury finds certain facts proved, the import of which is to be afterwards conſidered by the court.

Sentences.

53. Criminal judges muſt now ſuſpend for ſome time the execution of ſuch ſentences as affect life or limb, that ſo condemned criminals, whoſe caſes deſerve favour, may have acceſs to apply to the king for mercy. No ſentence of any court of judicature, ſouth of the river Forth, importing either death or demembration, can be executed in leſs than 30 days; and, if north of it, in leſs than 40 days, after the date of the ſentence. But corporal puniſhments, leſs than death or diſmembering, *e. g.* whipping, pillory, *&c.* may be inflicted eight days after ſentence on this ſide Forth, and twelve days after ſentence beyond it.

Extinction of crimes.

54. Crimes are extinguiſhed, 1. By the death of the criminal: both becauſe a dead perſon can make no defence, ſo that his trial is truly a judging upon the hearing of one ſide; and becauſe, though his guilt ſhould be ever ſo notorious, he is after death carried beyond the reach of human penalties: Such trials therefore can have no effect, but to puniſh the innocent heir, contrary to that moſt equitable rule, *Culpa tenet ſuos auctores*. 2. Crimes may be extinguiſhed by a remiſſion from the ſovereign. But a remiſſion, tho' it ſecures the delinquent from the public reſentment, the exerciſe of which belongs to the crown, cannot cut off the party injured from his claim of damages, over which the crown has no prerogative. Whoever therefore founds on a remiſſion, is liable in damages, to the private proſecutor, in the ſame manner as if he had been tried and found guilty. Even general acts of indemnity paſſed in parliament, though they ſecure againſt ſuch penalties as law inflicts upon the criminal merely *per modum pœnæ*, yet do not againſt the payment of any pecuniary fine that is given by ſtatute.

to the party injured, nor againſt the demand of any claim competent to him in name of damages.

55. Leſſer injuries, which cannot be properly ſaid to affect the public peace, may be extinguiſhed, either by the private party's expreſsly forgiving him, or by his being reconciled to the offender, after receiving the injury. Hence ariſes the rule, *Diſſimulatione tollitur injuria*. But where the offence is of a higher nature, the party injured, though he may paſs from the proſecution, in ſo far as his private intereſt is concerned, cannot preclude the king's advocate, or procurator-fiſcal, from inſiſting *ad vindictam publicam*.

Preſcription.

56. Crimes are alſo extinguiſhed by preſcription, which operates by the mere lapſe of time, without any act either of the ſovereign or of the private ſufferer. Crimes preſcribe in 20 years; but in particular crimes, the preſcription is limited by ſtatute to a ſhorter time. No perſon can be proſecuted upon the act againſt wrongous impriſonment, after three years. High treaſon, committed within the king's dominions, ſuffers likewiſe a triennial preſcription, if indictment be not found againſt the traitor within that time. All actions brought upon any penal ſtatute made or to be made, where the penalty is appropriated to the crown, expire in two years after committing the offence; and where the penalty goes to the crown or other proſecutor, the proſecutor muſt ſue within one year, and the crown within two years after the year ended. Certain crimes are, without the aid of any ſtatute, extinguiſhed by a ſhorter preſcription than twenty years. By the old law, in the caſe of rape, robbery, and hameſucken, the party injured was not heard after a ſilence of twenty-four hours; from a preſumption, that perſons could not be ſo groſsly injured, without immediately complaining: And it is probable, that a proſecution for theſe crimes, if delayed for any conſiderable time, would be caſt even at this day, or at leaſt the puniſhment reſtricted. Leſſer injuries ſuffer alſo a ſhort preſcription; law *preſuming* forgiveneſs, from the nature of the offence, and the ſilence of the party. The particular ſpace of time ſufficient to eſtabliſh this preſumption muſt be determined by the judge, according to circumſtances.

LAW

Law-Language.

Law-Language. In England all law-proceedings were formerly written, as indeed all public proceedings were, in Norman or law French, and even the arguments of the counſel and deciſions of the court were in the ſame barbarous dialect. An evident and ſhameful badge, it muſt be owned, of tyranny and foreign ſervitude; being introduced under the auſpices of William the Norman, and his ſons: whereby the obſervation of the Roman ſatyriſt was once more verified, that *Gallia cauſidicos docuit facunda Brittannos*. This continued till the reign of Edward III.; who, having employed his arms ſucceſsfully in ſubduing the crown of France, thought it unbeſeeming the dignity of the victors to uſe any longer the language of a vanquiſhed country. By a ſtatute, therefore, paſſed in the 36th year of his reign, it was enacted, that for the future all pleas ſhould be pleaded, ſhown, defended, anſwered, debated, and judged, in the Engliſh tongue; but be entered and inrolled in Latin: In like manner as Don Alonſo X. king of Caſtile (the great-grandfather of Edward III.) obliged his ſubjects to uſe the Caſtilian tongue in all legal proceedings; and as, in 1286, the German language was eſtabliſhed in the courts of the empire. And perhaps, if the legiſlature had then directed that the writs themſelves, which are mandates from the king to his ſubjects to perform certain acts or to appear at certain places, ſhould have been framed in the Engliſh language, according to the rule of the ancient law, it had not been very improper. But the record or enrolment of thoſe writs and the proceedings thereon, which was calculated for the benefit of poſterity, was more ſerviceable (becauſe more durable) in a dead and immutable language than in any flux or living one. The practiſers, however, being uſed to the Norman language, and therefore imagining they could expreſs their thoughts more aptly and more conciſely in that than in any other, ſtill continued to take their notes in law French; and of courſe, when thoſe notes came to be publiſhed, under the denomination of *reports*, they were printed in that barbarous dialect; which joined to the additional terrors of a Gothic black letter, has occaſioned many a ſtudent to throw away his Plowden and Littleton, without venturing to attack a page of them. And yet in reality, upon a nearer acquaintance, they would have found nothing very formidable in the language; which differs in its grammar and orthography as much from the modern French, as the diction of Chaucer and Gower does from that of Addiſon and Pope. Beſides, as the Engliſh and Norman languages were concurrently uſed by our anceſtors for ſeveral centuries together, the two idioms have naturally aſſimilated, and mutually borrowed from each other: for which reaſon the grammatical conſtruction of each is ſo very much the ſame, that I apprehend an Engliſhman (with a week's preparation) would underſtand the laws of Normandy, collected in their *grand couſtumier*, as well, if not better, than a Frenchman bred within the walls of Paris.

Blackſt. Comment.

The Latin, which ſucceeded the French for the entry and enrolment of pleas, and which continued in uſe for four centuries, anſwers ſo nearly to the Engliſh (oftentimes word for word) that it is not at all ſurpriſing it ſhould generally be imagined to be totally fabricated at home, with little more art or trouble than by adding Roman terminations to Engliſh words. Whereas in reality it is a very univerſal dialect, ſpread throughout all Europe at the irruption of the northern nations; and particularly accommodated and moulded to anſwer all the purpoſes of the lawyers with a peculiar exactneſs and preciſion. This is principally owing to the ſimplicity, or (if the reader pleaſes) the poverty and baldneſs of its texture, calculated to expreſs the ideas of mankind juſt as they ariſe in the human mind, without any rhetorical flouriſhes, or perplexed ornaments of ſtyle: for it may be obſerved, that thoſe laws and ordinances, of public as well as private communities, are generally the moſt eaſily underſtood, where ſtrength and perſpicuity, not harmony or elegance of expreſſion, have been principally conſulted in compiling them. Theſe northern nations, or rather their legiſlators, though they reſolved to make uſe of the Latin tongue in promulging their laws, as being more durable and more generally known to their conquered ſubjects than their own Teutonic dialects, yet (either through choice or neceſſity) have frequently intermixed therein ſome words of a Gothic original; which is, more or leſs, the caſe in every country of Europe, and therefore not to be imputed as any peculiar blemiſh in the Engliſh legal latinity. The truth is, what is generally denominated *law-Latin* is in reality a mere technical language, calculated for eternal duration, and eaſy to be apprehended both in preſent and future times; and on thoſe accounts beſt ſuited to preſerve thoſe memorials which are intended for perpetual rules of action. The rude pyramids of Egypt have endured from the earlieſt ages, while the more modern and more elegant ſtructures of Attica, Rome, and Palmyra, have ſunk beneath the ſtroke of time.

As to the objection of locking up the law in a ſtrange and unknown tongue, this is of little weight with regard to records; which few have occaſion to read, but ſuch as do, or ought to, underſtand the rudiments of Latin. And beſides, it may be obſerved of the law-Latin, as the very ingenious Sir John Davis obſerves of the law-French, "that it is ſo very eaſy to be learned, that the meaneſt wit that ever came to the ſtudy of the law doth come to underſtand it almoſt perfectly in ten days without a reader."

It is true, indeed, that the many terms of art, with which the law abounds, are ſufficiently harſh when Latinized (yet not more ſo than thoſe of other ſciences), and may, as Mr Selden obſerves, give offence "to ſome grammarians of ſqueamiſh ſtomachs, who would rather chooſe to live in ignorance of things the moſt uſeful and important, than to have their delicate ears wounded by the uſe of a word unknown to Cicero, Salluſt, or the other writers of the Auguſtan age." Yet this is no more than muſt unavoidably happen when things of modern uſe, of which the Romans had no idea, and conſequently no phraſes to expreſs them, come to be delivered in the Latin tongue. It would puzzle the moſt claſſical ſcholar to find an appellation, in his pure Latinity, for a conſtable, a record, or a deed of feoffment: it is therefore to be imputed as much to neceſſity as ignorance, that they were ſtyled in the forenſic dialect, *conſtabularius*, *recordum*, and *feoffamentum*. Thus again, another uncouth word of the ancient laws (for I defend not the ridiculous barbariſms ſometimes introduced by the ignorance of modern practiſers), the ſubſtantive *murdrum*, or the verb *murdrare*, however harſh and unclaſſical it may ſeem, was neceſſarily framed to expreſs a particular offence; ſince no other word in being, *occidere*, *interficere*, *necare*, or the like, was ſufficient to expreſs the intention of the criminal, or *quo animo* the act was perpetrated; and therefore by no means came up to the notion of murder at preſent entertained by law; viz. a killing *with malice aforethought*.

A ſimilar neceſſity to this produced a ſimilar effect at Byzantium, when the Roman laws were turned into Greek for the uſe of the oriental empire: for, without any regard to Attic elegance, the lawyers of the imperial courts made no ſcruple to tranſlate *fidei commiſſarios*, φιδεικομμισσαριυς; *cubiculum*, κυβικȣλειον; *filium familias*, παιδα-φαμιλιας; *repudium*, ρεπȣδιον; *compromiſſum*, κομπρομισσον; *reverentia et obſequium*, ρευερεντια και οψεκȣιον; and the like. They ſtudied more the exact and preciſe import of the words, than the neatneſs and delicacy of their cadence. And it may be ſuggeſted, that the terms of the law are not more numerous, more uncouth, or more difficult to be explained by a teacher, than thoſe of logic, phyſics, and the whole circle of Ariſtotle's philoſophy; nay, even of the politer arts of architecture and its kindred ſtudies, or the ſcience of rhetoric itſelf. Sir Thomas More's famous legal queſtion contains in it nothing more difficult, than the definition which in his time the philoſophers currently gave of their *materia prima*, the groundwork of all natural knowledge; that it is *neque quid, neque quantum, neque quale, neque aliquid eorum quibus ens determinatur*; or its ſubſequent explanation by Adrian Heereboard, who aſſures us, that *materia prima non eſt corpus, neque per formam corporeitatis, neque per ſimplicem eſſentiam: eſt tamen ens, et quidem ſubſtantia, licet incompleta; habetque actum ex ſe entitativum, et ſimul eſt potentia ſubjectiva.* The law, therefore, with regard to its technical phraſes, ſtands upon the ſame footing with other ſtudies, and requeſts only the ſame indulgence.

This technical Latin continued in uſe from the time of its firſt introduction, till the ſubverſion of the ancient conſtitution under Cromwell; when, among many other innovations in the law, ſome for the better and ſome for the worſe, the language of the records was altered and turned into Engliſh. But, at the reſtoration of king Charles, this novelty was no longer countenanced; the practiſers finding it very difficult to expreſs themſelves ſo conciſely or ſignificantly in any other language but the Latin. And thus it continued without any ſenſible inconvenience till about the year 1730, when it was again thought proper that the proceedings at law ſhould be done into Engliſh, and it was accordingly ſo ordered by ſtatute 4 Geo. II. c. 26. This was done, in order that the common people might have knowledge and underſtanding of what was alleged or done for and againſt them in the proceſs and pleadings, the judgment and entries in cauſe. Which purpoſe it is doubtful how well it has anſwered; but there is reaſon to ſuſpect, that the people are now, after many years experience, altogether as ignorant in matters of law as before. On the other hand, theſe inconveniences have already ariſen from the alteration; that now many clerks and attorneys are hardly able to read, much leſs to underſtand, a record even of ſo modern a date as the reign of George I. And it has much enhanced the expence of all legal proceedings; for ſince the practiſers are confined (for the ſake of the ſtamp-duties, which are thereby conſiderably increaſed) to write only a ſtated number of words in a ſheet; and as the Engliſh language, through the multitude of its particles, is much more verboſe than the Latin; it follows, that the number of ſheets muſt be very much augmented by the change. The tranſlation alſo of technical phraſes, and the names of writs and other proceſs, were found to be ſo very ridiculous (a writ of *niſi prius*, *quare impedit*, *fieri facias*, *habeas corpus*, and the reſt, not being capable of an Engliſh dreſs with any degree of ſeriouſneſs), that in two years time a new act was obliged to be made, 6 Geo. II. c. 14. which allows all technical words to continue in the uſual languages, and has thereby defeated every beneficial purpoſe of the former ſtatute.

Trial by Wager of Law, (vadiatio legis;) a ſpecies of trial, in the Engliſh law, ſo called, as another ſpecies is ſtyled "wager of battel," *vadiatio duelli,* (ſee Battel): becauſe, as in the wager of battel, the defendant gave a pledge, gage, or *vadium*, or try the cauſe by battel; ſo here he was put in ſureties or *vadios*, that at ſuch a day he will make his law, that is, take the benefit which the law has allowed him, (ſee the article Trial). For our anceſtors conſidered, that there were many caſes where an innocent man, of good credit, might be overborne by a multitude of falſe witneſſes; and therefore eſtabliſhed this ſpecies of trial, by the oath of the defendant himſelf: for if he will abſolutely ſwear himſelf not chargeable, and appears to be a perſon of reputation, he ſhall go free, and for ever acquitted of the debt, or other cauſe of action.

Blackſt. Comment.

The manner of waging and making law is this. He that has waged, or given ſecurity, to make his law, brings with him into court eleven of his neighbours: a cuſtom which we find particularly deſcribed ſo early as in the league between Alfred and Guthrum the Dane; for by the old Saxon conſtitution every man's credit in courts of law depended upon the opinion which his neighbours had of his veracity. The defendant then, ſtanding at the end of the bar, is admoniſhed by the judges of the nature and danger of a falſe oath. And if he ſtill perſiſts, he is to repeat this or the like oath: "Hear this, ye juſtices, that I do not owe unto Richard Jones the ſum of ten pounds nor any penny thereof, in manner and form as the ſaid Richard hath declared againſt me. So help me God." And thereupon his eleven neighbours or compurgators ſhall avow upon their oaths, that they believe in their conſciences that he ſaith the truth; ſo that himſelf muſt be ſworn *de fidelitate*, and the eleven *de credulitate*.

In the old Swediſh or Gothic conſtitution, wager of law was not only permitted, as it is in *criminal* caſes, unleſs the fact be extremely clear againſt the priſoner; but was alſo abſolutely required, in many *civil* caſes: which an author of their own very juſtly charges as being the ſource of frequent perjury. This, he tells us, was owing to the Popiſh eccleſiaſtics, who introduced this method of purgation from their canon law; and, having ſown a plentiful crop of oaths in all judicial proceedings, reaped afterwards an ample harveſt of perjuries; for perjuries were puniſhed in part by pecuniary fines, payable to the coffers of the church. But in England wager of law is never *required*; and then only *admitted*, where an action is brought upon ſuch matters as may be ſuppoſed to be privately tranſacted between the parties, and wherein the defendant may be preſumed to have made ſatisfaction without being able to prove it. Therefore it is only in action of debt upon ſimple contract, or for amercement, in actions of detinue, and of account, where the debt may have been paid, the goods reſtored, or the account balanced, without any evidence of either. And by ſuch wager of law (when admitted) the plaintiff is perpetually barred; for the law, in the ſimplicity of the ancient times, preſumed that no one would forſwear himſelf for any worldly thing. Wager of law, however, lieth in a real action, where the tenant alleges he was not legally ſummoned to appear, as well as in mere perſonal contracts.

Stiernbook, l. 9. 1. c.

The wager of law was never permitted but where the defendant bore a fair and unreproachable character; and it was alſo confined to ſuch caſes where a debt might be ſuppoſed to be diſcharged, or ſatisfaction made in private, without any witneſſes to atteſt it: and many other prudential reſtrictions accompanied this indulgence. But at length it was conſidered, that (even under all its reſtrictions) it threw too great a temptation in the way of indigent or profligate men: and therefore by degrees new remedies were deviſed, and new forms of action were introduced, wherein no defendant is at liberty to wage his law. So that now no plaintiff need at all apprehend any danger from the hardineſs of his debtor's conſcience, unleſs he voluntarily chooſes to rely on his adverſary's veracity, by bringing an obſolete, inſtead of a modern, action. Therefore, one ſhall hardly hear at preſent of an action of *debt* brought upon a ſimple contract: that being ſupplied by an action of *treſpaſs on the caſe* for the breach of a promiſe or *aſſumpſit;* wherein, though the ſpecific debt cannot be recovered, yet damages may, equivalent to the ſpecific debt. And, this being an action of treſpaſs, no law can be waged therein. So, inſtead of an action of *detinue* to recover the very thing detained, an action of treſpaſs on the caſe in *trover and converſion* is uſually brought; wherein, though the horſe or other ſpecific chattel cannot be had, yet the defendant ſhall pay damages for the converſion, equal to the value of the chattel; and for this treſpaſs alſo no wager of law is allowed. In the room of actions of *account*, a bill in equity is uſually filed: wherein, though the defendant anſwers upon his oath, yet ſuch oath is not concluſive to the plaintiff; but he may prove every article by other evidence, in contradiction to what the defendant has ſworn. So that wager of law is quite out of uſe, being avoided by the mode of bringing the action; but ſtill it is not out of force. And therefore, when a new ſtatute inflicts a penalty, and gives an action of debt for recovering it, it is uſed to add, "in which no wager of law ſhall be allowed:" otherwiſe an hardy delinquent might eſcape any penalty of the law, by ſwearing he had never incurred, or elſe had diſcharged it.

Cuſtom-Houſe Laws. The expedient of exacting duties on goods imported, or exported, has been adopted by every commercial nation in Europe. The attention of the Britiſh legiſlature has not been confined to the object of raiſing a revenue alone, but they have attempted by duties, exemptions, drawbacks, bounties, and other regulations, to direct the national trade into thoſe channels that contribute moſt to the public benefit. And, in order to obtain every requiſite information, all goods, exported or imported, whether liable to duty or not, are required to be entered at the reſpective cuſtom-houſes; and, from theſe entries, accounts are regularly made up of the whole Britiſh trade, diſtinguiſhing the articles, their quantity and value, and the countries which ſupply or receive them.

The objects of the Britiſh legiſlature may be reduced to the following heads:

Firſt, To encourage the employment of Britiſh ſhipping and ſeamen, for the purpoſe of ſupplying the navy when public exigencies require.

Secondly, To increaſe the quantity of money in the nation, by prohibiting the exportation of Britiſh coin, by encouraging exportation, and diſcouraging importation, and by promoting agriculture, fiſheries, and manufactures. For theſe purpoſes, it is penal to entice certain manufacturers abroad, or export the tools uſed in their manufactures; the exportation of raw materials is, in moſt inſtances, prohibited; and their importation permitted free from duty, and ſometimes rewarded with a bounty. The exportation of ſome goods, manufactured to a certain length only (for example white cloth), is loaded with a duty, but permitted duty-free when the manufacture is carried to its full extent. The importation of rival manufactures is loaded with heavy duties, or abſolutely prohibited. Theſe reſtrictions are moſt ſevere towards nations with which the balance of trade is ſuppoſed againſt them, or which are conſidered as the moſt formidable rivals in power or commerce. Upon this principle the commerce with France, till lately, laboured under the heavieſt reſtrictions.

Thirdly, to ſecure plenty of neceſſaries for ſubſiſtence and manufacture, by diſcouraging the exportation of ſome articles that conſume by length of time, and regulating the corn-trade according to the exigencies of the ſeaſons.

Fourthly, To ſecure the trade of the colonies to the mother-country, and preſerve a mutual intercourſe, by encouraging the produce of their ſtaple-commodities, and reſtraining their progreſs in theſe manufactures which they receive in exchange.

Hamilton's Introduction to Merchandiſe.

The foundation of our commercial regulations is the famous act of navigation, which was firſt enacted during the time of the commonwealth, and adopted by the firſt parliament after the reſtoration. The ſubſtance of this act, and ſubſequent amendments, is as follows.

1. Goods from Aſia, Africa, and America, may not be imported, except in Britiſh-ſhips duly navigated, or ſhips belonging to the Britiſh plantations; and they can only be imported from the place of their production or manufacture, or the port where they are uſually firſt ſhipped for tranſportation. Goods of the Spaniſh or Portugueſe plantations, imported from Spain and Portugal in Britiſh ſhips, bullion and ſome other inconſiderable articles are excepted.

The reſtriction on European goods is not univerſal, but extends to ſeveral of the bulkieſt articles. Ruſſian goods, maſts, timber, boards, ſalt, pitch, roſin, tar, hemp, flax, raiſins, figs, prunes, olives, oil, corn, ſugar, potaſhes, wine, and vinegar, may not be imported, except in ſhips belonging to Great Britain or Ireland, legally manned; nor Turkey goods and currants, except in ſhips Britiſh built; or in ſhips belonging to the country where theſe goods are produced or manufactured, or firſt ſhipped for exportation; and, if imported in foreign ſhips, they pay alien's duty.

In order to intitle a ſhip to the privileges of a Britiſh ſhip, it muſt be built in Britain, and belong entirely to Britiſh ſubjects; and the maſter, and three-fourths of the mariners, muſt be Britiſh ſubjects, except in caſe of death, or unavoidable accidents. In time of war, the proportion of Britiſh mariners required is generally confined to one-fourth; and the ſame proportion only is required in the Greenland fiſhery.

No goods may be imported into, or exported from, the plantations in Aſia, Africa, or America, except in ſhips built in Britain, Ireland, or the plantations, or prize-ſhips, manned by Britiſh ſubjects, duly regiſtered, and legally navigated.

The following goods, enumerated in the act of navigation and ſubſequent acts, may not be exported from the plantations, except to ſome other plantation or to Britain: Tobacco, cotton-wool, indigo, ginger, fuſtic, and other dying wood, molaſſes, hemp, copper-ore, beaver-ſkins and other furs, pitch, tar, turpentine, maſts, yards, and boltſprits, coffee, pymento, cocoa-nuts, whale-fins, raw ſilk, pot and pearl aſhes, Rice and ſugar were formerly comprehended in this liſt, but their exportation is now permitted under certain reſtrictions.

Iron may not be imported to Europe, except to Ireland; and none of the non-enumerated may be imported to any country north of Cape Finiſterre, except the Bay of Biſcay and Ireland.

2. For the more effectual prevention of ſmuggling, no goods may be imported in veſſels belonging to Britiſh ſubjects and no wine, in any veſſel whatever, unleſs the maſter have a manifeſt on board, containing the name, meaſure, and built of the ſhip, the place to which it belongs, and a diſtinct enumeration of the goods on board, and places where they were laden. If the ſhip be cleared from any place under his Majeſty's dominions the manifeſt muſt be attended by the chief officer of the cuſtoms, or chief magiſtrate, who is required to tranſmit a copy thereof to the place of deſtination. Ship-maſters muſt deliver copies of this manifeſt to the firſt cuſtom-houſe officer who goes on board within four leagues of the ſhore, and alſo to the firſt who goes on board within the limits of any port, and muſt deliver the original manifeſt to the cuſtom-houſe at their arrival, and make report of their cargo upon oath. If the report diſagree with the manifeſt, or either diſagree with the cargo on board, the ſhip-maſter is liable in the penalty of L. 200. The proprietors of the goods muſt enter them, and pay the duties within 20, days; otherwiſe they may be carried to the cuſtom-houſe, and ſold by auction, if not relieved within ſix months; and the overplus of the value, after paying duty and charges, paid to the proprietors.

3 The importation of cattle, beef, mutton, and pork, except from Ireland, woollen cloths, malt, and various articles of hardware, cutlery, and earthen ware, are prohibited: Alſo the following goods from Germany and the Netherlands; olive oil, pitch, tar, potaſhes, roſin, ſalt, tobacco, wines, except Rheniſh wine, and Hungary wines from Hamburgh.

4. The importation of various other goods is reſtricted by particular regulations reſpecting the time and place of importation, the packages, the burden of the ſhip, the requiſition of a licence, and other circumſtances.

To guard more effectually againſt clandeſtine trade, the importation of ſome articles is only permitted in ſhips of a certain burden, whoſe operations are not eaſily concealed. Spirits muſt be imported in ſhips of

100 tons or upwards, except rum, and ſpirits of Britiſh plantations, which are only reſtricted to 70 tons; wine, 60 tons; tea, tobacco, and ſnuff, 50 tons; ſalt, 40 tons. Wine, ſpirits, and tobacco are alſo reſtricted in reſpect of the packages in which they may be imported.

5. Diamonds and precious ſtones, flax, flax-ſeed, linen-rags, beaver-wool, wool for clothiers, linen-yarn unbleached, and moſt drugs uſed in dyeing, may be imported duty free.

6. All goods imported are liable to duties, except ſuch as are expreſsly exempted. The revenue of cuſtoms is of great antiquity in Britain, but was new-modelled at the reſtoration of Charles II. A ſubſidy of tonnage on wines, and of poundage, or 1 s. per pound value of other goods, was granted during the king's life, and, after ſeveral prolongations, rendered perpetual. A book of rates was compoſed for aſcertaining theſe values; and articles not rated paid duty according to the value, as affirmed upon oath by the importer. If the goods be valued too low by the importer, the cuſtom-houſe officer may ſeize them, upon paying to the proprietor the value he ſwore to, and 10 per cent. for profit; ſuch goods to be ſold, and the overplus paid into the cuſtoms. Various additional duties have been impoſed; ſome on all goods, ſome on particular kinds; ſome according to the rates, ſome unconnected with the rates; ſome with an allowance of certain abatements, ſome without any allowance; the greater part to be paid down in ready money, and a few for which ſecurity may be granted; often with variations, according to the ſhip's place and circumſtances of importation. The number of branches amounted to upwards of 50; and ſometimes more than 10 were chargeable on the ſame articles. By this means, the revenue of the cuſtoms has become a ſubject of much intricacy. The inconveniences which this gave riſe to are now removed by the conſolidation act; which appoints one fixed duty for each article free from fractions, inſtead of the various branches to which they were formerly ſubject.

7. Goods of moſt kinds may be exported duty free when regularly entered; and thoſe that have paid duty on importation are generally intitled to drawback of part, ſometimes of the whole, when re-exported within three years, upon certificate that the duties were paid on importation, and oath of their identity. In ſome caſes, a bounty is given on manufactured goods, when the materials from which they are manufactured have paid duty on importation; and manufactures ſubject to exciſe, have generally the whole or part of the exciſe duties returned.

8. The following goods are prohibited to be exported; white-aſhes, horns, unwrought hides of black-cattle, tallow, coin, braſs, copper, engines for knitting ſtockings, tools for cotton, linen, woollen, ſilk, iron, and ſteel manufactures; wool, woolfells, woollen yarn, fullers earth, fulling clay, and tobacco pipe-clay.

9. The object of the laws reſpecting the corn-trade is to encourage agriculture, by not only permitting the free exportation, but rewarding it with a bounty when the prices are low, and checking the importation by a heavy duty; and, to prevent ſcarcity, by prohibiting the exportation when the prices are high, and permitting importation at an eaſy duty. Various temporary laws have been enacted for theſe purpoſes, and ſometimes other expedients employed in times of ſcarcity, ſuch as prohibiting the diſtillery from corn, and manufacture of ſtarch: And by a permanent law 1773, the low duties and bounties are regulated as under:

	Low duty.		Bounties	
Wheat at or above	48 s. per qr	6 d.	under 44 s	5 s.
Rye, -	32 s.	3 d.	28 s.	3 s.
Peaſe and beans,	32 s.	3 d.	28 s.	no bounty.
Oats, -	16 s.	2 d.	14 s.	2 s.
Barley, -	24 s.	2 d.	22 s.	2. s 6 d.

The duties, when the prices are lower than in the firſt column, amount to a prohibition. When the prices are higher than in the column prefixed to the bounty, no exportation is permitted. When oats are under the bounty price, oat-meal is intitled to a bounty of 2 s. 6 d. per quarter.

10. Bounties are allowed on the exportation of refined ſugar, ſail-cloth, linen under limited prices, ſilk ſtuffs of Britiſh manufacture, cordage, ſpirits when barley is under 24 s. beef, pork, and the following kinds of fiſh, ſalmon, herrings, pilchards, cod, ling, flake, and ſprats.

Various other bounties are allowed for the encouragement of the Britiſh fiſheries. Ships from 150 to 300 tons employed in the Greenland whale-fiſhery, and conforming to the regulations preſcribed, are allowed 30 s. per ton. Veſſels employed in the herring-fiſhery receive 20 s. per ton, beſides a bounty on the herrings caught and cured, amounting in ſome caſes to 4 s. per barrel. Other bounties are granted to a limited number of the moſt ſucceſsful veſſels employed in the herring and Newfoundland fiſheries, and in the ſouthern whale-fiſhery.

It is unneceſſary and impracticable, in this place, to enter into a full detail of the Britiſh cuſtom-houſe laws. Indeed, all that can be admitted into a work of this kind, muſt convey but very imperfect information; and even that little becomes uſeleſs in a ſhort time from alterations in the law. We have therefore only marked the general outlines in the preſent article; which, however, will be ſufficient to enable the reader to judge of the principles upon which the Britiſh legiſlature has acted. How far the means employed have contributed to the ends propoſed, and how far the ends themſelves are always wiſe; or whether a trade encumbered by fewer reſtrictions would not prove more extenſive and beneficial; has been a ſubject of much diſcuſſion: and of late a more liberal ſyſtem has been embraced in the commercial treaty with France, and in other regulations.

Mercantile Laws. The laws relating to commercial and maritime affairs approach nearer to uniformity through the different countries of Europe, than thoſe on other ſubjects. Some of the fundamental regulations have been taken from the Roman law; others have been ſuggeſted by experience, during the progreſs of commerce; and the whole have been gradually reduced to a ſyſtem, and adopted into the laws of trading nations, but with ſome local varieties and exceptions.

The Britiſh legiſlature has enacted many ſtatutes reſpecting commerce; yet the greater part of their mercantile law is to be collected from the deciſions of their courts of juſtice, founded on the cuſtom of merchants. A proof of ſuch cuſtom, where no direct ſtatute interferes, determines the controverſy, and becomes a precedent for regulating like caſes afterwards. The exiſtence of a cuſtom not formerly recogniſed, is, in England, determined by a jury of merchants.

The moſt common mercantile contracts are thoſe between buyer and ſeller; between factor and employer; between partners; between the owners, maſters, mariners, and freighters of ſhips; between inſurers and the owners of the ſubject inſured; and between the parties concerned in tranſacting bills of exchange. See FACTORAGE, SALE, PARTNERSHIP, INSURANCE, BILL, &c. and the next article.

Maritime Laws. The moſt ancient ſyſtem of maritime laws is that of Rhodes, which was in force during the time of the Grecian empire, and afterwards incorporated into the Roman law. Although, in ſome parts, not applicable to the preſent ſtate of trade, and, in others, now hardly intelligible, it contains the groundwork of the moſt equitable and beneficial rules obſerved in modern commerce. A like ſyſtem was ſet forth by Richard I. of England, called the *Statutes of Oleron*; and another, by the town of Wiſby, in the iſland of Gothland. From theſe ſyſtems, improved and enlarged in the courſe of time, their general maritime law is derived. The juriſdiction of matters purely maritime belongs, in England, to the court of admiralty, which proceeds on the civil law; but their proceedings are ſubject to the controul, and their deciſions to the review of the ſuperior courts.

We ſhall here conſider the obligations which ſubſiſt between the maſters or owners of ſhips, the freighters, and the furniſhers of proviſions or repairs.

1. *Maſters and Freighters.* A charter-party is a contract between the maſter and freighters, in which the ſhip and voyage is deſcribed, and the time and conditions of performing it are aſcertained.

The freight is moſt frequently determined for the whole voyage, without reſpect to time. Sometimes it depends on the time.

In the former caſe, it is either fixed at a certain ſum for the whole cargo; or ſo much *per* ton, barrel-bulk, or other weight or meaſure; or ſo much *per cent.* on the value of the cargo. This laſt is common on goods ſent to America; and the invoices are produced to aſcertain the value.

The burden of the ſhip is generally mentioned in the contract, in this manner *one hundred tons, or thereby*; and the number mentioned ought not to differ above 5 tons, at moſt, from the exact meaſure. If a certain ſum be agreed on for the freight of the ſhip, it muſt all be paid, although the ſhip, when meaſured, ſhould prove leſs, unleſs the burden be *warranted*. If the ſhip be freighted for *tranſporting* cattle, or ſlaves, at ſo much a head, and ſome of them die on the paſſage, freight is only due for ſuch as are delivered alive; but, if for *lading* them, it is due for all that were put on board.

When a whole ſhip is freighted, if the maſter ſuffers any other goods beſides thoſe of the freighter to be put on board, he is liable for damages.

It is common to mention the number of days that the ſhip ſhall continue at each port to load or unload. The expreſſion uſed is, *work weather days*; to ſignify, that Sundays, holidays, and days when the weather ſtops the work, are not reckoned. If the ſhip be detained longer, a daily allowance is often agreed on, in name of *demurrage*.

If the voyage be completed in terms of the agreement, without any misfortune, the maſter has a right to demand payment of the freight before he delivers the goods. But if the ſafe delivery be prevented by any fault or accident, the parties are liable, according to the following rules.

If the merchant do not load the ſhip within the time agreed on, the maſter may engage with another, and recover damages.

If the merchant load the ſhip, and recall it after it has ſet ſail, he muſt pay the whole freight; but if he unload it before it ſets ſail, he is liable for damages only.

If a merchant loads goods which it is not lawful to export, and the ſhip be prevented from proceeding on that account, he muſt pay the freight notwithſtanding.

If the ſhipmaſter be not ready to proceed on the voyage at the time agreed on, the merchant may load the whole, or part of the cargo, on board another ſhip, and recover damages; but chance, or notorious accident, by the marine law, releaſes the maſter from damages.

If an embargo be laid on the ſhip before it ſails, the charter-party is diſſolved, and the merchant pays the expence of loading and unloading; but if the embargo be only for a ſhort limited time, the voyage ſhall be performed when it expires, and neither party is liable for damages.

If the ſhipmaſter ſails to any other port than that agreed on, without neceſſity, he is liable for damages; if through neceſſity, he muſt ſail to the port agreed on, at his own expence.

If a ſhip be taken by the enemy, and retaken or ranſomed, the charter-party continues in force.

If the maſter transfer the goods from his own ſhip to another, without neceſſity, and they periſh, he is liable for the value; but if his own ſhip be in imminent danger, the goods may be put on board another ſhip at the riſk of the owner.

If a ſhip be freighted out and home, and a ſum agreed on for the whole voyage, nothing is due till it return; and the whole is loſt if the ſhip be loſt on the return.

If a certain ſum be ſpecified for the homeward voyage, it is due, although the factor abroad ſhould have no goods to ſend home.

In the caſe of a ſhip freighted to Madeira, Carolina, and home, a particular freight fixed for the homeward voyage, and an option reſerved for the factor at

Carolina to decline it, unleſs the ſhip arrived before 1ſt of March: the ſhipmaſter, foreſeeing he could not arrive there within that time, and might be diſappointed of a freight, did not go there at all. He was found liable in damages, as the obligation was abſolute on his part, and conditional only on the other.

If the goods be damaged without fault of the ſhip or maſter, the owner is not obliged to receive them and pay freight, but he muſt either receive the whole, or abandon the whole; he cannot chooſe thoſe that are in beſt order, and reject the others. If the goods be damaged through the inſufficiency of the ſhip, the maſter is liable for the ſame; but, if it be owing to ſtreſs of weather, he is not accountable. It is cuſtomary for ſhipmaſters, when they ſuſpect damage, to take a *proteſt againſt wind and weather* at their arrival. But as this is the declaration of a party, it does not bear credit, unleſs ſupported by collateral circumſtances.

If part of the goods be thrown over-board, or taken by the enemy, the part delivered pays freight.

The ſhipmaſter is accountable for all the goods received on board, by himſelf or mariners, unleſs they periſh by the act of GOD, or of the king's enemies.

Shipmaſters are not liable for leakage on liquors; nor accountable for the contents of packages, unleſs packed and delivered in their preſence.

Upon a principle of equity, that the labourer is worthy of his hire, differences ariſing with regard to freight, when the caſe is doubtful, ought rather to be determined in favour of the ſhipmaſter.

2. *Ship and Owners with Creditors.* When debts are contracted for proviſions or repairs to a ſhip, or ariſe from a failure in any of the abovementioned obligations, the ſhip and tackle, and the owners, are liable for the debt, as well as the maſter.

By the mercantile law, the owners are liable in all caſes, without limitation; but by ſtatute, they are not liable for embezzlement beyond their value of ſhip, tackle, and freight.

A ſhipmaſter may pledge his ſhip for neceſſary repairs during a voyage; and this hypothecation is implied by the maritime law when ſuch debts are contracted. This regulation is neceſſary, and is therefore adopted by all commercial nations; for, otherwiſe, the maſter might not find credit for neceſſary repairs, and the ſhip might be loſt. If repairs be made at different places, the laſt are preferable.

The relief againſt the ſhip is competent to the court of admiralty in England, only when repairs are furniſhed during the courſe of a voyage; for the neceſſity of the caſe extends no further. If a ſhip be repaired at home (*e. g.* upon the river Thames), the creditor is only intitled to relief at common law.

The creditor may ſue either the maſters or owners; but if he undertook the work on the ſpecial promiſe of the one, the other is not liable.

If the maſter buys proviſions on credit, the owners are liable for the debt, though they have given him money to pay them.

If a ſhip be mortgaged, and afterwards loſt at ſea, the owners muſt pay the debt; for the mortgage is only an additional ſecurity, though there be no expreſs words to that purpoſe in the covenant.

If a ſhip be taken by the enemy, and ranſomed, the owners are liable to pay the ranſom, though the ranſomer die in the hands of the captors.

3. *Owners of ſhip and cargo with each other.* There is a mutual obligation which ſubſiſts between all the owners of a ſhip and cargo. In time of danger, it is often neceſſary to incur a certain loſs of part for the greater ſecurity of the reſt; to cut a cable; to lighten the ſhip, by throwing part of the goods overboard; to run it aſhore; or the like: and as it is unreaſonable that the owners of the thing expoſed for the common ſafety ſhould bear the whole loſs, it is defrayed by an equal contribution among the proprietors of the ſhip, cargo, and freight. This is the famous *Lex Rhodia de jactu*, and is now called a *general average*.

The cuſtom of valuing goods which contribute to a general average, is not uniform in all places. They are generally valued at the price they yield at the port of deſtination, charges deducted; and goods thrown overboard are valued at the price they would have yielded there. Sailors wages, cloaths and money belonging to paſſengers, and goods belonging to the king, pay no general average; but proprietors of gold and ſilver, in caſe of goods being thrown overboard, contribute to the full extent of their intereſt.

The following particulars are charged as general average: Damage ſuſtained in an engagement with the enemy; attendance on the wounded, and rewards given for ſervice in time of danger, or gratuities to the widows or children of the ſlain; ranſom; goods given to the enemy in the nature of ranſom; charges of bringing the ſhip to a place of ſafety when in danger from the enemy, or waiting for convoy; charges of quarantine; goods thrown overboard; maſts or rigging cut; holds cut in the ſhip to clear it of water; pilotage, when a lake is ſprung; damage, when voluntarily run aground, and expence of bringing it afloat; goods, loſt by being put in a lighter; the long boat loſt in lightening the ſhip in time of danger; hire of cables and anchors; charges of laying in ballaſt, victualling, and guarding the ſhip when detained; charges at law, in reclaiming the ſhip and cargo; intereſt and commiſſion on all theſe deburſements.

Though goods put on board a lighter, and loſt, are charged as a general average; yet if the lighter be ſaved, and the ſhip with the reſt of the goods be loſt, the goods in the lighter belong to their reſpective proprietors, without being liable to any contribution.

If part of the goods be plundered by a pirate, the proprietor or ſhipmaſter is not intitled to any contribution.

The eſſential circnmſtances that conſtitute a general average are theſe; the loſs muſt be the effect of a voluntary action; and the object of that action the common ſafety of the whole. Quarantine, which is allowed, ſeems not to fall within this deſcription.

4. *Quarantine.* See QUARANTINE.
5. *Wrecks.* See WRECK.
6. *Impreſs.* See IMPRESSING.
7. *Inſurance.* See INSURANCE.
Game-Laws. See the article GAME.

Sir William Blackſtone, treating of the alterations in Britiſh laws, and mentioning franchiſes granted to chaſe and free warren, as well to preſerve the breed of animals, as to indulge the ſubject, adds, "From a ſimilar principle to which, though the foreſts laws are now mitigated, and by degrees grown entirely obſolete; yet from this root has ſprung a *baſtard-ſlip*, known by the name of the *game law*, now arrived to and wantoning in its higheſt vigour: both founded upon the ſame unreaſonable notion of permanent property in wild creatures; and both productive of the ſame tyranny to the commons; but with this difference, that the foreſt-laws eſtabliſhed only one mighty hunter throughout the land; *the game laws have raiſed a little* Nimrod *in every manor*. And in one reſpect the ancient law was much leſs unreaſonable than the modern; for the king's grantee of a chaſe or free-warren, might kill game in every part of his franchiſe; but now, though a freeholder of leſs than L. 100 a year *is forbidden to kill partridge upon his own eſtate*, yet nobody elſe (not even the lord of the manor, unleſs he hath a grant of free warren) can do it without *committing a treſpaſs* and *ſubjecting himſelf to an action*.

Under the article GAME, the deſtroying ſuch beaſts and fowls as are ranked under that denomination, was obſerved (upon the old principles of the foreſt-law) to be a treſpaſs and offence in all perſons alike, who have not authority from the crown to kill game (which is royal property) by the grant of either a free warren, or at leaſt a manor of their own. But the laws called the *game-laws* have alſo inflicted additional puniſhments (chiefly pecuniary) on perſons guilty of this general offence, unleſs they be people of ſuch rank or fortune as is therein particularly ſpecified. All perſons, therefore, of what property or diſtinction ſoever, that kill game out of their own territories, or even upon their own eſtates, without the king's licence expreſſed by the grant of a franchiſe, are guilty of the firſt original offence of encroaching on the royal prerogative. And thoſe indigent perſons who do ſo, without having ſuch rank or fortune as is generally called a *qualification*, are guilty, not only of the original offence, but of the aggravations alſo created by the ſtatutes for preſerving the game: which aggravations are ſo ſeverely puniſhed, and thoſe puniſhments ſo implacably inflicted, that the offence againſt the king is ſeldom thought of, provided the miſerable delinquent can make his peace with the lord of the manor. The only rational footing upon which this offence, thus aggravated, can be conſidered as a crime, is, that in low and indigent perſons it promotes idleneſs, and takes them away from their proper employments and callings: which is an offence againſt the public police and economy of the commonwealth.

The ſtatutes for preſerving the game are many and various, and not a little obſcure and intricate; it being remarked, that in one ſtatute only, 5 Ann. c. 14. there is falſe grammar in no fewer than ſix places, beſides other miſtakes: the occaſion of which, or what denomination of perſons were probably the penners of theſe ſtatutes, it is unneceſſary here to inquire. It may be in general ſufficient to obſerve, that the *qualifications* for killing game, as they are uſually called, or more properly the exemptions from the penalties inflicted by the ſtatute law, are, 1. The having a freehold eſtate of L. 100 *per annum*; there being fifty times the property required to enable a man to kill a partridge, as to vote for a knight of the ſhire. 2. A leaſehold for 99 years of L. 150 *per annum*. 3. Being the ſon and heir apparent of an eſquire (a very looſe and vague deſcription) or perſon of ſuperior degree. 4. Being the owner or keeper of a foreſt, park, chaſe, or warren. For unqualified perſons tranſgreſſing theſe laws, by killing game, keeping engines for that purpoſe, or even having game in their cuſtody, or for perſons (however qualified) that kill game, or have it in poſſeſſion, at unſeaſonable times of the year, or unſeaſonable hours of the day or night, on Sundays or on Chriſtmas day, there are various penalties aſſigned, corporal and pecuniary, by different ſtatutes (after-mentioned), on any of which, but only on one at a time, the juſtices may convict in a ſummary way, or (in moſt of them) proſecutions may be carried on at the aſſizes. And, laſtly, by ſtatute 28 Geo. II. c. 12. no perſon, however qualified to kill, may make merchandiſe of this valuable privilege, by ſelling or expoſing to ſale any game, on pain of like forfeiture as if he had no qualification.

The ſtatutes above referred to are as follow. No perſon ſhall take pheaſants or partridges with engines in another man's ground, without licence, on pain of 10 l. ſtat. 11 Hen. VII. c. 13. If any perſon ſhall take or kill any pheaſants or partridges with any net in the night-time, they ſhall forfeit 20 s. for every pheaſant, and 10 s. for every partridge taken; and hunting with ſpaniels in ſtanding corn, incurs a forfeiture of 40 s. 23 Eliz. c. 10. Thoſe who kill any pheaſant, partridge, duck, heron, hare, or other game, are liable to a forfeiture of 20s. for every fowl and hare; and ſelling, or buying to ſell again, any hare, pheaſant, &c. the forfeiture is 10 s. for each hare, &c. 1 Jac. I. c. 17. Alſo pheaſants or partridges are not to be taken between the firſt of July and the laſt of Auguſt, on pain of impriſonment for a month, unleſs the offenders pay 20 s. for every pheaſant, &c. killed: and conſtables, having a juſtice of peace's warrant, may ſearch for game and nets, in the poſſeſſion of perſons not qualified by law to kill game or to keep ſuch nets, 7 Jac. I. c. 11. Conſtables, by a warrant of a juſtice of peace, are to ſearch houſes of ſuſpected perſons for game: and if any game be found upon them, and they do not give a good account how they came by the ſame, they ſhall forfeit for every hare, pheaſant, or partridge, not under 5 s. nor exceeding 20 s. And inferior tradeſmen hunting, &c. are ſubject to the penalties of the act, and may likewiſe be ſued for treſpaſs. If officers of the army or ſoldiers kill game without leave, they forfeit 5 l. an officer, and 10 s. a ſoldier; 4 and 5 W. and M. c. 23. Higglers, chapmen, carriers, inn-keepers, victuallers, &c. having in their cuſtody hare, pheaſant, partridge, heath-game, &c. (except ſent by ſome perſon qualified to kill game), ſhall forfeit for every hare and fowl 5 l. to be levied by diſtreſs and ſale of their goods, being proved by one witneſs, before a juſtice; and for want of diſtreſs ſhall be committed to the houſe of correction for three months: one moiety of the forfeiture to the informer, and the other to the poor. And ſelling game, or offering the ſame to ſale, incurs the like penalty; wherein hare and other game found in a ſhop, &c. is adjudged an expoſing to ſale: killing hares in the night is liable to the ſame penalties: and if any perſons ſhall drive wild-fowls with nets, between the firſt day of July and the firſt of September, they ſhall forfeit 5 s. for every fowl; 5 Ann. c. 14. 9 Ann. c. 25. If any unqualified perſon ſhall keep a gun, he ſhall forfeit 10 l.; and perſons being qualified may take guns from thoſe that are not, and break them; 21 & 22 Car. II. c. 25. and 33 H. VIII. c. 6. One juſtice of peace, upon examination and proof of the offence, may commit the offender till he hath paid the forfeiture of 10 l. And perſons, not qualified by law, keeping dogs, nets, or other engines to kill game, being convicted thereof before a juſtice of peace, ſhall forfeit 5 l. or be ſent to the houſe of correction for three months; and the dogs, game, &c. ſhall be taken from them, by the ſtatute 5 Ann. If a perſon hunt upon the ground of another, ſuch other perſon cannot juſtify killing of his dogs, as appears by 2 Roll. Abr. 567. But it was otherwiſe adjudged Mich. 33 Car. II. in C. B. 2 Cro. 44. and ſee 3. Lev. xxviii. In actions of debt, *qui tam*, &c. by a common informer on the ſtatute 5 Ann. for 15l. wherein the plaintiff declared on two ſeveral counts, one for 10l. for killing two partridges, the other for 5l. for keeping an engine to deſtroy the game, not being qualified, &c. the plaintiff had a verdict for 5 l. only: this action was brought by virtue of the ſtat. 8 Geo. I. See ſtat. 9 Geo. I. c. 22. See likewiſe 24 Geo. II. c. 34. for the better preſervation of the game in Scotland. By the ſtat. 26 Geo. II. c. 2. all ſuits and actions brought by virtue of ſtat. 8 Geo. I. c.—— for the recovery of any pecuniary penalty, or ſum of money, for offences commited againſt any law for the better preſervation of the game, ſhall be brought before the end of the ſecond term after the offence committed.

By 28 Geo. II. c. 12. perſons ſelling, or expoſing to ſale, any game, are liable to the penalties inflicted by 5 Ann. c. 14. on higglers, &c. offering game to ſale: and game found in the houſe or poſſeſſion of a poulterer, ſaleſman, fiſhmonger, cook, or paſtry-cook, is deemed expoſing thereof to ſale.

By 2 Geo. III. c. 19. after the 1ſt June 1762, no perſon may take, kill, buy or ſell, or have in his cuſtody, any patridge, between 12th February and 1ſt September, or pheaſant between 1ſt February and 1ſt October, or heath-fowl between 1ſt January and 20th Auguſt, or grouſe between 1ſt December and 25th July, in any year; pheaſants taken in their proper ſeaſon, and kept in mews, or breeding places, excepted: and perſons offending in any of the caſes aforeſaid, forfeit 5 l. per bird, to the proſecutor, to be recovered, with full coſts, in any of the courts at Weſtminſter. By this act, likewiſe, the whole of the pecuniary penalties under the 8 Geo. I. c. 19. may be ſued for, and recovered to the ſole uſe of the proſecutor, with double coſts; and no part thereof to go to the poor of the pariſh.

By 5 George III. c. 14. perſons convicted of entering warrens in the night-time, and taking or killing coneys there, or aiding or aſſiſting therein, may be puniſhed by tranſportation, or by whipping, fine, or impriſonment. Perſons convicted on this act, not liable to be convicted under any former act. This act does not extend to the deſtroying coneys in the day-time, on the ſea and river-banks in the county of Lincoln, &c. No ſatisfaction to be made for damages occaſioned by entry, unleſs they exceed 1 s. It may not be improper to mention an act lately made, and not yet repealed, viz. 10 Geo III. c. 19. for preſervation of the game, which ſhows the importance of the object. It is thereby enacted, That if any perſon kill any hare, &c. between ſun-ſetting and ſun-riſing, or uſe any gun, &c. for deſtroying game, ſhall for the firſt offence be impriſoned for any time not exceeding ſix nor leſs than three months: if guilty of a ſecond offence, after conviction of a firſt, to be impriſoned for any time not exceeding 12 months nor leſs than ſix; and ſhall alſo, within three days after the time of his commitment, either for the firſt or for any other offence, be once publickly whipped.

By 25 George III. c. 50. and 31 George III. c. 21. every perſon in Great Britain (the royal family excepted), who ſhall, after July 1ſt 1785, uſe any dog, gun, net, or other engine, for the taking or deſtruction of game (not as acting as gamekeeper), ſhall deliver in a paper or account in writing, containing his name and place of abode, to the clerk of the peace or his deputy, and annually take out a certificate thereof; and every ſuch certificate ſhall be charged with a ſtamp-duty of L. 2, 2 s. (and an additional L. 1, 1 s. by 31 Geo. III. c. 21.) making in the whole L. 3, 3 s.—Every deputation of a gamekeeper ſhall be regiſtered with the clerk of the peace, and ſuch gamekeeper ſhall annually take out a certificate thereof; which certificate ſhall be charged with a ſtamp duty of 10s. 6d. (and an additional 10 s. 6 d. by 31 Geo. III. c. 21.), making in the whole L. 1, 1 s.—The duties to be under the management of the commiſſioners of the ſtamp-office.

From and after the ſaid 1ſt of July 1785, the clerk of the peace ſhall annually deliver to perſons requiring the ſame, duly ſtamped, a certificate or licence according to the form therein mentioned, for which he ſhall be intitled to demand 1 s. for his trouble; and on refuſal or neglect to deliver the ſame, forfeit L. 20.—Every certificate to bear date the day when iſſued, and to continue in force until the 1ſt day of July then following, on penalty of 20 l.

After the firſt day of July 1785, any perſon that ſhall uſe any greyhound, hound, pointer, ſetting-dog, ſpaniel, or other dog, or any gun, net, or engine, for taking or killing of game, without a certificate, is liable to the penalty of 20 l. And if any gamekeeper ſhall, for the ſpace of 20 days after the ſaid 1ſt day of July, or if any gamekeeper thereafter to be appointed ſhall, for the ſpace of 20 days next after ſuch appointment, neglect or refuſe to regiſter his deputation and take out a certificate thereof, he is liable to the penalty of 20 l.

The clerks of the peace are to tranſmit to the ſtamp-office in London alphabetical liſts of the certificates granted in every year before the 1ſt day of Auguſt, under penalty of 20 l. Theſe liſts are to be kept at the ſtamp-office in London, and there to be inſpected on payment of 1 s.: And the commiſſioners of the ſtamp duties are, once or oftener in every year, as ſoon as ſuch liſts are tranſmitted to them, to cauſe the ſame to be publiſhed in the newſpapers circulating in each county, or ſuch public paper as they ſhall think moſt proper.

If any gamekeeper, who ſhall have regiſtered his deputation, and taken out a certificate thereof, ſhall be changed, and a new gamekeeper appointed in his ſtead, the firſt certificate is declared null and void, and the perſon acting under the ſame after notice, is liable to the penalty of 20 l. And any perſon in purſuit of game, who ſhall refuſe to produce his certificate, or to tell his name and place of abode, or ſhall give in any falſe or fictitious name or place of abode to any perſon requiring the ſame, who ſhall have obtained a certificate, is liable to the penalty of 50 l.

The certificates are not to authoriſe perſons to kill game at any time prohibited by law, nor to give any perſon any right to kill game, unleſs ſuch perſon ſhall be qualified ſo to do by the laws now in being, but ſhall be liable to the ſame penalties as if this act had not paſſed. [So that though by this act qualified and unqualified perſons are equally included, yet having a certificate does not give an unqualified perſon a right to kill game: the point of right ſtill ſtands upon the former acts of parliament; and any unqualified perſon killing game without a certificate, is not only liable to the penalty inflicted by this act, but alſo to all the former penalties relating to the killing of game, &c.]

Witneſſes refuſing to appear on juſtices ſummons, or appearing and refuſing to give evidence, forfeit 10 l. The certificates obtained under deputations, not to be given in evidence for killing of game by a gamekeeper out of the manor, in reſpect of which ſuch deputation or appointment was given and made. Perſons counterfeiting ſtamps to ſuffer death as felons.

Penalties exceeding 20 l. are to be recovered in any of his majeſty's courts of record at Weſtminſter; and penalties not exceeding 20 l. are recoverable before two juſtices, and may be levied by diſtreſs. The whole of the penalties go to the informer.

Military Law. See MILITARY and MARINE.

LAW (John,), the famous projector, was the eldeſt ſon of a goldſmith burgeſs in Edinburgh, by Elizabeth Campbell heireſs of Laurieſton near that city; and was born about the year 1681. He was bred to no buſineſs; but poſſeſſed great abilities, and a very fertile invention. He had the addreſs, when but a very young man, to recommend himſelf to the king's miniſters in Scotland to arrange and fit the revenue accounts, which were in great diſorder at the time of ſettling the equivalent before the union of the kingdoms. The attention of the Scottiſh parliament being alſo turned to the contrivance of ſome means for ſupplying the kingdom with money, and facilitating the circulation of ſpecie, for want of which the induſtry of Scotland languiſhed; he propoſed to them, for theſe purpoſes, the eſtabliſhment of a bank of a particular kind, which he ſeems to have imagined might iſſue paper to the amount of the whole value of all the lands in the country: but this ſcheme the parliament by no means thought it expedient to adopt.

His father dying about the year 1704, Law ſucceeded to the ſmall eſtate of Laurieſton; but the rents being inſufficient for his expences, he had recourſe to gaming. He was tall and graceful in his perſon, and much addicted to gallantry and finery; and giving a kind of ton at Edinburgh, he went commonly by the name of *Beau Law*. He was forced to fly his country, however, in the midſt of his career, in conſequence of having fought a duel and killed his antagoniſt; and in ſome of the French literary gazettes it is ſaid that he run off with a married lady. In his flight from juſtice he viſited Italy; and was baniſhed from Venice and Genoa, becauſe he contrived to drain the youth of theſe cities of their money, by his ſuperiority in calculation, that is, by being a cheat and a ſharper. He wandered over all Italy, living on the event of the moſt ſingular bets and wagers, which ſeemed to be advantageous to thoſe who were curious after novelty; but which were always of the moſt certain ſucceſs with regard to him. He arrived at Turin, and propoſed his ſyſtem to the duke of Savoy, who ſaw at once, that, by deceiving his ſubjects, he would in a ſhort time have the whole money of the kingdom in his poſſeſſion: but that ſagacious prince aſking him how his ſubjects were to pay their taxes when all their money ſhould be gone, Law was diſconcerted, not expecting ſuch a queſtion.

Having been baniſhed from Italy, and thus repulſed at Turin, Law proceeded to Paris, where he was already known as a projector. In the lifetime of Louis XIV. he had tranſmitted his ſchemes to Deſmareſt and to Chamillard, who had rejected them as dangerous innovations. He now propoſed them to the Duc d'Orleans, who deſired Noailles to examine them, to be as favourable in his report as poſſible, and to remark ſuch of them as were practicable. Noailles called in the aſſiſtance of ſeveral merchants and bankers who were averſe to the ſyſtem. Law then propoſed the eſtabliſhment of a bank, compoſed of a company, with a ſtock of ſix millions. Such an inſtitution promiſed to be very advantageous to commerce. An arret of the 2d March 1716 eſtabliſhed this bank, by authority, in favour of Law and his aſſociates; two hundred thouſand ſhares were inſtituted of one thouſand livres each; and Law depoſited in it to the value of two or three thouſand crowns which he had accumulated in Italy, by gaming or otherwiſe. This eſtabliſhment very much diſpleaſed the bankers, becauſe at the beginning buſineſs was tranſacted here at a very ſmall premium, which the old financiers had charged very highly. Many people had at firſt little confidence in this bank; but when it was found that the payments were made with quickneſs and punctuality, they began to prefer its notes to ready money. In conſequence of this, ſhares roſe to more than 20 times their original value; and in 1719 their valuation was more than 80 times the amount of all the current ſpecie in the kingdom. But the following year, this great fabric of falſe credit fell to the ground, and almoſt overthrew the French government, ruining ſome thouſands of families; and it is remarkable, that the ſame deſperate game was played by the South Sea directors in England, in the ſame fatal year, 1720. Law being exiled as ſoon as the credit of his projects began to fail, retired to Venice, where he died in 1729.

The principles upon which Law's original ſcheme was founded, are explained by himſelf in *A Diſcourſe concerning Money and Trade*, which he publiſhed in Scotland where (as we have ſeen) he firſt propoſed it. "The ſplendid but viſionary ideas which are ſet forth in that and ſome other works upon the ſame principles (Dr Adam Smith obſerves), ſtill continue to make an impreſſion upon many people; and have perhaps in part contributed to that exceſs of banking which has of late been complained of both in Scotland and in other places."

LAW (Edmund), D. D. biſhop of Carliſle, was born in the pariſh of Cartmel in Lancaſhire, in the year 1703. His father, who was a clergyman, held a ſmall chapel in that neighbourhood; but the family had been ſituated at Aſkham, in the county of Weſtmoreland. He was educated for ſome time at Cartmel ſchool, afterwards at the free grammar-ſchool at Kendal; from which he went, very well inſtructed in the learning of grammar ſchools, to St John's college in Cambridge.

Soon after taking his firſt degree, he was elected fellow of Chriſt-college in that univerſity. During his reſidence in which college, he became known to the public by a Tranſlation of Archbiſhop King's Eſſay upon the Origin of Evil, with copious notes; in which many metaphyſical ſubjects, curious and intereſting in their own nature, are treated of with great ingenuity, learning, and novelty. To this work was prefixed, under the name of a Preliminary Diſſertation, a very valuable piece, written by the reverend Mr Gay of Sidney college. Our biſhop always ſpoke of this gentleman in terms of the greateſt reſpect. In the Bible and in the writings of Mr Locke, no man, he uſed to ſay, was ſo well verſed.

He alſo, whilſt at Chriſt-college, undertook and went through a very laborious part in preparing for the preſs an edition of Stephens's Theſaurus. His acquaintance, during this his firſt reſidence in the univerſity, was principally with Dr Waterland, the learned maſter of Magdalen college; Dr Jortin, a name known to every ſcholar; and Dr Taylor, the editor of Demoſthenes.

In the year 1737 he was preſented by the univerſity to the living of Grayſtock in the county of Cumberland, a rectory of about 300 l. a-year. The advowſon of this benefice belonged to the family of Howards of Grayſtock, but devolved to the univerſity, for this turn, by virtue of an act of parliament, which transfers to theſe two bodies the nomination to ſuch benefices as appertain, at the time of the vacancy, to the patronage of a Roman catholic. The right, however, of the univerſity was conteſted; and it was not till after a law-ſuit of two years continuance that Mr Law was ſettled in his living. Soon after this, he married Mary the daughter of John Chriſtian, Eſq; of Unerigg, in the county of Cumberland; a lady whoſe character is remembered with tenderneſs and eſteem by all who knew her.

In 1743, he was promoted by Sir George Fleming, biſhop of Carliſle, to the archdeaconry of that dioceſe; and in 1746 went from Grayſtock to reſide at Salkeld, a pleaſant village upon the banks of the river Eden, the rectory of which is annexed to the archdeaconry. Mr Law was not one of thoſe who loſe and forget themſelves in the country. During his reſidence at Salkeld, he publiſhed Conſiderations on the Theory of Religion: to which were ſubjoined, Reflections on the Life and character of Chriſt; and an Appendix concerning the uſe of the words Soul and Spirit in holy ſcripture, and the ſtate of the dead there deſcribed.

Dr Keene held at this time, with the biſhopric of Cheſter, the maſterſhip of Peterhouſe in Cambridge. Deſiring to leave the univerſity, he procured Dr Law to be elected to ſucceed him in that ſtation. This took place in the year 1756; in which year Dr Law reſigned his archdeacony in favour of Mr Eyre, a brother-in-law of Dr Keene. Two years before this, he had proceeded to his degree of Doctor in Divinity; in his public exerciſe for which, he defended the doctrine of what is uſually called the "ſleep of the ſoul."

About the year 1760, he was appointed head librarian of the univerſity; a ſituation which, as it procured an eaſy and quick acceſs to books, was peculiarly agreeable to his taſte and habits. Some time after this, he was alſo appointed caſuiſtical profeſſor. In the year 1762, he ſuffered an irreparable loſs by the death of his lady; a loſs in itſelf every way afflicting, and rendered more ſo by the ſituation of his family, which then conſiſted of eleven children, many of them very young. Some years afterwards, he received ſeveral preferments, which were rather honourable expreſſions of regard from his friends than of much advantage to his fortune.

By Dr Cornwallis, then biſhop of Litchfield, afterwards archbiſhop of Canterbury, who had been his pupil at Chriſt-college, he was appointed to the archdeaconry of Staffordſhire, and to a prebend in the church of Litchfield. By his old acquaintance Dr Green, biſhop of Lincoln, he was made a prebendary of that church. But in the year 1767, by the intervention of the duke of Newcaſtle, to whoſe intereſt, in the memorable conteſt for the high-ſtewardſhip of the univerſity, he had adhered in oppoſition to ſome temptations, he obtained a ſtall in the church of Durham. The year after this, the duke of Grafton, who had a ſhort time before been elected chancellor of the univerſity, recommended the maſter of Peterhouſe to his majeſty for the biſhopric of Carliſle. This recommendation was made not only without ſolicitation on his part or that of his friends, but without his knowledge, until the duke's intention in his favour was ſignified to him by the archbiſhop.

In or about the year 1777, our biſhop gave to the public a handſome edition, in three volumes quarto, of the Works of Mr Locke, with a Life of the Author, and a Preface. M. Locke's writings and character he held in the higheſt eſteem, and ſeems to have drawn from them many of his own principles. He was a diſciple of that ſchool. About the ſame time he publiſhed a tract, which engaged ſome attention in the controverſy concerning ſubſcription; and he publiſhed new editions of his two principal works, with conſiderable additions, and ſome alterations.

Dr Law held the ſee of Carliſle almoſt 19 years; during which time he twice only omitted ſpending the ſummer months in his dioceſe at the biſhop's reſidence at Roſe Caſtle; a ſituation with which he was much pleaſed not only on account of the natural beauty of the place, but becauſe it reſtored him to the country, in which he had ſpent the beſt part of his life. In the year 1787 he paid this viſit in a ſtate of great weakneſs and exhauſtion; and died at Roſe about a month after his arrival there, on the 14th day of Auguſt, and in the 84th year of his age.

The life of the biſhop of Carliſle was a life of inceſſant reading and thought, almoſt entirely directed to metaphyſical and religious inquiries. Beſides the works already mentioned, he publiſhed, in 1734 or 1735, a very ingenious *Inquiry into the Ideas of Space, Time,* &c. in which he combats the opinions of Dr Clarke and his adherents on theſe ſubjects: but the tenet by which his name and writings are principally diſtinguiſhed, is "that Jeſus Chriſt, at his ſecond coming, will, by an act of his power, reſtore to life and conſciouſneſs the dead of the human ſpecies, who by their own nature, and without this interpoſition, would remain in the ſtate of inſenſibility to which the death brought upon mankind by the ſin of Adam had reduced them." He interpreted literally that ſaying of St Paul, 1 Cor. xv. 21. "As by man came death, "by man came alſo the reſurrection of the dead." This opinion had no other effect upon his own mind than to increaſe his reverence for Chriſtianity, and for its divine Founder. He retained it, as he did his other ſpeculative opinions, without laying, as many are wont to do, an extravagant ſtreſs upon their importance, and without pretending to more certainty than the ſubject allowed of. No man formed his own concluſions with more freedom, or treated thoſe of others with greater candour and equity. He never quarrelled with any perſon for differing from him, or conſidered that difference as a ſufficient reaſon for queſtioning any man's ſincerity, or judging meanly of his underſtanding. He was zealouſly attached to religious liberty, becauſe he thought that it leads to truth; yet from his heart he loved peace. But he did not perceive any repugnancy in theſe two things. There was nothing in his elevation to his biſhopric which he ſpoke of with more pleaſure, than its being a proof that decent freedom of inquiry was not diſcouraged.

He was a man of great ſoftneſs of manners, and of the mildeſt and moſt tranquil diſpoſition. His voice was never raiſed above its ordinary pitch. His countenance ſeemed never to have been ruffled; it preſerved the ſame kind and compoſed aſpect, truly indicating the calmneſs and benignity of his temper. He had an utter diſlike of large and mixed companies. Next to his books, his chief ſatisfaction was in the ſerious converſation of a literary companion, or in the company of a few friends. In this ſort of ſociety he would open his mind with great unreſervedneſs, and with a peculiar turn and ſprightlineſs of expreſſion. His perſon was low, but well formed: his complexion fair and delicate. Except occaſional interruptions by the gout, he had for the greateſt part of his life enjoyed good health; and when not confined by that diſtemper, was full of motion and activity. About nine years before his death, he was greatly enfeebled by a ſevere attack of the gout in his ſtomach; and a ſhort time after that, loſt the uſe of one of his legs. Notwithſtanding his fondneſs for exerciſe, he reſigned himſelf to this change, not only without complaint, but without any ſenſible diminution of his cheerfulneſs and good-humour. His fault (for we are not writing a panegyric) was the general fault of retired and ſtudious characters, too great a degree of inaction and facility in his public ſtation. The modeſty, or rather baſhfulneſs of his nature, together with an extreme unwillingneſs to give pain, rendered him ſometimes leſs firm and efficient in the adminiſtration of authority than was requiſite. But it is the condition of human morality. There is an oppoſition between ſome virtues which ſeldom permits them to ſubſiſt together in perfection.

The biſhop was interred with due ſolemnity in his cathedral church, in which a handſome monument is erected to his memory, bearing the following inſcription:

Columnæ hujus ſepultus eſt ad pedem
Edmundus Law, S. T. P.
per xix fere annos hujuſce eccleſiæ Epiſcopus.
In evangelica veritate exquirenda,
et vindicanda,
ad extremum uſque ſenectutem,
operam navavit indeſeſſam.
Quo autem ſtudio et affectu veritatem,
eodem et libertatem Chriſtianam coluit;
Religionem ſimplicem et incorruptam,
niſi ſalva libertate,
ſtare non poſſe arbitratus.
Obiit Aug. xiv. MDCCLXXXVII.
Ætat. lxxxiv.

LAWBURROWS, in Scots law. See Law, Part III. N° clxxxiii. 16.

LAWENBURG, Duchy, a territory of Germany, in the circle of Lower Saxony, bounded by the duchy of Holſtein on the north and weſt, by the duchy of Mecklenburg on the eaſt, and by the duchy of Lunenburgh, from which it is ſeparated by the river Elbe, on the weſt; being about 85 miles long, and 20 broad. The chief towns are Lawenburg, Mollen, Wittemburg, and Ratzeburg. It belongs to the elector of Hanover.

Lawenburg, a city of Germany in the circle of Lower Saxony, and capital of a duchy of the ſame name. It is a ſmall but populous town, ſituated on the Elbe, under the brow of a very high hill, from whence there is a delightful proſpect over the adjacent country. It has a caſtle on an eminence, and is convenient for trade. E. Long. 10. 51. N. Lat. 53. 36.

Lawenburg, a town of Germany in Farther Pomerania, and the chief place of a territory of the ſame name, belonging to the elector of Brandenburg.

LAWERS, an eminent engraver, who flouriſhed about the middle of the 16th century. He was a native of Flanders, and probably ſtudied under Paul Pontius, whoſe ſtyle of engraving he frequently imitated. He poſſeſſed a conſiderable ſhare of merit: but was by no means equal to that great maſter, either in the excellency of the handling of the graver, or knowledge of drawing. He engraved from ſeveral painters; but his beſt works are from the pictures of Rubens.

LAWES (Henry), a celebrated muſician, and the Purcell of his time. He was a ſervant to Charles I. in his public and private muſic, and ſet ſome of the works of almoſt evey poet of eminence in that reign. The comus of Milton, and ſeveral of the lyrics of Waller, were ſet by him; and both theſe poets have done him honour in their verſes. He compoſed a conſiderable number of pſalm-tunes in the *Cantica Sacra*, for three voices and an organ; and many more of his compoſitions are to be ſeen in a work called *Select airs and dialogues;* alſo in the *Treaſury of muſic*, and the *Muſical companion.* He died in 1662.

Lawes (William), was brother to the former, and a moſt capital muſician. He made above 30 ſeveral ſorts of muſic for voices and inſtruments; nor was there any inſtrument then in uſe, but he compoſed to it as aptly as if he had ſtudied that alone. In the muſical ſchool at Oxford are two large manuſcript volumes of his works in ſcore for various inſtruments. He was a commiſſary under general Gerard in the civil war, and, to the great regret of the king, was killed at the ſiege of Cheſter in 1645.

LAWLESS COURT, a court ſaid to be held annually on King's Hill at Rochford in Eſſex, on the Wedneſday morning after Michaelmas day at cock-crowing, where they whiſper, and have no candle, nor any pen and ink, but only a coal. Perſons who owe ſuit, or ſervice, and do not appear, forfeit double their rent every hour they are miſſing.

This ſervile attendance, Cambden informs us, was impoſed on the tenants for conſpiring at the like unſeaſonable hour to raiſe a commotion. The court belongs to the honour of Raleigh, and to the earl of Warwick; and is called *lawleſs*, from its being held at an unlawful hour.

LAWINGEN, a town of Germany, in the circle of Suabia; formerly imperial, but now ſubject to the duke of Neuburg. Here the duke of Bavaria, in 1704, fortified his camp to defend his country againſt the Britiſh forces and their allies commanded by the duke of Marlborough, who forced their intrenchments. It is ſeated on the Danube, in E. Long. 10. 29. N. Lat. 38. 32.

LAWN, a ſpacious plain in a park, or adjoining to a noble ſeat. As to the dimenſions of a lawn: In a large park, it ſhould be as extenſive as the ground will permit; and, if poſſible, it ſhould never be leſs than 50 acres: but in gardens of a moderate extent, a lawn of 10 acres is ſufficient; and in thoſe of the largeſt ſize, 15 acres. The beſt ſituation for a lawn is in the front of the houſe: and here, if the houſe front the eaſt, it will be extremely convenient; but the moſt deſirable aſpect for a lawn is that of the ſouth-eaſt. As to the figure of the lawn, ſome recommend an exact ſquare, others an oblong ſquare, ſome an oval, and others a circular figure: but neither of theſe are to be regarded. It ought to be ſo contrived, as to ſuit the ground; and there ſhould be trees planted for ſhade on the boundaries of the lawn, ſo the ſides may be broken by irregular plantations of trees, which, if there are not ſome good proſpects beyond the lawn, ſhould bound it on every ſide, and be brought round pretty near to each end of the houſe. If in theſe plantations round the lawn, the trees are placed irregularly, ſome breaking much forwarder on the lawn than others, and not crowded too cloſe together, they will make a better appearance than any regular plantations can poſſibly do; and if there are variety of trees, properly diſpoſed, they will have a good effect; but only thoſe which make a fine appearance, and grow large, ſtraight, and handſome, ſhould be admitted here. The moſt proper trees for this purpoſe, are the elm, oak, cheſnut, and beech; and if there are ſome clumps of ever-green trees intermixed with the others, they will add to the beauty of the whole, eſpecially in the winter-ſeaſon; the beſt ſorts for this purpoſe are lord Weymouth's pine, and the ſilver and ſpruce firs.

LAWN, in manufactures, a fine ſort of linen, remarkable for being uſed in the ſleeves of biſhops.

LAWRENCE (St), the largeſt river in North America, proceeding from the lake Ontario, from which it runs a courſe of 700 miles to the Atlantic ocean. It is navigable as far as Quebec, which is above 400 miles; but beyond Montreal it is ſo full of ſhoals and rocks, that it will not admit large veſſels without danger, unleſs the channel be very well known.

LAWSONIA, EGYPTIAN PRIVET: A genus of the monogynia order, belonging to the octandria claſs of plants; and in the natural method ranking with thoſe of which the order is doubtful. The calyx is quadrifid; the petals four; the ſtamina four in pairs; the capſule is quadrilocular and polyſpermous. There are two ſpecies, the inermis and ſpinoſa, both natives of India. Some authors take the firſt to be the plant termed by the Arabians *henna* or *alhenna*; the pulveriſed leaves of which are much uſed by the eaſtern nations for dying their nails yellow: but others, Dr Haſſelquiſt in particular, attribute that effect to the leaves of the other ſpecies of Egyptian privet which bears prickly branches. It is probable, that neither ſet of writers are miſtaken, and that the ſhrub in queſtion is a variety only of the thorny lawſonia, rendered mild by culture.

Alhenna grows naturally and is cultivated throughout India, as alſo in Egypt, Paleſtine, and Perſia. In thoſe countries, ſays Haſſelquiſt, it flowers from May to Auguſt. The leaves being pulveriſed, are made with water into a paſte, which the inhabitants of thoſe countries bind on the nails of their hands and feet, keeping it on all night. The deep yellow colour that is thus obtained is conſiderably permanent, not requiring to be renewed for ſeveral weeks. It would ſeem that this cuſtom is very ancient in Egypt; the nails of ſome mummies being found dyed in this manner. The dried flowers of henna afford a fragrant ſmell, which, it is affirmed, women with child cannot bear.

LAWYER, ſignifies a counſellor, or one that is learned or ſkilled in the law. See COUNSELLOR, BARRISTER, and SERJEANT.

LAY, a kind of ancient poem among the French, conſiſting of very ſhort verſes.

There were two ſorts of lays; the *great*, and the *little*. The firſt was a poem conſiſting of twelve couplets of verſes, of different meaſures. The other was a poem conſiſting of ſixteen or twenty verſes, divided into four couplets.

Theſe lays were the lyric poetry of the old French poets, who were imitated by ſome among the Engliſh. They were principally uſed on melancholy ſubjects, and are ſaid to have been formed on the model of the trochaic verſes of the Greek and tragedies.

Father Mourgues gives us an extraordinary inſtance of one of theſe ancient lays, in his Treatiſe of French Poetry:

Sur l'appuis du monde
Que faut il qu'on fonde,
D'eſpoir ?
Cette mer profonde,
En debris ſeconde
Fait voir
Calme au matin, l'onde
Et l'orage y gronde
Le ſoir.

LAY-Brothers, among the Romaniſts, thoſe pious but illiterate perſons, who devote themſelves in ſome convent to the ſervice of the religious. They wear a different habit from that of the religious; but never enter into the choir, nor are preſent at the chapters; nor do they make any other vow except of conſtantcy and obedience. In the nunneries there are alſo lay-ſiſters.

Lay-Man, one who follows a ſecular employment, and has not entered into holy orders.

LAYERS, in gardening, are tender ſhoots or twigs of trees, laid or buried in the ground, till, having ſtruck root, they are ſeparated from the parent-tree, and become diſtinct plants.—The propagating trees by *layers* is done in the following manner: The branches of the trees are to be ſlit a little way, and laid under the mould for about half a foot; the ground ſhould be firſt made very light, and after they are laid they ſhould be gently watered. If they will not remain eaſily in the poſition they are put in, they muſt be pegged down with wooden hooks: the beſt ſeaſon for doing this is, for ever greens, toward the end of Auguſt, and, for other trees, in the beginning of February. If they are found to have taken root, they are to be cut off from the main plant the ſucceeding winter, and planted out. If the branch is too high from the ground, a tub of earth is to be raiſed to a proper height for it. Some pare off the rhind, and others twiſt the branch before they lay it, but this is not neceſſary. The end of the layer ſhould be about a foot out of the ground; and the branch may be either tied tight round with a wire, or cut upwards from a joint, or cut round for an inch or two at the place, and it is a good method to pierce ſeveral holes through it with an awl above the part tied with the wire.

LAYING THE LAND, in navigation, the ſtate of motion which increaſes the diſtance from the coaſt, ſo as to make it appear lower and ſmaller, a circumſtance which evidently ariſes from the intervening convexity of the ſurface of the ſea. It is uſed in contradiction to *raiſing* the land, which is produced by the oppoſite motion of approach towards it. See LAND.

LAZAR-HOUSE, or LAZARETTO, a public building, in the nature of an hoſpital, to receive the poor, and thoſe afflicted with contagious diſtempers. In ſome places, lazarettos are appointed for the performance of quarantine; in which caſe, thoſe are obliged to be confined in them who are ſuſpected to have come from places infected with the plague.

LAYSTOFF, or LOWESTOFF, a town of Suffolk 117 miles from London, ſeems to hang over the ſea, and its chief buſineſs is fiſhing for cod in the north ſea, and for herring, mackarel, and ſprats at home. The church being three furlongs off, there is a chapel in the place. Having been a part of the ancient demeſnes of the crown, this town has a charter and a ſeal, by the former of which the inhabitants are exempted from ſerving on juries. Here is a market on Wedneſday, and two fairs in the year. Some take this to be the moſt eaſtern part of Britain.

LAZULI, or *Lapis Lazuli*, a ſpecies of zeolite belonging to the claſs of argillaceous earths. See CLAY, n° 7. It is of a blue colour. That which is of a fine blue inclining to purple, has obtained the name of Oriental; but the pale blue is leſs eſteemed. It is frequently variegated with yellow, and white ſhining veins and ſpeckles; which the common people take for gold and ſilver, though they are in truth nothing but marcaſites. The lapis lazuli has the following properties: 1. It retains its blue colour for a long time in a calcining heat; but changes at laſt to a brown. 2. It melts eaſily in the fire to a white frothy ſlag; which puffs up greatly when expoſed to the flame of a blow-pipe; but with a ſtrong heat in a covered veſſel, it becomes clear and ſolid, with blue clouds in it. 3. It does not ferment with acids; but, if boiled with oil of vitriol, it ſlowly diſſolves and loſes its blue colour. On adding a ſolution of fixed alkali, it precipitates a white earth, which being ſcorified with borax, yields a ſilver coloured regulus, varying in bigneſs according to the different ſpecimens of the ſtone. 4. By ſcorification with lead, it yields ſilver, ſometimes in the quantity of two ounces to a hundred weight of the ſtone. 5. Oil of vitriol diſcovers the preſence of ſilver more certainly in lapis lazuli than ſpirit of nitre. 6. On adding ſpirit of ſal ammoniac to any ſolution either of crude or calcined lapis lazuli, no blue colour is produced; a certain proof that it does not depend on copper; which is further confirmed by the fixity of the blue colour in the fire, and the colour of the ſlag or glaſs. 7. It is ſomewhat harder than the other kinds of zeolite, but does not approach to the hardneſs of quartz or other ſiliceous ſtones in general; for the pureſt and fineſt lapis lazuli may be rubbed into a white powder by means of ſteel, though it takes a poliſh like marble. 8. When perfectly calcined, it is a little attracted by the loadſtone; and when ſcorified with lead, the ſlag becomes of a greeniſh colour, not like that produced by copper, but ſuch as is always produced by iron mixed with a calcareous ſubſtance.

Mongez informs us, that ſome of the parts of lapis lazuli will ſtrike fire with ſteel. According to Cronſtedt, it is ſeldom found pure; but generally full of veins of quartz, limeſtone, and marcaſite: but for the experiments by which the abovementioned qualities were determined, the pureſt pieces were picked; ſuch as had been examined through a magnifying glaſs, and judged as free from heterogeneous mixture as poſſible. Our author expreſſes a wiſh that ſuch as are in poſſeſſion of any quantity of the ſtone would make farther experiments, in order to determine what ſubſtance it is which produces the blue colour ſo conſtant in the fire, ſince it cannot depend either on copper or iron; for though theſe metals, on certain occaſions, give a blue colour, yet they never produce any other but what inſtantly vaniſhes in the fire, and is deſtroyed by means of an alkali. "What is mentioned in ſeveral books (ſays he) can by no means be objected here; ſince in theſe proceſſes the ſilver employed is mixed with copper and other ſubſtances which contain a volatile alkali, whereby the blue colour is produced."

In the year 1761 M. Margraaf publiſhed ſome experiments on the lapis lazuli; in which he agrees in a great meaſure with Cronſtedt. According to him, the lapis lazuli does not contain any copper; but he found in it a calcareous and gypſeous ſubſtance, though he took care to pick out the very pureſt bits he could find. Engeſtrom, however, is of opinion, that the calcareous ſubſtance is not eſſential to lapis lazuli; as Cronſtedt ſays, that the lapis lazuli he tried did not ferment with acids. He farther mentions, that when diſſolved in any of the mineral acids, it always turned them into a jelly. Some of his experiments alſo ſeem to indicate, that all kinds of lapis lazuli do not contain ſilver though many of them do.

The lapis lazuli is found in many parts of the world; but that of Aſia and Africa is much ſuperior both in beauty and real value to the Bohemian and German kind, which is too often ſold in its place.

LEACHLADE, a town of Glouceſterſhire, in England 12 miles eaſt from Cirenceſter, 29 miles from Glouceſter, and 60 from London. The river Thames waters it on the ſouth and eaſt ſides, and divides it from Wiltſhire and Berkſhire. The Leach runs through the north ſide of the pariſh. The Thames river is navigable for barges of 50 tons burden, but want of water one part of the year makes the navigation very uncertain. Here is a ſmall market on Tueſday, and two fairs in the year. The church is a large handſome building, with double ailes, ſupported by two rows of fluted pillars.

LEAD, one of the imperfect metals, of a dull white colour inclining to blue, the leaſt ductile, the leaſt elaſtic, and the leaſt ſonorous, of the whole, poſſeſſes a conſiderable degree of ſpecific gravity, reaching from 11.3 to 11.479. It is found,

1. *Native.* Cronſtedt and ſome other mineralogiſts have doubted whether native lead was ever found in the earth, but the matter is now decided by innumerable teſtimonies. It appears from the Philoſophical Tranſactions for 1772, that ſome ſmall pieces of native lead were found in the county of Monmouth in Wales. It is ſaid alſo to be found in the Vivarrais in France. Bomare mentions a curious ſpecimen of native lead kept in the collection of the abbé Nolin at Paris, that had been found in the lead mines of *Pompean*, near Rennes in Brittany. It was very malleable, could be cut with a knife without crumbling, and eaſily melted over the flame of a candle. It weighed about two pounds; was imbedded in earthy lead ore of a reddiſh colour; and had a ſlaty vein that went through the middle of it.

2. *Lead ſpar*, is ſometimes tranſparent, but generally opake, and cryſtalized in regular forms of a laminar or ſtriated texture. Lead ochre, or native ceruſs, is the ſame ſubſtance, but in a looſe form, or indurated and ſhapeleſs. Sometimes it is found in a ſilky form. Both contain ſome iron, calcareous earth, and clay; and both grow red or yellowiſh when heated. They efferveſce with acids, and afford from 60 to 80 or 90 *per cent.* of lead. They are found in Brittany, Lorrain, Germany, and England.

M. Sage, of the royal academy of Paris, pretended, that the white lead ore from Poulawen in the county of Bretagne in France, was mineralized by the marine acid; but his miſtake was detected by the commiſſioners of that academy. This ore, according to the ſame academicians, is compoſed of ſtriated cryſtals, of a whitiſh pale red or grey colour. There is a lead ore of this kind ſometimes grey and ſometimes yellow, which is very heavy. Its ſtructure is either lamellated or fibrous, and its laminæ can hardly be ſeparated; but it is friable, and may be cut with a knife. Sometimes it is cryſtallized; and ſometimes its fibres are extremely thin, ſemitranſparent, and have a ſilky look. They efferveſce with acids, decrepitate in the fire, and ſeem to loſe the aerial acid by which the lead is mineraliſed.

The ſparry lead ore has often a ſemitranſparency like the ſparry fluor; its chryſtals being generally terminated by hexahedral priſms, or cylindrical columns, ſtriated, and apparently compoſed of a great number of filaments. Theſe ſparry chryſtals are always found in the ſame places with the galenas or ſulphurated lead ores; and ſeem to be formed from their decompoſition after the loſs of their ſulphur; ſo that it is not uncommon to find galenas which are beginning to paſs into a ſtate of white lead. There is a black ore of lead, which may be ſuppoſed to be an intermediate ſtate betwixt the white lead ore and galena, as it ſeems to be a true white lead tinged by the hepatic vapours of the ſulphur on its parting from the galena. There is alſo a green tranſparent lead, having a more or leſs yellowiſh caſt. It frequently has no regular form, and appears like a kind of moſs. When this green ore is cryſtallized, it conſiſts of hexhahedral truncated priſms, terminated by ſix-ſided pyramids, either entire or truncated near the baſe. Profeſſor Brunnich tells us, that the green and the black lead ores from Saxony, and the Hungarian blue ores, are priſmatic. According to Kirwan and Mongez, the green lead ores are either cryſtallized in needles as in Brittany, or in a looſe powder as in Saxony; but moſtly adhering to and inveſting quartz. They owe their green colour to iron, ſeldom containing any copper, and are very rare. Brunnich mentions a ſapphire-coloured ore once found among ſome white lead ſpar at Wendiſh Lemen. It was eaſily melted by the blow pipe. Natural red-lead or minium has been found in ſome Siberian mines. It is found either cryſtallized, or in ſhapeleſs maſſes, or in powder, in which it agrees with the brown or yellow ores. Dr J. R. Forſter brought ſome of this cryſtallized red lead ore from Ruſſia. The cryſtals were cubical, and the colour ſeemed rather pale. The red Siberian ores are perfectly rhombic; thoſe from Bohemia have a cubical or rhomboidal form. Sulphur and arſenic have been found in the red ones, but the others have not been ſufficiently inveſtigated. Moſt of them efferveſce with acids.

3. *Arſenical lead ſpar.* Conſtredt ſays that he tried an ore of this kind from an unknown place in Germany, and found that no metal could be melted from it by means of the blow-pipe as could be done by other ſpars; but by doing it in a crucible, that part of the arſenic which did not fly off was likewiſe reduced, and found in the form of grains diſperſed, and forced into the lead. Another ore ſimilar to this, and which likewiſe was not eaſily reduced by means of the blow-pipe, always ſhot into polygonal, but chiefly hexagonal cryſtals, after being melted, having ſhining ſurfaces. Profeſſor Brunnich obſerves, that theſe ores efferveſce with acids, and contain 40 *per. cent.* of lead.

4. The *bley-glanz* of the Germans contains lead mineralized with ſulphur alone, and of this there are two or three varieties. At Villach in Auſtria there is ſaid to be found a potters lead-ore containing not the ſmalleſt portion of ſilver.

5. *Lead mineraliſed by the vitriolic acid*, is generally in the form of a white maſs, ſoluble in 18 times its quantity of water. Sometimes it is blackiſh, and cryſtallized in very long ſtriæ, or in friable ſtalactites; this laſt variety effloreſces in the air, and is converted

into a true vitriol of lead. According to Mr Kirwan, it does not efferveſce nor is ſoluble in other acids, but may be reduced by laying it on a burning coal. It originates from the decompoſition of ſulphurated lead ores. Dr Withering informs us, that it is found in great quantity in the iſland of Angleſey; but united to iron, and not reducible by the blow-pipe or charcoal.

6. *Lead mineralized by the phoſphoric acid,* was lately diſcovered by Mr Gahn. It is of a greeniſh, yellow, or reddiſh colour, and does efferveſce, with acids. After ſolution in nitrous acid, the lead may be precipitated from this ore by the vitriolic acid. An hundred grains of lead are produced from 137 of this precipitate waſhed and dried. The decanted liquor evaporated to dryneſs affords the phoſphoric acid, from which the inflammable compound may be produced by diſtillation with charcoal. Seven ounces of this lead ore from the neighbourhood of Friburg, treated in the manner juſt mentioned, yielded by diſtillation 144 grains of phoſphorus. A compound ſimilar to this ore may be obtained by mixing pure phoſphoric acid (that is, ſuch as is combined with the volatile alkali, for the foſſile alkali in the microcoſmic ſalt hinders the operation) with red lead.

7. *Galena,* or *potters ore,* in which the metal is mineralized by ſulphurated ſilver. According to Mr Kirwan it is the moſt common of all the lead ores, of a bluiſh dark lead colour, formed of cubes of a moderate ſize, or in grains of a cubic figure, whoſe corners have been cut off; its texture lamellar, and its hardneſs varying in different ſpecimens. That which is formed into grains is ſuppoſed to be the richeſt in ſilver; but even this contains only about one or one and a half *per cent.* that is, about 12 or 18 ounces *per* quintal; and the pooreſt not above 60 grains. Ores that yield about half an ounce of ſilver *per* quintal are barely worth the extracting. Different ſpecimens alſo vary in the quantity of ſulphur they contain, from 15 to 25 *per cent.* and that which contains the leaſt is in ſome degree malleable. The proportion of iron in this ore is very ſmall, but the lead is from 60 to 85 *per cent.* M. Monnet aſſerts that galena is inſoluble in the nitrous acid; but Dr Watſon has ſhown, that it is completely diſſolved by the acid when diluted. The ſpecific gravity of galena is from 7.000 to 7.780. It yields a yellow ſlag when melted.

M. Fourcroy diſtinguiſhes ſeveral varieties of this ore. 1. Cubic galena, the cubes of which are of various ſizes, and found either ſingle or in groups; it is often found with the angles truncated, and is common at Freyberg. 2. In maſſes, without any regular configuration; very common at St Maire. 3. With large facets. It does not compoſe regular cryſtals, but is entirely formed of large laminæ. 4. With ſmall facets, appearing like mica, compoſed of white and very brilliant ſcales. It is called white ſilver ore, becauſe it contains a conſiderable quantity of that metal. 5. Small grained galena, ſo called becauſe it has a very cloſe grain. It is likewiſe very rich in ſilver, and is found with the foregoing ore. No galena, excepting that of Carinthia, is known to be without ſilver; but it has been obſerved, that thoſe which afford the moſt ſilver have the ſmalleſt facets. 6. Galena cryſtallized like lead ſpar, in hexagonal priſms or cylindrical columns, contains little ſilver, and ſeems to be merely ſpathoſe lead, mineralized without having loſt its form. Cryſtals of pure ſpathoſe lead entirely covered with a very fine galena, are ſometimes found in the ſame piece, together with others which are changed into galena throughout.

8. *Antimonial lead-ore,* in which the metal is mineralized by ſulphur with ſilver and regulus of antimony. This is of the ſame colour with galena, but its texture is different, being radiated, filamentous or ſtriated. When heated, it yields a white ſmoke; and it affords from 40 to 50 *per cent.* of lead, and from half an ounce to two ounces of ſilver *per* quintal.

9 *Pyritous lead-ore,* mineralized by ſulphur with ſilver and a large proportion of iron. This is of a brown or yellowiſh colour; of an oblong or ſtalactitical form; friable; and of a lamellar, ſtriated, or looſe texture; affording 18 or 20 *per cent.* of lead at moſt, which is obtained merely by melting it, the iron detaining the ſulphur. It is only a mixture of galena with the brown pyrites.

10. *Lead mineralized by arſenic,* was lately diſcovered in Siberia. It is of a pale colour externally, but internally of a deep red. It is for the moſt part cryſtallized in rhomboidal parallelopipeds, or irregular pyramids. Lehman ſays, that it contains ſulphur, arſenic, and about 34 *per cent.* of lead; and Mr Pallas ſays, that it contains ſome ſilver alſo. It was found near Catherineburg in Siberia; and Lehman ſays, that on being reduced to powder, it reſembled the beſt carmine. A ſpecimen examined by Mongez was of a yellow-greeniſh colour, and was found among quartz in the ſame country, and contained ſome arſenic. Both theſe, according to M. Magellan, may be eaſily reduced by means of a blow-pipe.

11. *Stony* or *ſandy lead ores,* conſiſt either of the calciform or the galena kind, intimately mixed and diffuſed through ſtones and earth, chiefly of the calcareous or barytic genus. To this ſpecies Mongez refers the earthy lead ore, falſely called *native maſſicot,* found in the lead mines of Pompean in Brittany, principally in ſolid pieces. Theſe are either yellowiſh or grey: they appear bright like glaſs when broken, and efferveſce with acids; whence it appears that the ore contains fixed air. Sometimes it is mixed with clay.

12. The mine of Morngenſtern at Freyberg has a peculiar variety of lead-ore containing ſilver, and which deſerves to be noticed on account of its yellowiſh-brown colour, and likewiſe on account of its ſingular figure, which conſiſts of ſlender cylinders. Sometimes it is found in dentritical forms, like the *knit cobalt.*

Moſt of the ores of lead contain ſilver; and thoſe kinds of galena which do not, are very ſcarce. In Hungary and Tranſylvania, the lead ore contains a quantity of gold as well as ſilver. Sometimes the potters ores are found ſo poor in ſilver, that it is not worth the expence of extracting it. Theſe, when free from mixtures of the rock, are employed without any fuſion to glaze earthern ware; and a conſiderable trade is carried on in the Mediterranean with ſuch ores from the mines of Sardinia and France.

Lead, expoſed to heat, melts long before it is ignited. By a ſtrong heat it becomes volatile, and flies off in vapours. If ſuffered to cool very ſlowly, and the melted portion be poured off from that which is become ſolid, it is found to be cryſtallized in quadrangular pyramids. When melted with the contact of air, it ſoon becomes covered with a grey dull pellicle, which by proper management is converted into minium, as explained under the article Chemistry; and by this operation it becomes heavier by about ten pounds in the hundred, though it is ſaid that at Nuremberg it gains twice as much. By too much heat minium loſes its beautiful red colour, and aſſumes that of a pale yellow: by a heat ſtill more violent, it melts into a tranſparent glaſs, ſo fuſible, that it penetrates the crucible and eſcapes. But if one part of ſand be added to three parts of calx of lead, the ſand melts, by the aſſiſtance of the calx, into a beautiful amber-coloured glaſs. With two parts of lead and one of ſand, it reſembles a topaz. A ſimilar quantity of the calx of lead, added to common glaſs, does not alter its tranſparence, but gives it a greater degree of weight, and more eſpecially a kind of unctuouſneſs, which renders it capable of being cut and poliſhed more eaſily without breaking. This glaſs is very proper for making achromatic lenſes; but is ſubject to veins, and to have a gelatinous appearance. "The Engliſh (ſays M. Fourcroy) call it *flint glaſs*; our workmen find great difficulty in ſelecting pieces of any conſiderable magnitude, exempt from ſtriæ, in that which is imported from England." This great imperfection ſeems, in Macquer's opinion, to depend on the principles of the glaſs not being uniformly combined: for that purpoſe it is neceſſary that it ſhould be kept in fuſion for a long time; but as the lead would by that means be diſſipated, the flint-glaſs would loſe a part of its denſity and unctuouſneſs, which are its chief merit.

M. Magellan tells us, that it is the pureſt calx of lead called *minium*, made immediately from the metal, and the moſt pure quartzous ſand, with pure mineral alkali, or rather with good nitre, that produce, when properly melted, the beſt flint-glaſs. The greater the proportion of red-lead, the heavier is the glaſs, and of courſe its refraction the greater; an eſſential requiſite for ſuch glaſs as is employed for the lenſes of achromatic teleſcopes. It muſt, however, be obſerved, that glaſs made with lead has the defect of being of unequal denſity, for want of a perfect mixture of all its parts; ſo that it is extremely difficult to find pieces of a few inches diameter among hundred weights of this glaſs, that ſhall be quite free from filaments and ſtriæ. By chance the late Mr Dollond procured a pot of pure flint-glaſs, from which he made the admirable triple object lenſes of three feet and a half focus, which have been ſo much admired; but no ſuch other glaſs has yet been found, though very conſiderable premiums have been offered for the method of producing the beſt kind of glaſs for optical inſtruments.

All the calces of lead, eſpecially minium, have a great attraction for fixed air. If therefore we ſhould deſire a calx of lead in perfect purity, it muſt be kept defended from the contact of air, or ſlightly calcined before it is uſed, in order to ſeparate the fixed air it may have abſorbed. When expoſed to the air, it tarniſhes in proportion to the dampneſs of the air, and contracts a white ruſt, which is not a pure calx, but combined with the fixed air imbibed from the atmoſphere. It is not altered by pure water; and therefore we muſt conclude, that the whitiſh cruſt with which the internal part of lead pipes through which water runs is uſually covered, muſt be owing to the ſaline ſubſtances contained in the water.

"All the phenomena of the calcination of lead (ſays M. Magellan), and of its reduction to the metallic ſtate, ſhow that it has the ſmalleſt adheſion to phlogiſton; as appears by the ſimple action of fire, which ſeparates both, whilſt their attraction is equally quick in its reduction to the metallic ſtate A common wafer, which owes its colour to red-lead, by being burned in the flame of a candle, immediately exhibits pure globules or little drops of the metal. The readineſs with which lead parts with its phlogiſton is ſhown by the curious experiment lately performed at Paris by Doctor Luzuriagu penſioner of the court of Spain. He put four ounces of lead-ſhot wetted with water into a pint-bottle filled with atmoſpheric air, and cloſed with a ſtopple. Having ſhaken it ſeveral times, a black powder was produced, which ſoon turned white: on opening the bottle at the end of 24 hours, the air was found to have loſt a fifth part of its bulk, and to have become phlogiſticated. Dephlogiſticated air was ſtill more reduced in bulk; but the contrary took place when inflammable air was employed."

Cauſtic alkaline lixivia, boiled on lead, diſſolve a ſmall quantity of it, and corrode more. It has been obſerved, that plants do not thrive ſo well in leaden as in earthen veſſels.

In Holland, and perhaps in other places, it has been cuſtomary to correct the moſt offenſive expreſſed oils, as that of rape-ſeed and rancid oils of almonds or olives, by impregnating them with lead. This dangerous abuſe may be diſcovered by mixing a little of that oil with a ſolution of orpiment made in lime-water: for, on ſhaking them together, and ſuffering them to reſt, the oil, if it has any ſaturnine tint, will appear of an orange red; but if pure, of a paleyellowiſh one. A ſimilar abuſe has alſo been practiſed with acid wines, which diſſolve as much of the lead as communicates a ſweetiſh taſte. This is diſcovered in a ſimilar manner; and upon this principle is founded the *liquor probatorius*, or teſt-liquor. This liquor is nothing elſe than a ſolution of orpiment or liver of ſulphur in lime-water. If a few drops of this ſolution be put in a glaſs of the ſuſpected liquor, it will exhibit a precipitation like a dark-coloured cloud. This is owing to the attachment of the lead to the ſulphur in the orpiment. If lead, or its calces, in powder, be mixed with a ſolution of hepar ſulphuris, a decompoſition enſues, but the alkali is not thus deprived of its ſulphur. Inſtead of this, it is re-converted into vitriolated tartar; the lead ſeizes the phlogiſton of the ſulphur, and allows the vitriolic acid to unite with the alkali.

Lead unites with moſt other metals. It cannot, however, be united with iron: but if both are expoſed to the fire in a proper veſſel, the lead ſcorifies the iron by ſeizing on its phlogiſton; after which it melts with the calx into a dark-coloured glaſs. This property which lead poſſeſſes, of reducing all the imperfect metals to a glaſs, is the reaſon of its being uſed in the purification of gold and ſilver; neither of which can be touched by it, but remain pure in the bottom of the cupel. This proceſs is the more complete by reaſon of the great efficacy of lead in diſſolving earthy bodies. In this reſpect it is ſo powerful a flux, that no earthern veſſel or crucible can contain it when fuſed, of whatever materials the veſſel be made. A mixture of raw and burned clay ſtands the action of lead for the greateſt length of time; but at laſt this alſo gives way, and is corroded in the ſides.

Litharge, a ſort of refuſe of lead, is employed in the compoſition of all the finer glaſſes called *paſtes*, which are deſigned as imitations of precious ſtones. The addition of litharge renders them more ſolid and brilliant. The principal ingredients are the pureſt of flint, purified alkali, borax, and litharge; the other additions, chiefly of metallic calces, are added, merely for the ſake of tinging them with various colours.

Lead is employed in making of various veſſels, as ciſterns for water, large boilers for chemical and other purpoſes, &c. It is frequently mixed with tin by the pewterers; a practice which M. Fourcroy ſets forth as very dangerous, and gives the following proceſs for detecting it: "Diſſolve two ounces of the ſuſpected metal in five ounces of a good pure nitrous acid. The calx of tin is to be waſhed with four pounds of diſtilled water, and dried, and the water evaporated by the heat of a water-bath. By this evaporation nitre of lead is procured; which being calcined, the weight of the reſidue ſhows the quantity of metal contained in the tin, allowing a few grains for the augmentation of weight ariſing from calcination, as well as the other metallic ſubſtances, ſuch as zinc and copper, which the tin under examination may contain. Bayan and Charlard by this method aſcertained, that fine wrought tin or pewter contains about 10 pounds of lead in the 100; and that the common tin ſold in France under that name, often contains 25 pounds in the ſame quantity; an enormous doſe, ſufficient to expoſe thoſe who uſe veſſels made of this compoſition to the greateſt danger."

There are ſeveral methods uſed by pewterers to diſcover the fineneſs of tin. This is done in ſome caſes by ſimple inſpection, the judgment being aſſiſted by the weight and noiſe produced in bending the metal. But the beſt method is by trying the ſpecific gravity of the metal; which will diſcover a very ſmall quantity of lead, the difference betwixt the two metals being ſo conſiderable.

Lead, when taken into the human body, is productive of various diſorders, particularly a dangerous kind of colic terminating in a palſy; and as all the common earthen ware is glazed with minium, the uſe of it cannot be ſuppoſed to be void of danger in all caſes. Fountains, or veſſels of lead which contain water, often communicate a noxious quality to it when ſuffered to remain long full. Its vapour is dangerous to the workmen who melt it, and the fumes falling upon the graſs render it poiſonous to the cattle who eat it; the fiſh who inhabit the waters near ſmelting houſes ſoon die, nor is it ſafe for any animal to drink of it. In caſes of poiſoning by lead, antimonial emetics are recommended. Navier preſcribes liver of ſulphur and hepatic waters. The internal uſe of lead is certainly dangerous, though it is often preſcribed in medicine; and even the external uſe of it is not altogether ſafe. Certain it is, that all workmen who deal much in lead, are ſubject to the cholic abovementioned from the habitual contact of the metal or its calces, even though they neither take it internally, nor are expoſed to its fumes.

Black LEAD *(Plumbago)*, a genus of inflammable ſubſtances, frequently confounded with *molybdæna*; the appearance of which is nearly the ſame, though the qualities are very different. Black-lead, when pure, is extremely black; but when freſh cut, appears of a bluiſh white, and ſhining like lead. It is micaceous, and minutely ſcaly; eaſily broken, and of a granular and dull appearance when broken. Its tract on paper is much darker than that of molybdæna, which has a fine ſilvery appearance; by which means they are eaſily diſtinguiſhed from one another. Black-lead is too ſoft to ſtrike fire with ſteel: it is inſoluble in acids; but in a very ſtrong fire, when expoſed to the air at the ſame time, it is entirely volatile, leaving only a little iron and a ſmall quantity of ſiliceous earth. It may be decompoſed by deflagration with nitre; but the common fluxes are not capable of procuring its fuſion. Its ſpecific gravity is from 1.987 to 2,267. According to Scheele, this ſubſtance conſiſts of phlogiſton combined with aerial acid; but M. Pelletier has ſhown, that when pure it neither produces fixed nor inflammable air; both which, when found, are entirely owing to the ſubſtances that are mixed with it. Mr Scheele ſays, that one part of plumbago requires ten of nitre to decompoſe it, but charcoal only five. The concluſion drawn from hence, *viz.* that plumbago contains twice as much phlogiſton as charcoal, however, is by no means juſt; for the phlogiſton may be defended from the action of the nitre, by means we cannot poſſibly know, in the one and not in the other, Dr Prieſtley's experiments on the diſſipation of charcoal into inflammable air alſo ſhow, that charcoal is little or nothing elſe than mere phlogiſton, ſo that no ſubſtance whatever can contain *more*. From theſe experiments Mr Kirwan concludes, that 100 parts of plumbago contain 67 of phlogiſton; becauſe 100 grains of nitre contain 33 of real nitrous acid; all of which are decompoſed when it receives as much phlogiſton as is neceſſary to convert it into nitrous acid, or a little more. But 33 grains of nitrous acid are converted into nitrous air by 67 grains of phlogiſton; the remaining 33 parts may be water, or other volatile ſubſtance. By the experiments of Meſſrs Gahn and Hielm, it appears, that 100 grains of plumbago, calcined in a muffle, loſt 90 grains in weight; the remainder being a ferruginous earth, and the ſulphureous ſmell ſhowed that it contained ſome pyrites, both which were accidental to the black lead. M. Pelletier, however, as has already been hinted, affirms, that plumbago is volatilized in a ſtrong fire, without producing any aerial vapour whatever; whence we muſt conclude, that the plumbago uſed by Scheele had not been quite pure. In cloſe veſſels, however, all agree, that black lead ſuſtains a vehement fire for a long time without any ſenſible diminution of weight. This is ſimilar to charcoal; which for a long time was ſuppoſed to be indeſtructible in cloſe veſſels: but Dr Prieſtley has ſhown, that in a very violent fire, in cloſe veſſels, charcoal begins to emit inflammable air, and continues to do ſo without any end of the proceſs that he could perceive; whence it is probable, that in this way alſo charcoal might be entirely diſperſed, provided we could find veſſels capable of ſuſtaining ſuch a long and vehement heat. No experiments have been made with black-lead in this way, either with the ſolar heat *in vacuo*, or with a violent heat in an iron or other veſſel capable of reſiſting a long continued heat.

Cronſtedt, when treating of this mineral, obſerves, that "Mr Pott examined it in cloſe veſſels, and Mr Quiſt in an open fire; from which difference in the mode of treatment, different notions had ariſen: becauſe the black-lead, when treated in cloſe veſſels, or when immediately put into a ſtrong charcoal fire, is almoſt unalterable; but in a calcining heat, becomes almoſt entirely volatile. This is the caſe with ſeveral of the other mineral phlogiſtons; and from this we may in general learn, how neceſſary it is to examine the mineral bodies by many and different methods, and to endeavour to multiply the experiments more than has hitherto been done."

With regard to the reduction of metallic calces, which ought to be accompliſhed by this *phlogiſtic* ſubſtance, M. Pelletier affirms, that it cannot be done unleſs the black-lead be mixed with fixed alkali, in the ſame manner as when charcoal is employed in ſuch circumſtances. It cannot be combined with iron, as Bergman aſſerts; nor with any other metal, though it may be ſimply interſperſed betwixt its particles. M. Pelletier indeed owns that there is a kind of plumbago found ſwimming over the melted iron in large furnaces where iron-ores are ſmelted; but he thinks, that this muſt have been naturally mixed with the mineral. It is alſo the only known plumbago of a very diſtinct lamellar form; as he obſerved in the pieces obtained from the iron works at Vallancy in the French province of Berry.

Black-lead is found of different kinds; *viz.* 1. Of a ſteel-grained and dull texture; naturally black, but when rubbed affording a dark lead colour. 2. Of a granulated and ſcaly appearance at the ſame time. It is found in different countries, as Germany, France, Spain, the Cape of Good Hope, and America; but generally in ſmall quantities, and of very different qualities. The beſt ſort, however, and the fitteſt of all for making pencils, is that met with in the county of Cumberland in England. It is found in ſuch plenty at a place called *Borrowdale* in Scotland, that hence not only the whole iſland of great Britain, but the whole continent of Europe, may be ſaid to be ſupplied. "I have ſeen (ſays M. Magellan) various ſpecimens from different countries; but their coarſe texture and bad quality cannot bear any compariſon with that of Borrowdale; though it ſometimes, but ſeldom, contains pyritaceous particles of iron. It is but a few years ago, that this mine ſeemed to be almoſt exhauſted; but by digging ſome few yards through the ſtrata underneath, according to the advice of an experienced miner, whoſe opinion had been long unattended to, a very thick and rich vein of the beſt black-lead has been diſcovered, to the great joy of the proprietors and advantage of the public."

The principal uſe of black-lead is for making pencils for drawing; which have the advantage of marking paper very diſtinctly for a time, though their traces may afterwards be entirely rubbed out by ſoft bread or elaſtic gum. To form the pencils, the lead is cut into thin parallelopipeds, and put into quadrangular grooves cut in pieces of cypreſs wood; and a ſlit being glued over, they are worked into ſmall cylinders like quills. A coarſer kind are made by working up the powder of black-lead with ſulphur, or ſome mucilaginous ſubſtance; but theſe anſwer only for carpenters, or ſome very coarſe drawings. One part of plumbago with three of clay, and ſome cows hair, make an excellent coating for retorts, as it keeps its form even after the retorts have melted. The famous crucibles of Ypſen are formed of plumbago mixed with clay. Theſe are known in Britain by the name of Heſſian crucibles; but a manufacture of the ſame kind is now eſtabliſhed at Chelſea in the neighbourhood of London, where crucibles are manufactured nearly of the ſame quality with the foreign ones. The powder of black-lead ſerves alſo to cover the ſtraps of razors; and it is with it that the caſt-iron work, ſuch as ſtoves, &c. receive a gloſs on their ſurface. An application, however, perhaps as uſeful as any other, is that of black-lead to ſmooth the ſurfaces of wooden work which are ſubjected to much friction, as wooden ſcrews, packers preſſes, &c.; neither greaſy nor oily ſubſtances, nor ſoapy ointments, produce ſuch a good effect upon them.

Milled LEAD. See CHEMISTY, n° 1219.

Poiſon of LEAD. See POISON.

Sheet LEAD. See PLUMBERY.

LEAF, a part of a plant extended into length and breadth in ſuch a manner as to have one ſide diſtinguiſhable from the other. This is Miller's definition. Linnæus denominates leaves "the organs of motion, or muſcles of the plant."—The leaves are not merely ornamental to plants; they ſerve very uſeful purpoſes, and make part of the organs of vegetation.

The greater number of plants, particularly trees, are furniſhed with leaves: in muſhrooms, and ſhrubby horſe-tail, they are totally wanting. Ludwig defines leaves to be fibrous and cellular proceſſes of the plant, which are of various figures, but generally extended into a plane membranaceous or ſkinny ſubſtance. They are of a deeper green than the foot-ſtalks on which they ſtand, and are formed by the expanſion of the veſſels of the ſtalk, among which, in ſeveral leaves, the proper veſſels are diſtinguiſhed by the particular taſte, colour, and ſmell, of the liquors contained within them.

By the expanſion of the veſſels of the ſtalk, are produced ſeveral ramifications or branches, which, croſſing each other mutually, form a kind of net; the meſhes or interſtices of which are filled up with a tender cellular ſubſtance, called the *pulp*, *pith*, or *parenchyma*. This pulpy ſubſtance is frequently conſumed by certain ſmall inſects, whilſt the membranous net remaining untouched exhibits the genuine ſkeleton of the leaf.

The net in queſtion is covered externally with an epidermis or ſcarf-ſkin, which appears to be a continuation of the ſcarf-ſkin of the ſtalk, and perhaps of that of the ſtem. M. Deſauſſure, a judicious naturaliſt, has attempted to prove, that this ſcarf-ſkin, like that of the petals, is a true bark, compoſed itſelf of an epidermis and cortical net; theſe parts ſeem to be the organs of perſpiration, which ſerve to diſſipate the ſuperfluous juices.

The cortical net is furniſhed, principally on the ſurface of the leaf, with a great number of ſuckers or abſorbent veſſels, deſtined to imbibe the humidity of the air. The upper ſurface, turned towards heaven, ſerves as a defence to the lower, which looks downward; and this diſpoſition is ſo eſſential to the vegetable economy, that, if a branch is overturned in ſuch a manner as to deſtroy the natural direction of the leaves, they will, of themſelves, in a very ſhort time, reſume their former poſition; and that as often as the branch is thus overturned.

Leaves, then, are uſeful and neceſſary organs; trees periſh when totally diveſted of them. In general, plants ſtript of any of their leaves, cannot ſhoot vigorouſly; witneſs thoſe which have undergone the depredations of inſects: witneſs, likewiſe, the very common practiſe of ſtripping off ſome of the leaves from plants, when we would ſuſpend their growth, or diminiſh the number of their ſhoots. This method is ſometimes obſerved with corn and the eſculent graſſes; and, in cold years, is practiſed on fruit-trees and vines, to render the fruit riper and better coloured: but in this caſe it is proper to wait till the fruits have acquired their full bulk, as the leaves contribute greatly to their growth, but hinder, when too numerous, that exquiſite rectifying of the juices, which is ſo neceſſary to render them delicious and palatable.

When vegetation ceaſes, the organs of perſpiration and inſpiration become ſuperfluous. Plants, therefore, are not always adorned with leaves: they produce new ones every year; and every year the greater part are totally diveſted of them, and remain naked during the winter. Se PLANT.

Leaf-Inſect. See CIMEX.

LEAF, in clocks and watches, an appellation given to the notches of their pinions.

Gold-Leaf, uſually ſignifies fine gold beaten into plates of an exceeding thinneſs, which are well known in the arts of gilding, &c. The preparation of gold-leaf, according to Dr Lewis, is as follows.

“ The gold is melted in a black-lead crucible, with ſome borax, in a wind-furnace, called by the workmen a *wind-hole*: as ſoon as it appears in perfect fuſion, it is poured out into an iron ingot mould, ſix or eight inches long, and three quarters of an inch wide, previouſly greaſed, and heated, ſo as to make the tallow run and ſmoke, but not to take flame. The bar of gold is made red-hot, to burn off the unctuous matter, and forged on an anvil into a long plate, which is further extended, by being paſſed repeatedly between poliſhed ſteel rollers, till it becomes a ribbon as thin as paper. Formerly the whole of this extenſion was procured by means of the hammer, and ſome of the French workmen are ſtill ſaid to follow the ſame practice: but the uſe of the flatting-mill both abridges the operation, and renders the plate of more uniform thickneſs. The ribbon is divided by compaſſes, and cut with ſheers into equal pieces, which conſequently are of equal weights: theſe are forged on an anvil till they are an inch ſquare; and afterwards well nealed, to correct the rigidity which the metal has contracted in the hammering and flatting. Two ounces of gold, or 960 grains, the quantity which the workmen uſually melt at a time, make 150 of theſe ſquares, whence each of them weighs ſix grains and two fifths; and as 902 grains of gold make a cubic inch, the thickneſs of the ſquare plates is about the 766th part of an inch.

“ In order to the further extenſion of theſe pieces into fine leaves, it is neceſſary to interpoſe ſome ſmooth body between them and the hammer, for ſoftening its blow, and defending them from the rudeneſs of its immediate action: as alſo to place between every two of the pieces ſome proper intermedium, which, while it prevents their uniting together, or injuring one another, may ſuffer them freely to extend. Both theſe ends are anſwered by certain animal membranes.

“ The gold-beaters uſe three kinds of membranes; for the outſide cover, common parchment made of ſheep-ſkin; for interlaying with the gold, firſt the ſmootheſt and cloſeſt vellum, made of calf-ſkin; and afterwards the much finer ſkins of ox-gut, ſtript off from the large ſtraight gut ſlit open, curiouſly prepared on purpoſe for this uſe, and hence called *gold-beater's ſkin*. The preparation of theſe laſt is a diſtinct buſineſs, practiſed by only two or three perſons in the kingdom, ſome of the particulars of which I have not ſatisfactorily learned. The general proceſs is ſaid to conſiſt, in applying one upon another, by the ſmooth ſides, in a moiſt ſtate, in which they readily cohere and unite inſeparably; ſtretching them on a frame, and carefully ſcraping off the fat and rough matter, ſo as to leave only the fine exterior membrane of the gut; beating them between double leaves of paper, to force out what unctuoſity may remain in them; moiſtening them once or twice with an infuſion of warm ſpices; and laſtly, drying and preſſing them. It is ſaid, that ſome calcined gypſum, or plaſter of Paris, is rubbed with a hare's foot both on the vellum and the ox-gut ſkins, which fills up ſuch minute holes as may happen in them, and prevents the gold-leaf from ſticking, as it would do to the ſimple animal-membrane. It is obſervable, that, notwithſtanding the vaſt extent to which the gold is beaten between theſe ſkins, and the great tenuity of the ſkins themſelves, yet they ſuſtain continual repetitions of the proceſs for ſeveral months, without extending or growing thinner. Our workmen find, that, after 70 or 80 repetitions, the ſkins, though they contract no flaw, will no longer permit the gold to extend between them; but that they may be again rendered fit for uſe by impregnating them with the virtue which they have loſt, and that even holes in them may be repaired by the dexterous application of freſh pieces of ſkin; a microſcopical examination of ſome ſkins that had been long uſed plainly ſhowed theſe repairs. The method of reſtoring their virtue is ſaid in the *Encyclopédie* to be, by interlaying them with leaves of paper moiſtened with vinegar white-wine, beating them for a whole day, and afterwards rubbing them over as at firſt with plaſter of Paris. The gold is ſaid to extend between them more eaſily, after they have been uſed a little, than when they are new.

“ The beating of the gold is performed on a ſmooth block of black marble, weighing from 200 to 600 pounds, the heavier the better; about nine inches ſquare on the upper ſurface, and ſometimes leſs, fitted into the middle of a wooden frame, about two feet ſquare, ſo as that the ſurface of the marble and the frame form one continuous plane. Three of the ſides are furniſhed with a high ledge; and the front, which is open, has a leather flap faſtened to it, which the gold-beater takes before him as an apron, for preſerving the fragments of gold that fall off. Three hammers are employed, all of them with two round and ſomewhat convex faces, though commonly the workman uſes only one of the faces: the firſt, called the *cutch-hammer*, is about four inches in diameter, and weighs 15 or 16 pounds, and ſometimes 20, though few workmen can manage thoſe of this laſt ſize: the ſecond, called the *ſhodering-hammer*, weighs about 12 pounds, and is about the ſame diameter: the third called the *gold-hammer*, or *finiſhing-hammer*, weighs 10 or 11 pounds, and is nearly of the ſame width. The French uſe four hammers, differing both in ſize and ſhape from thoſe of our workmen: they have only one face, being in figure truncated cones. The firſt has very little convexity, is near five inches in diameter, and weighs 14 or 15 pounds: the ſecond is more convex than the firſt, about an inch narrower, and ſcarcely half its weight: the third, ſtill more convex, is only about two inches wide, and four or five pounds in weight: the fourth or finiſhing hammer is near as heavy as the firſt, but narrower by an inch, and the moſt convex of all. As theſe hammers differ ſo remarkably from ours, I thought proper to inſert them, leaving the workmen to judge what advantage one ſet may have above the other.

"A hundred and fifty of the pieces of gold are interlaid with leaves of vellum, three or four inches ſquare, one vellum leaf being placed between every two of the pieces, and about 20 more of the vellum leaves on the outſides; over theſe is drawn a parchment caſe, open at both ends, and over this another in a contrary direction, ſo that the aſſemblage of gold and vellum leaves is kept tight and cloſe on all ſides. The whole is beaten with the heavieſt hammer, and every now and then turned upſide down, till the gold is ſtretched to the extent of the vellum; the caſe being from time to time opened for diſcovering how the extenſion goes on, and the packet, at times, bent and rolled as it were between the hands, for procuring ſufficient freedom to the gold, or, as the workmen ſay, to make the gold work. The pieces, taken out from between the vellum leaves, are cut in four with a ſteel knife; and the 600 diviſions, hence reſulting, are interlaid, in the ſame manner, with pieces of the ox-gut ſkins five inches ſquare. The beating being repeated with a lighter hammer till the golden plates have again acquired the extent of the ſkins, they are a ſecond time divided in four: the inſtrument uſed for this diviſion is a piece of cane cut to an edge, the leaves being now ſo light, that the moiſture of the air or breath condenſing on a metalline knife would occaſion them to ſtick to it. Theſe laſt diviſions being ſo numerous, that the ſkins neceſſary for interpoſing between them would make the packet too thick to be beaten at once, they are parted into three parcels, which are beaten ſeparately, with the ſmalleſt hammer, till they are ſtretched for the third time to the ſize of the ſkins: they are now found to be reduced to the greateſt thinneſs they will admit of; and indeed many of them, before this period, break or fail. The French workmen, according to the minute detail of this proceſs, given in the *Encyclopédie*, repeat the diviſion and the beating once more; but as the ſquares of gold, taken for the firſt operation, have four times the area of thoſe uſed among us, the number of leaves from an equal area is the ſame in both methods, *viz.* 16 from a ſquare inch. In the beating, however ſimple the proceſs appears to be, a good deal of addreſs is requiſite, for applying the hammers ſo as to extend the metal uniformly from the middle to the ſides: one improper blow is apt not only to break the gold leaves, but to cut the ſkins.

"After the laſt beating, the leaves are taken up by the end of a cane inſtrument, and, being blown flat on a leather-cuſhion, are cut to a ſize, one by one, with a ſquare frame of cane made of a proper ſharpneſs, or with a frame of wood edged with cane: they are then fitted into books of 25 leaves each, the paper of which is well ſmoothed, and rubbed with red-bole to prevent their ſticking to it. The French, for ſizing the leaves, uſe only the cane-knife; cutting them firſt ſtraight on one ſide, fitting them into the book by the ſtraight ſide, and then paring off the ſuperfluous parts of the gold about the edges of the book. The ſize of the French gold leaves is from ſomewhat leſs than three inches to three and three quarters ſquare; that of ours, from three inches to three and three-eighths.

"The proceſs of gold-beating is conſiderably influenced by the weather. In wet weather, the ſkins grow ſomewhat damp, and in this ſtate make the extenſion of the gold more tedious: the French are ſaid to dry and preſs them at every time of uſing; with care not to overdry them, which would render them unfit for farther ſervice. Our workmen complain more of froſt, which appears to affect the metalline leaves themſelves: in froſt, a gold-leaf cannot eaſily be blown flat, but breaks, wrinkles, or runs together.

"Gold-leaf ought to be prepared from the fineſt gold; as the admixture of other metals, though in too ſmall a proportion to ſenſibly affect the colour of the leaf, would diſpoſe it to loſe of its beauty in the air. And indeed there is little temptation to the workman to uſe any other; the greater hardneſs of alloyed gold occaſioning as much to be loſt in point of time and labour, and in the greater number of leaves that break, as can be gained by any quantity of alloy that would not be at once diſcoverable by the eye. All metals render gold harder and more difficult of extenſion: even ſilver, which in this reſpect ſeems to alter its quality leſs than any other metal, produces with gold a mixture ſenſibly harder than either of them ſeparately, and this hardneſs is in no art more felt than in the gold-beater's. The French are ſaid to prepare what is called the *green gold-leaf*, from a compoſition of one part of copper and two of ſilver with eighty of gold. But this is probably a miſtake: for ſuch an admixture gives no greenneſs to gold: and I have been informed by our workmen, that this kind of leaf is made from the ſame fine gold as the higheſt gold-coloured ſort, the greeniſh hue being only a ſuperficial teint induced upon the gold in ſome part of the proceſs: this greeniſh leaf is little otherwiſe uſed than for the gilding of certain books.

"But though the gold-beater cannot advantageouſly diminiſh the quantity of gold in the leaf by the admixture of any other ſubſtance with the gold, yet means have been contrived, for ſome particular purpoſes, of ſaving the precious metal, by producing a kind of leaf called *party-gold*, whoſe baſis is ſilver, and which has only a ſuperficial coat of gold upon one ſide; a thick leaf of ſilver and a thinner one of gold, laid flat on one another, heated and preſſed together, unite and cohere; and being then beaten into fine leaves, as in the foregoing proceſs, the gold, though its quantity is only about one-fourth of that of the ſilver, continues every where to cover it, the extenſion of the former keeping pace with that of the latter.

LEAGUE, a meaſure of length, containing more or fewer geometrical paces, according to the different uſages and cuſtoms of countries. A league at ſea, where it is chiefly uſed by us, being a land-meaſure moſtly peculiar to the French and Germans, contains 3000 geometrical paces, or three Engliſh miles. The French league ſometimes contains the ſame meaſure, and in ſome parts of France it conſiſts of 3500 paces: the mean or common league conſiſts of 2400 paces, and the little league of 2000. The Spaniſh leagues are larger than the French, 17 Spaniſh leagues making a degree, or 20 French leagues, or 69½ Engliſh ſtatute-miles. The Dutch and German leagues contain each four geographical miles. The Perſian leagues are pretty near of the ſame extent with the Spaniſh; that is, they are equal to four Italian miles: which is pretty near to what Herodotus calls the length of the Perſian Paraſang, which contained 30 ſtadia, eight whereof, according to Strabo, make a mile. The word comes from *leuca*, or *leuga*, an ancient Gauliſh word for an itinerary meaſure, and retained in that ſenſe by the Romans. Some derive the word *leuca* from λευκος, "white;" as the Gauls, in imitation of the Romans, marked the ſpaces and diſtances of their roads with white ſtones.

League alſo denotes an alliance or confederacy between princes and ſtates for their mutual aid, either in attacking ſome common enemy, or in defending themſelves. The word comes from *liga*, which in the corrupt Latin was uſed for a *confederacy: Qua quis cum alio ligatur*.

Leagues, among the Greeks, were of three ſorts: 1. Σπονδη, Συνθηκη, or Ειρηνη, whereby both parties were obliged to ceaſe from hoſtilities, without even moleſting the allies of each other; 2. Επιμαχια, whereby they engaged to lend aſſiſtance to each other in caſe of invaſion; and, 3. Συμμαχια, whereby they engaged to have the ſame friends and enemies, and to aſſiſt each other upon all occaſions. All theſe leagues were confirmed with oaths, and imprecations, and ſacrifices. The victims moſt generally uſed were a boar, ram, or goat, ſometimes all three; and ſometimes bulls and lambs. They cut out the teſticles of the animal, and ſtood upon them while they ſwore; and ſome of the hair of the victim was diſtributed to all preſent. Then they cut the animal's throat, which was called ορκια τεμνειν, in Latin, *ferire fædus*.—This done, they repeated their oaths and imprecations, calling the gods to witneſs the honeſty of their intentions. A libation was then made of wine, which at this time was mixed, to imply their conjunction and union: while this was pouring out, they prayed that the blood of him who ſhould break the treaty might be poured out in like manner. Upon theſe occaſions no part of the victim was eaten. Still further to encreaſe the ſolemnity of this obligation, the league was engraven upon braſs, fixed up in places of public concourſe, and ſometimes read at the ſolemn games. Some exchanged certain Συμβολα or *teſſeræ* upon the occaſion, and frequently ſent ambaſſadors, on ſome appointed day to keep them in mind of their engagements to each other.

The ceremonies of the Romans in making leagues were performed by the *Feciales*. See Feciales.

Leagues of the Griſons, are a part of Switzerland, conſiſting of three ſubdiviſions, *viz.* the upper league, the league of the houſe of God, and the league of the ten juriſdictions. See the article Grisons.

The League, by way of eminence, denotes that famous one on foot in France, from the year 1576 to 1593. Its intent was to prevent the ſucceſſion of Henry IV. who was of the reformed religion, to the crown; and it ended with his abjuration of that faith.

The *leaguers*, or confederates, were of three kinds. The *zealous leaguers* aimed at the utter deſtruction not only of the Huguenots, but alſo of the miniſtry. The *Spaniſh leaguers* had principally in view the transferring the crown of France to the king of Spain, or the infanca his daughter. The *moderate leaguers* aimed only at the extirpation of Calviniſm, without any alteration of the government.

LEAK, at ſea, is a hole in the ſhip, through which the water comes in. A ſhip is ſaid to *ſpring a leak* when ſhe begins to *leak* or to let in the water. The manner of ſtopping a leak is to put into it a plug wrapped in oakum and well tarred, or in a tarpawling clout, which keeps out the water, or nailing a peice of ſheet lead on the place. Seamen ſometimes ſtop a leak by thruſting a piece of ſalt beef into it. The ſea-water, ſays Mr Boyle, being freſher than the brine imbibed by the beef, penetrates into its body, and cauſes it to ſwell ſo as to bear ſtrongly againſt the edges of the broken plank, and thereby ſtops the influx of the water.—A ready way to find a leak in a ſhip is to apply the narrower end of a ſpeaking trumpet to the ear, and the other to the ſide of the ſhip where the leak is ſuppoſed to be; then the noiſe of the water iſſuing in at the leak will be heard diſtinctly, whereby it may be diſcovered.

LEAKAGE, the ſtate of a veſſel that leaks, or lets water or other liquid ooze in or out.

Leakage, in commerce, is an allowance of 12 *per cent.* in the cuſtoms, allowed to importers of wines for the waſte or damage it is ſuppoſed to have received in the paſſage: an allowance of two barrels in 22 is alſo made to the brewers of ale and beer by the exciſe-office.

LEAKE (Richard), maſter-gunner of England, was born at Harwich in 1629, and was bred to the ſea. At the reſtoration, he was made maſter-gunner of the Princeſs, a frigate of 50 guns; and in the firſt Dutch war diſtinguiſhed himſelf by his ſkill and bravery in two extraordinary actions; one againſt 15 ſail of Dutch men of war; and another in 1667 againſt two Danes in the Baltic, in which the commanding officers of the Princeſs being killed or deſperately wounded, the command, according to the rules of war at that time, fell to the gunner. In 1669, he was promoted to be gunner of the Royal Prince, a firſt-rate man of war. He was engaged, with his two ſons Henry and John, in the battle againſt Van Tromp, in 1673; when the Royal Prince had all her maſts ſhot away, near 400 of her men killed and diſabled, and moſt of her upper tier of guns diſmounted. As ſhe lay thus like a wreck, a great Dutch man of war came down upon her with two fire-ſhips, either to burn or carry her off; and Captain Rooke, afterwards Sir George, thinking it impoſſible to defend her, ordered the men to ſave their lives, and the colours to be ſtruck. Mr Leake hearing this, ordered the lieutenant off the quarter-deck, and took the command upon himſelf, ſaying, "The Royal Prince ſhall never be given up to the enemy while I am alive to defend her." The undaunted ſpirit of the brave gunner inſpired the ſmall reſidue of the ſhip's company with reſolution: they returned with alacrity to the fight, and under the direction of this valiant gunner and his two ſons ſunk both the fire-ſhips, and obliged the man of war to ſheer off; and having thus ſaved the Royal Prince, he brought her into Chatham. But Mr Leake's joy in obtaining this victory was damped by the loſs of Henry, his eldeſt ſon, who was killed near him. Soon after, Mr Leake was preferred to the command of a yacht, and alſo made gunner of Whitehall. In 1677, he obtained a grant for life of the office of maſter-gunner of England, and ſtore-keeper of the ordnance at Woolwich. By theſe poſts he had full ſcope for his genius. He accordingly, among other things, invented the cuſhee-piece; and contrived to fire a mortar by the blaſt of a piece, which has been uſed ever ſince. He was alſo the principal contriver of what the French call *infernals*, uſed at the bombardment at St Malo's in 1693. Mr Leake had a ſurpriſing genius for all inventions of this kind; and had frequent trials of ſkill with French and Dutch gunners and engineers in Woolwich warren, at which king Charles II. and the duke of York were often preſent, and he never failed to excel all his competitors: nor was he leſs ſkilled in the art of making compoſitions for fireworks; of which he likewiſe made frequent trials with equal ſucceſs.

Leake (Sir John), an Engliſh admiral, diſtinguiſhed by his bravery and ſucceſs, was born in 1656, and was taught mathematics and gunnery by Mr Richard Leake his father, who was maſter-gunner of England. Entering early into the navy, he diſtinguiſhed himſelf under his father in 1673, in the memorable engagement between Sir Edward Spragg and Van Tromp, when but 16 years of age; and being afterwards made captain he ſignalized himſelf, among other occaſions, by executing the deſperate attempt of convoying ſome victualers into Londonderry, which obliged the enemy to raiſe the ſiege; and at the famous battle of La Hogue. In. 1702, being made commodore of a ſquadron, he deſtroyed the French trade and ſettlements at Newfoundland, and reſtored the Engliſh to the poſſeſſion of the whole iſland. On his return he was created rear admiral; ſoon after, he was made vice-admiral of the blue, and was afterwards knighted. He was engaged with admiral Rook in taking Gibraltar: ſoon after which, he particularly diſtinguiſhed himſelf in the general engagement off Malaga; when commanding the leading ſquadron of the van, conſiſting only of ſix ſhips, he drove that of the enemy, conſiſting of 13, out of the line of battle, ſo diſabled that they never returned to the fight. In 1705, he relieved Gibraltar, which the French had beſieged by ſea, and the Spaniards by land, ſo ſeaſonably, that the enemy was to have attacked the town that very night in ſeveral places, and would undoubtedly have made themſelves maſters of it. Five hundred Spaniards had, by the help of rope-ladders, climbed up the rocks by a way that was thought inacceſſible. At the ſame time they had got a great number of boats to land 3000 men at the New Mole, who, by making a vigorous aſſault on the ſide next the ſea, were to draw the garriſon to oppoſe that attack, while the 500 concealed men ruſhed into the town. Theſe being the next day drawn by hunger out of their ambuſcade, were diſcovered; on which Sir John aſſiſting the garriſon with ſailors and marines, they were attacked with ſuch vigour, that, though they had taken an oath not to ſurrender to the Engliſh, 190 common ſoldiers and 30 officers took quarter; 200 were killed on the ſpot; and the reſt, who endeavoured to make their eſcape, fell headlong down the rock. He was ſoon after made vice-admiral of the white, and then twice relieved that fortreſs. The laſt time, he attacked five ſhips of the French fleet coming out of the bay, of whom two were taken, and two run aſhore and were deſtroyed: baron Pointi died ſoon after, of the wounds he received in the battle; and in a few days the enemy raiſed the ſiege. In the year 1705, Sir John was engaged in the reduction of Barcelona; and the next year relieved that city, when it was reduced to the laſt extremity, and obliged king Philip to raiſe the ſiege. Soon after he took the city of Carthagena; from whence proceeding to Alicant and Joyce, both theſe ſubmitted to him; and he concluded the exploits of that year with the reduction of the city and iſland of Majorca. Upon his return home, prince George of Denmark made him a preſent of a ring valued at 400 l. and he had the honour of receiving 1000 l. from the queen as a reward for his ſervices. Upon the unhappy death of Sir Cloudeſly Shovel, in 1707, he was made admiral of the white, and commander in chief of her majeſty's fleet; and the next year, ſurpriſing a convoy of the enemy's corn, he ſent it to Barcelona, and thus ſaved both that city and the confederate army from the danger of famine: ſoon after, convoying the new queen of Spain to king Charles her conſort, her majeſty made him a preſent of a diamond ring of 500 pounds value. He then proceeded to the iſland of Sardinia, which he reduced to the obedience of king Charles; and ſoon after aſſiſted the lord Stanhope in the conqueſt of Minorca. Then returning home, he was appointed one of the council to the lord high admiral; and in 1709, was made rear admiral of Great Britain. He was ſeveral times choſen member of parliament for Rocheſter; and in 1712 conducted the Engliſh forces to take poſſeſſion of Dunkirk. But upon the acceſſion of king George I. he was ſuperſeded, and allowed a penſion of 600 l. a-year. After this he lived privately till his death, which happened at his houſe in Greenwich in 1720.

Leake (Stephen Martin, Eſq;) ſon of Captain Martin, went through different ranks in the heralds office till he came to the garter. He was the firſt perſon who wrote profeſſedly on Engliſh coins, two editions of his "Hiſtorical Account" of which were publiſhed by him with plates, under the title of *Nummi Britannici Hiſtoria*, London, 1726, 8vo; the ſecond, much improved, London, 1745, 8vo. He printed, in 1750, "The life of Sir John Leake, knight, admiral of the fleet," &c. to whom he was indebted for a conſiderable eſtate; which the Admiral deviſed to truſtees for the uſe of his ſon for life; and upon his death to Captain Martin (who married Lady Leake's ſiſter) and his heirs: By which means it came to the Captain's ſon; who, in gratitude to the memory of Sir John Leake, wrote an accurate account of his life, of which only 50 copies were printed. In 1766, he printed alſo 50 copies of "The Statutes of the Order of the Garter," 4to. He died in 1773; and was buried in his chancel in the pariſh-church of Thorp in Eſſex, of which manor he was lord.

LEANDER, in poetic hiſtory, a young man of Abydos in Aſia. He uſed to ſwim over the Helleſpont by night to viſit Hero his miſtreſs, who ſet forth a light to guide him: but in a tempeſtuous winter-night he was drowned; upon which Hero ſeeing him dead on the ſhore, caſt herſelf headlong from the tower, and died alſo. See Hero.

LEAO, in natural hiſtory, a mineral ſubſtance approaching to the nature of the lapis lazuli, found in the Eaſt Indies, and of great uſe in the Chineſe porcelain manufactures, being the fineſt blue they are poſſeſſed of. This ſtone is found in the ſtrata of pit-coal, or in thoſe of a yellowiſh or reddiſh earth in the neighbour hood of the veins of coal. There are often found pieces of it lying on the ſurface of the ground, and theſe are a ſure indication that more will be found on digging. It is generally found in oblong pieces of the ſize of a finger, not round, but flat. Some of this is very fine, and ſome coarſe and of a bad colour. The latter is very common; but the fine ſort is ſcarce, and greatly valued. It is not eaſy to diſtinguiſh them at ſight, but they are found by experiment; and the trying one piece is generally ſufficient for judging of the whole mine, for all that is found in the ſame place is uſually of the ſame ſort.

The manner of preparing it for uſe is this: They firſt waſh it very clean, to ſeparate it from the earth or any other foulneſs it may have: they then lay it at the bottom of their baking furnaces; and when it has been thus calcined for three or four hours, it is taken out, and powdered very fine in large mortars of porcelain, with ſtone peſtles faced with iron. When the powder is perfectly fine, they pour in boiling water, and grind that with the reſt, and when it is thoroughly incorporated, they add more, and finally pour it off after ſome time ſettling. The remainder at the bottom of the mortar, which is the coarſer part, they grind again with more water; and ſo on till they have made the whole fine, excepting a little dirt or grit. When this is done, all the liquors are mixed together, and well ſtirred. They are ſuffered to ſtand two or three minutes after this, and then poured off with the powder remaining in them: this is ſuffered to ſubſide gradually, and is the fine blue uſed in their beſt works, the common ſmalt ſerving for the blue of all the common china ware.

LEAP, in muſic, is when the ſong does not proceed by conjoint degrees, as when between each note there is an interval of a third, a fourth, fifth, &c.

Leap-Year. See Year, and Chronology, n° 24.

Lovers-Leap. See Leucata.

LEAPING, or Vaulting, was an exerciſe much uſed both amongſt the Greeks, and Romans. The Grecians called it Αλμα, and performed it with weights upon their heads and ſhoulders. Sometimes they carried the weights in their hands, which were of different figures, but generally oval and made with holes or covered with thongs, through which the contenders put their fingers. Theſe weights were called Αλτηρες. The conteſt was who could leap the higheſt and fartheſt. The place from whence they jumped was called Βατης, and that to which they leaped, εσκαμμενα, becauſe the ground was there dug up. This exerciſe was performed in the ſame manner by the Romans.

LEAR, the name of a Britiſh king, ſaid in old chronicles to have ſucceeded his father Bladud, about A. M. 3160. The ſtory of this king and his three daughters, is well known from Shakeſpeare's excellent tragedy founded on it.

LEASE, from the French *laiſer*, *demittere*, "to let," in law, a demiſe, or letting of lands, tenements, or hereditaments, unto another for life, term of years, or at will, for a rent reſerved.

A leaſe is either written, called an *indenture*, *deed-poll*, or *leaſe* in writing; or by word of mouth, called *leaſe parole*.

All eſtates, intereſts of freehold, or terms for years in lands, &c. not put in writing and ſigned by the parties, ſhall have no greater effect than as eſtates at will; unleſs it be of leaſes not exceeding three years from the making; wherein the rent reſerved ſhall be two-thirds of the value of things demiſed. Leaſes exceeding three years muſt be made in writing; and if the ſubſtance of a leaſe be put in writing, and ſigned by the parties, though it be not ſealed, it ſhall have the effect of a leaſe for years, &c.

An *aſſignment* differs from a leaſe only in this; that by a leaſe one grants an intereſt leſs than his own, reſerving to himſelf a reverſion; in aſſignments he parts with the whole property, and the aſſignee ſtands to all intents and purpoſes in the place of the aſſignor.

Leaſe, in Scots law. See Tack.

Leaſe and *Releaſe*, a ſpecies of conveyance uſed in the Engliſh law, firſt invented by Serjeant Moore, ſoon after the ſtatute of uſes, and now the moſt common of any, and therefore not to be ſhaken; though very great lawyers (as particularly Mr Noy) have formerly doubted its validity. It is thus contrived. A leaſe, or rather bargain and ſale, upon ſome pecuniary conſideration, for one year, is made by the tenant of the freehold to the leſſee or bargainee. Now this, without any inrolment, makes the bargainor ſtand ſeiſed to the uſe of the bargainee, and veſts in the bargainee the *uſe* of the term for a year; and then the ſtatute immediately annexes the *poſſeſſion*. He therefore, being thus in poſſeſſion, is capable of receiving a releaſe of the freehold and reverſion, which muſt be made to a tenant in poſſeſſion: and accordingly, the next day, a releaſe is granted to him. This is held to ſupply the place of livery of ſeiſin; and ſo a conveyance by leaſe and releaſe is ſaid to amount to a feoffment.

LEASH, among ſportſmen, denotes three creatures of any kind; but chiefly gre-hounds, foxes, bucks, and hares.

The term *leaſh* alſo ſignifies a line to hold in a hunting dog; and a ſmall long thong of leather, by which a falconer holds his hawk.

LEASING-MAKING, in Scots law, the uttering of words tending to excite diſcord between the king and his people; alſo called *verbal ſedition*.

LEATHER, the ſkin of ſeveral ſorts of beaſts dreſſed and prepared for the uſe of various manufacturers, whoſe buſineſs it is to make them up.

Dyeing of LEATHER, *Skins*, &c. *Blue* is given by ſteeping the ſubject a day in urine and indigo, then boiling it with alum: or it may be given by tempering the indigo with red-wine, and waſhing the ſkins therewith. *Red* is given by waſhing the ſkins, and laying them two hours in galls, then wringing them out, dipping them in a liquor made with liguſtrum, alum, and verdigris in water; and laſtly, in a dye made of brazil-wood, boiled with ley. *Purple* is given by wetting the ſkins with a ſolution of roche alum in warm water; and, when dry again, rubbing them with the hand with a decoction of log-wood in colder. *Green* is given by ſmearing the ſkin with ſap-green and alum-water boiled. *Dark green* is alſo given with ſteel-filings and ſal armoniac ſteeped in urine till ſoft, then ſmeared over the ſkin; which is to be dried in the ſhade. *Sky-colour* is given with indigo ſteeped in boiling water, and the next morning warmed and ſmeared over the ſkin. *Yellow*, by ſmearing the ſkin over with aloes and linſeed-oil diſſolved and ſtrained; or by infuſing it in weld. *Orange-colour* is given by ſmearing with fuſtic berries boiled in alum-water; or, for a deep orange, with turmeric.

Proceſſes for Dyeing LEATHER Red *and* Yellow *as practiſed in* Turkey, *with directions for Preparing and Tanning the Skins; as communicated by Mr* Philippo, *a native of* Armenia, *who received from the Society for the Encouragemeut of Arts, &c. one hundred pounds, and alſo the gold medal of the Society, as a reward for diſcovering this ſecret.*

1. *Firſt Preparation of the Skins, both for Red and Yellow Leather, by dreſſing them in Lime.* Let the ſkins, dried with the hair on, be firſt laid to ſoak in clean water for three days; let them then be broken over the fleſh-ſide, put into freſh water for two days longer, and afterwards hung up to drain half an hour. Let them now be broken on the fleſh-ſide, limed in cold lime on the ſame ſide, and doubled together with the grain-ſide outward. In this ſtate they muſt be hung up within-doors over a frame for five or ſix days, till the hair be looſe; which muſt then be taken off, and the ſkins returned into the lime-pit for about three weeks. Take them out, and let them be well worked fleſh and grain, every ſixth or ſeventh day during that time: after which, let them be waſhed ten times in clear water, changing the water at each waſhing. They are next to be prepared in drench, as below mentioned.

2. *Second Preparation of the Skins for both the Red and Yellow Dyes by drenching.* After ſqueezing the water out of the ſkins, put them into a mixture of bran and water, warm as new milk, in the following proportions; viz. about three pounds of bran for five ſkins, and water ſufficient to make the mixture moderately fluid, which will be about a gallon to each pound of bran. In this drench let the ſkins lie three days; at the end of which time they muſt be well worked, and afterwards returned into the drench two days longer. They muſt then be taken out and rubbed between the hands; the water ſqueezed from them, and the bran ſcraped off clear from both ſides of the ſkins. After this they muſt be again waſhed ten times in clear water, and the water ſqueezed out of them.

Thus far the preparatory proceſs of all the ſkins, whether intended to be dyed red or yellow, is the ſame; but afterwards thoſe which are to be died red, muſt be treated as follows.

3. *Preparations in Honey and Bran of the Skins that are to be dyed Red.* Mix one pound of honey with three pints of luke-warm water, and ſtir them together till the honey is diſſolved. Then add two double handfuls of bran; and taking four ſkins (for which the above quantity of the mixture will be ſufficient) work them well in it one after another. Afterwards fold up each ſkin ſeparately into a round form, with the fleſh-ſide inwards; and lay them in an earthen pan, or other proper veſſel; if in the ſummer, by the ſide of each other; but in the winter, on the top of each other. Place the veſſel in a ſloping poſition, ſo that ſuch part of the fluid as may ſpontaneouſly drain from the ſkins, may paſs from them. An acid fermentation will then riſe in the liquor, and the ſkins will ſwell conſiderably. In this ſtate they muſt continue for ſeven or eight days; but the moiſture that drains from them muſt be poured off, once or twice a-day, as occaſion may require. After this a further preparation in ſalt is neceſſary; and which muſt be performed in the following manner.

4. *Preparation in Salt, of the Skins to be dyed Red.* After the ſkins have been fermented in the honey and bran, as abovementioned, let them be taken out of that mixture on the eighth or ninth day, and well rubbed with dry common ſea-ſalt, in the proportion of about half a pound to each ſkin; the ſalt muſt be well rubbed and worked with them. This will make them contract, again and part with a further conſiderable quantity of moiſture; which muſt be ſqueezed out by drawing each ſkin ſeparately through the hand. They muſt next be ſcraped clean on both ſides from the bran, ſuperfluous ſalt, and moiſture that may adhere to them. After which, dry ſalt muſt be ſtrewed over the grain-ſide, and well rubbed in with the hands. They are then to be doubled with the fleſh ſide outwards, lengthwiſe from neck to tail, and a little more dry ſalt muſt be thinly ſtrewed over the fleſh-ſide, and rubbed in; for the two laſt operations, about a pound and a half of ſalt will be ſufficient for each ſkin. They muſt then be put, thus folded on each other, between two clean boards, placed ſloping, breadthwiſe; and a heavy weight laid on the upper board, in order gradually to preſs out what moiſture they will thus part with. In this ſtate of preſſure, they muſt be continued two days or longer, till it is convenient to dye them, for which they will then be duly prepared.

5. *Preparations of the Red Dye, in a proper proportion for four ſkins.* Put eight gallons of water into a

copper, with ſeven ounces of ſhenan (A) tied up in a linen bag. Light a fire under a copper; and when the water has boiled about a quarter of an hour, take out the bag of ſhenan, and put into the boiling fluid or lixivium, 1ſt, two drams of alum; 2dly, two drams pomegranate bark; 3dly, three quarters of an ounce of turmeric; 4thly, three ounces of cochineal; 5thly, two ounces of loaf-ſugar. Let the whole mixture boil about ſix minutes, then cover the fire, and take out a quart of liquor, putting it into a flat earthen pan; and when it is as cold as new milk, take one ſkin, folded lengthwiſe, the grain-ſide outwards, and dip it in the liquor, rubbing it gently with the hands. Then taking out the ſkin, hang it up to drain, and throw away the ſuperfluous dye. Proceed in the ſame manner with the remaining three ſkins: repeating the operation of each ſkin ſeparately, eight times, ſqueezing the ſkins by drawing them through the hands before each freſh dipping. Lay them now on one ſide of a large pan, ſet ſloping, to drain off as much of the moiſture as will run from them without preſſure, for about two hours, or till they are cold; then tan them as below directed.

6. *Tanning the Red Skins.* Powder four ounces of the beſt white galls in a marble mortar, ſifting it thro' a fine ſieve. Mix the powder with about three quarts of water, and work the ſkins well in this mixture for half an hour or more, folding up the ſkins four-fold. Let them lie in this tan for 24 hours; when they muſt be worked again as before; then taken out, ſcraped clean on both ſides from the firſt galls, and put into a like quantity of freſh galls and water. In this freſh mixture they muſt be again well worked for three quarters of an hour; then folded up as before, and left in the freſh tan for three days. On the fourth day they muſt be taken out, waſhed clean from the galls in ſeven or eight freſh quantities of water, and then hung up to dry.

7. *Manner of Dreſſing Skins after they are tanned.* When the ſkins have been treated as above, and are very near dry, they ſhould be ſcraped with the proper inſtrument or ſcraper on the fleſh-ſide, to reduce them to a proper degree of thickneſs. They are then to be laid on a ſmooth board, and glazed by rubbing them with a ſmooth glaſs. After which they muſt be oiled, by rubbing with olive-oil, by means of a linen rag, in the proportion of one ounce and a half of oil for four ſkins: they are then to be grained on a graining-board, lengthwiſe, breadthwiſe, and cornerwiſe, or from corner to corner.

8. *Preparations with Galls for the Skins to be dyed. Yellow.* After the four ſkins are taken out of the drench of bran, and clean waſhed as before directed in the ſecond article, they muſt be very well worked, half an hour or more, in a mixture of a pound and a half of the beſt white galls, finely powdered, with two quarts of clean water. The ſkins are then to be ſeparately doubled lengthwiſe, rolled up with the fleſh-ſide outwards, laid in the mixture, and cloſe preſſed down on each other, in which ſtate they muſt continue two whole days. On the third day let them be again worked in the tan; and afterwards ſcraped clean from the galls, with an ivory or braſs inſtrument (for no iron muſt touch them). They muſt then be put into a freſh tan, made of two pounds of galls finely powdered, with about three quarts of water, and well worked therein 15 times. After this they muſt be doubled, rolled up as before, and laid in the ſecond tan for three days. On the third day a quarter of a pound of white ſea-ſalt muſt be worked into each ſkin; and the ſkins doubled up as before, and returned into the tan, till the day following, when they are to be taken out, and well waſhed ſix times in cold water, and four times in water lukewarm. The water muſt be then well ſqueezed out, by laying the ſkins under preſſure, for about half an hour, between two boards, when a weight of about 200 or 300 pounds laid upon the uppermoſt board, when they will be ready for the dye.

9. *Preparation of the Yellow Dye, in the proper proportion for four Skins.* Mix ſix ounces of the caſſiari gehira (B), or dgehira, or the berries of the eaſtern rhamnus, with the ſame quantity of alum; and pound them together till they be fine, in a marble or braſs mortar with a braſs peſtle. Then dividing the materials, thus powdered, into three equal parts of four ounces each, put one of thoſe three parts into about a pint and a half of water, in a china or earthen veſſel, and ſtir the mixture together. Let the fluid ſtand to cool, till it will not ſcald the hand. Then ſpreading one of the ſkins flat on a table, in a warm room, with the grain-ſide uppermoſt, pour a fourth part of the tinging liquor, prepared as above directed, over the upper or grain-ſide, ſpreading it equally over the ſkin with the hand, and rubbing it well in. Afterwards do the like with the other three ſkins, for which the mixture firſt made will be ſufficient.

This operation muſt be repeated twice more on each ſkin ſeparately, with the remaing eight ounces of the powder of the berries, and alum with the abovementioned due proportions of hot water, put to them as before directed.

(A) Shenan is a drug much uſed by dyers in the Eaſt; and may eaſily be procured at any of the ports of Syria and Africa, in the Levant. It is the Eaſtern jointed-kali, called by botaniſts *ſalicornia;* and grows in great plenty in thoſe and other parts of the the eaſt. There is a leſſer ſpecies of the ſalicornia on the coaſt of Britian which from its great affinity with the ſhenan, might be preſumed to have the ſame qualities. On ſome trials, however, it has not appeared to anſwer the intention of the ſhenan; but it will not be prudent to purſue the examination of this further, as ſome unknown circumſtances in the collecting or uſing the Engliſh ſalicornia might occaſion the miſcarriage. But be this as it may, the Eaſtern ſhenan may, at all events, be eaſily procured in any quantity, at a very trifling expence, by any of the captains of Turkey ſhips, at Aleppo, Smyrna, &c.

(B) The caſſiari gehira is the berries of an eaſtern rhamnus, or buckthorn-tree; and may be had at Aleppo, and other parts of the Levant, at a ſmall price. The common Avignon or yellow berries may be ſubſtituted, but not with ſo good an effect; the caſſiari gehira being a ſtronger and brighter yellow dye, both for this uſe and alſo that of colouring paper-hangings, &c.

The ſkins, when dyed, are to be hung up on a wooden frame, without being folded, with the grain-ſide outwards, about three quarters of an hour to drain; when they muſt be carried to a river or ſtream of running water, and well waſhed therein ſix times or more. After this they muſt be put under preſſure for about an hour, till the water be well ſqueezed out; afterwards the ſkins muſt be hung up to dry in a warm room.

This being done, the ſkins are to be dreſſed and grained as before directed for thoſe dyed red; except the oiling, which muſt be omitted.

Blacking LEATHER. In the tanning of leather it is ſo much impregnated with the aſtringent parts of oak-bark, or with that matter which ſtrikes a black with green vitriol, that rubbing it over three or four times with a ſolution of the vitriol, or with a ſolution of iron made in vegetable acids, is ſufficient for ſtaining it black. Of this we may be convinced by dropping a little of the ſolution on the unblacked ſide of common ſhoe-leather. This operation is performed by the currier: who, after the colouring, gives a gloſs to the leather with a ſolution of gum-arabic and ſize made in vinegar. Where the previous aſtringent impregnation is inſufficient to give due colour, and for thoſe ſorts of leather which have not been tanned, ſome galls or other aſtringents are added to the ſolution of iron; and in many caſes, particularly for the finer ſorts of leather, and for renewing the blackneſs, ivory or lamp-black are uſed. A mixture of either of theſe with linſeed oil makes the common oil-blacking. For a ſhining blacking, ſmall beer or water are taken inſtead of oil, in the quantity of about a pint to an ounce of the ivory-black, with the addition of half an ounce of brown ſugar and as much gum-arabic. The white of an egg, ſubſtituted for the gum, makes the black more ſhining, but is ſuppoſed to hurt the leather, and make it apt to crack. It muſt be obvious, however, that all theſe compoſitions admit of a great many variations.

Gilding of LEATHER. Take glair of the whites of eggs, or gum water, and with a bruſh rub over the leather with either of them; then lay on the gold or ſilver, and, letting them dry, burniſh them. See the articles GILDING and BURNISHING.

To dreſs or cover LEATHER *with Silver or Gold.* Take brown-red; grind or move it on a ſtone with a muller, adding water and chalk; and when the latter is diſſolved, rub or lightly daub the leather over with it, till it looks a little whitiſh; and then lay on the leaf-ſilver or gold before the leather is quite dry, laying the leaves a little over each other, that there may not be the leaſt part uncovered; and when they have well cloſed with the leather, and are ſufficiently dried on and hardened, rub them over with an ivory poliſher, or the foretooth of a horſe.

LEAVEN, a piece of ſour dough, uſed to ferment and render light a much larger quantity of dough or paſte. See BREAD, BARM, and BAKING.

Leaven was ſtrictly forbidden by the law of Moſes during the ſeven days of the paſſover; and the Jews, in obedience to this law, very carefully purified their houſes from all leaven as ſoon as the vigil of the feaſt began. Nothing of honey or leaven was to have place in any thing preſented to the Lord, upon his altar, during this ſolemnity. If during the feaſt, the leaſt particle of leaven was found in their houſes, they imagined the whole was polluted, for a little leaven leaveneth the whole lump. Leaven, in its figurative ſenſe, ſignifies the bad paſſions of envy and malice, and rancour, which ſour the temper, and extend their ferment over the ſocial affections; whereas unleavened bread implies ſincerity and truth. It is frequently uſed for any kind of moral contagion.

LEAVES OF PLANTS. See LEAF.

Colours extracted from LEAVES. See COLOUR-MAKING, n° 37.

LEBADEA, or LEBADIA, an ancient town of Bœotia, on the borders of Phocis, ſituated between Helicon and Chæronea, near Coronæa. In it ſtood the oracle of Jupiter Trophonius, which whoever went to conſult, deſcended into a ſubterraneous gulf.

LEBEDA, an ancient ſea-port town of Africa, in the kingdom of Tripoli, with a pretty good harbour, and an old caſtle, ſeated on the Mediterranean Sea; in E. Long. 14. 50. N. Lat. 32. 10.

LEBEDOS, reckoned among the twelve ancient cities of Ionia, was ſituated to the ſouth of Smyrna. It was the reſidence of ſtage-players, and the place where they met from all parts of Ionia, as far as the Helleſpont, and celebrated annual games in honour of Bacchus, (Strabo). It was overthrown by Lyſimachus, who removed the inhabitants to Epheſus; ſcarce ever after recovering itſelf, and becoming rather a village than a town, (Horace.)

LEBEN, or LEBENA, (anc. geog.) one of the port-towns of the Gortynians, near the promontory Leon, on the ſouth-eaſt ſide of Crete; famous for a temple of Æſculapius in imitation of that of Cyrenaica.

LEBRIXA, an ancient, ſtrong, and pleaſant town of Spain, in Andaluſia; ſeated on a territory abounding in corn, wine, and a great number of olive-trees, of whoſe fruit they make the beſt oil in Spain. W. Long. 5. 32. N. Lat. 36. 52.

LEBUS, a town of Germany, in the circle of Upper Saxony, and in the marquiſate of Brandenburg, with a biſhop's ſee, ſecularized in favour of the houſe of Brandenburg. It is ſeated on the river Oder, in E. Long. 14. 55. N. Lat. 52. 28.

LECCE, a rich, populous, and moſt beautiful town of Italy, in the kingdom of Naples and in the Terra d'Otranto, of which it is the chief place, and the ſee of a biſhop. E. Long. 18. 20. N. Lat. 40. 38.

LECCO, a town of Italy, in the duchy of Milan, ſeated on the eaſtern ſide of the lake Como. E. Long. 9. 40. N. Lat. 45. 45.

LECHLADE, a town of Glouceſterſhire in England, ſeated at the confluence of the river Lech with the Thames. W. Long. 2. 15. N. Lat. 51. 42.

LECHNICH, a town of Germany in the circle of the Lower Rhine, and in the electorate of Cologne. E. Long. 6. 35. N. Lat. 50. 40.

LECTI, beds or couches, were of two kinds amongſt the Romans, as being deſtined to two different uſes, to lie upon at entertainments, and to repoſe upon for nightly reſt. The firſt were called *lecti tricliniares*, the other *lecti cubicularii*. See BEDS.

LECTICA, was a litter or vehicle, in which the Romans were carried. It was of two kinds, covered and uncovered. The covered lectica is called by Pliny *cubiculum viatorum*, a traveller's bed-chamber: And indeed we are informed that Auguſtus frequently ordered his ſervants to ſtop his litter that he might ſleep upon the road. This vehicle was carried by ſix or eight men called *lecticarii*. The lectica differed from the *ſella*, for in the firſt the traveller could recline himſelf for ſleep, in the latter he was obliged to ſit. The lectica was invented in Bithynia; the ſella was a Roman machine, and eſteemed the more honourable of the two. Lectica was alſo the name of the funeral bed or bier for carrying out the dead.

LECTICARII, among the Romans, ſervants who carried the LECTICA.

LECTICARIUS was alſo an officer in the Greek church, whoſe buſineſs it was to bear off the bodies of thoſe who died, and to bury them. Theſe were otherwiſe denominated *decani* and *copiatæ*.

LECTIO, *reading*. Conſidered in a medicinal view, it is ſaid by Celſus, lib. i. cap. 4. to be bad, eſpecially after ſupper, for thoſe whoſe heads are weak; and in lib. 1. cap. 8. he recommends reading with an audible voice for ſuch as have weak ſtomachs. It is alſo directed by Paulus Æginetus as an exerciſe, lib. 1. cap. 19.

LECTISTERNIUM, a ſolemn ceremony obſerved by the Romans in times of public danger, wherein an entertainment was prepared with great magnificence, and ſerved up in the temples. The gods were invited to partake of the good cheer, and their ſtatutes placed upon couches round the table in the ſame manner as men uſed to ſit at meat. The firſt lectiſternium held at Rome was in honour of Apollo, Latona, Diana, Hercules, Mercury, and Neptune, to put a ſtop to a contagious diſtemper which raged amongſt the cattle, in the year of Rome 354. At theſe feaſts the Epulones preſided, and the ſacred banquet was called *epulum*. See EPULO, EPULUM, &c.

Something like the lectiſternium was occaſionally obſerved among the Greeks, according to Caſaubon.

LECTORES, among the Romans, ſervants in great mens houſes, who were employed in reading while their maſters were at ſupper. They were called by the Greeks ANAGNOSTÆ.

LECTOURE, an ancient and ſtrong town of France, in Gaſcony, with a caſtle and a biſhop's ſee; ſeated on a mountain at the foot of which runs the river Gers. E. Long. 0. 42. N. Lat. 43. 56.

LECTURERS, in England, are an order of preachers in pariſh churches, diſtinct from the rector, vicar, and curate. They are choſen by the veſtry, or chief inhabitants of the pariſh, ſupported by voluntary ſubſcriptions and legacies, and are uſually the afternoon preachers in the Sunday ſervice. The term is alſo more generally applied to thoſe who preach on Sunday, or on any ſtated day of the week, in churches, or other places of public worſhip. By 13 & 14 Car. II. cap. 4. lecturers in churches, unlicenſed, and not conforming to the liturgy, ſhall be diſabled, and ſhall alſo ſuffer three months impriſonment in the common goal; and two juſtices, or the mayor in a town corporate, ſhall, upon certificate from the ordinary, commit them accordingly. Where there are lectures founded by the donations of pious perſons, the lecturers are appointed by the founders without any interpoſition or conſent of rectors of churches, &c. though with the leave and approbation of the biſhop; ſuch as that of Lady Moyer's at St Paul's. But the lecturer is not intitled to the pulpit, without the conſent of the rector or vicar, who is poſſeſſed of the freehold of the church.

LEDA, (fab. hiſt.) a daughter of king Theſpius and Eurythemus, who married Tyndarus king of Sparta. She was ſeen bathing in the river Eurotas by Jupiter, when ſhe was ſome few days advanced in her pregnancy, and the god, ſtruck with her beauty, reſolved to deceive her. He perſuaded Venus to change herſelf into an eagle, while he aſſumed the form of a ſwan, and after this metamorphoſis Jupiter, as if fearful of the tyrannical cruelty of the bird of prey, fled through the air into the arms of Leda, who willingly ſheltered the trembling ſwan from the aſſaults of his ſuperior enemy. The careſſes with which the naked Leda received the ſwan, enabled Jupiter to avail himſelf of his ſituation, and nine months after this adventure the wife of Tyndarus brought forth two eggs, of one of which ſprung Pollux and Helena, and of the other Caſtor and Clytemneſtra. The two former were deemed the offspring of Jupiter, and the others claimed Tyndarus for their father. Some mythologiſts attribute this amour to Nemeſis and not to Leda; and they farther mention, that Leda was entruſted with the education of the children which ſprung from the eggs brought forth by Nemeſis. To reconcile this diverſity of opinions, others maintain that Leda received the name of *Nemeſis* after death. Homer and Heſiod make no mention of the metamorphoſis of Jupiter into a ſwan, whence ſome have imagined that the fable was unknown to theſe two ancient poets, and probably invented ſince their age.

LEDBURY, a town of Herefordſhire in England. It is a well-built town ſeated on a rich clay ſoil, and inhabited moſtly by clothiers, who carry on a pretty large trade. W. Long. 2. 27. N. Lat. 52. 6.

LEDESMA, an ancient and ſtrong town of Spain, in the kingdom of Leon, ſeated on the river Tome, in W. Long. 5. 25. N. Lat 47. 2.

LEDGER, the principal book wherein merchants enter their accounts. See BOOK-KEEPING.

LEDUM, MARSH CISTUS, or *Wild Roſemary*: A genus of the monogynia order, belonging to the decandria claſs of plants; and in the natural method ranking under the 18th order, *Bicornes*. The calyx is quinquefid; the corolla plain and quinquepartite; the capſule quinquelocular, and opening at the baſe. There is but one ſpecies, viz. the paluſtre, with very narrow leaves. This grows naturally upon bogs and moſſes in many parts of Yorkſhire, Cheſhire, and Lancaſhire; riſing with a ſlender ſhrubby ſtalk about two feet high, dividing into many ſlender branches, garniſhed with narrow leaves, not much unlike thoſe of heath. The flowers are produced in ſmall cluſters at the end of the branches, and are ſhaped like thoſe of the ſtrawberry-tree, but ſpread open wider at top. Theſe are of a reddiſh colour, and in the natural places of their growth are ſucceeded by ſeed-veſſels filled with ſmall ſeeds which ripen in autumn.—This plant is with great difficulty kept in a garden; for as it naturally grows upon bogs, unleſs the plants have a ſimilar ſoil they will not thrive. They muſt be procured from the places of their growth, and taken up with good roots; otherwiſe they will not live.

LEE, an epithet uſed by ſeamen to diſtinguiſh that part of the hemiſphere to which the wind is directed, from the other part whence it ariſes; which latter is accordingly called *to windward*. This expreſſion is chiefly uſed when the wind croſſes the line of a ſhip's courſe, ſo that all on a ſide of her is called *to windward*, and all on the oppoſite ſide *to leeward*. Hence,

Under the Lee, implies farther to the leeward, or farther from that part of the horizon whence the wind blows: as,

Under the Lee *of the ſhore; i. e.* at a ſhort diſtance from the ſhore which lies to windward. This phraſe is commonly underſtood to expreſs the ſituation of a veſſel anchored, or ſailing under the weather-ſhore, where there is always ſmoother water, and leſs danger of heavy ſeas, than at a great diſtance from it.

Lee Larches, the ſudden and violent rolls which a ſhip often takes to the leeward in a high ſea, particularly when a large wave ſtrikes her on the weather-ſide.

Lee-Side, all that part of a ſhip or boat which lies between the maſt and the ſide fartheſt from the direction of the wind; or otherwiſe, the half of a ſhip, which is preſſed down towards the water by the effort of the ſails, as ſeparated from the other half by a line drawn through the middle of her length. That part of the ſhip which lies to windward of this line is accordingly called the *weather-ſide*. Thus admit a ſhip to be ſailing ſouthward, with the wind at eaſt, then is her ſtarbord or right ſide the *lee ſide;* and the larboard, or left, the *weather-ſide*.

Lee-Stone. See *Lee-Penny*.

Lee-Way. See Navigation.

LEE (Nathaniel), a very eminent dramatic poet of the laſt century, was the ſon of a clergyman, who gave him a liberal education.—He received his firſt rudiments of learning at Weſtminſter ſchool; from whence he went to Trinity-college, Cambridge.—Going to London, however, his inclination prompted him to appear on the theatre; but he was not more ſucceſsful in repreſenting the thoughts of other men, than many a genius beſides, who have been equally unfortunate in treading the ſtage, although they knew ſo well how to write for it. He produced 11 tragedies, all of which contain a very great portion of true poetic enthuſiaſm. None, if any, ever felt the paſſion of love more truly; nor could any one deſcribe it with more tenderneſs. Addiſon commends his genius highly; obſerving, that none of the Engliſh poets had a happier turn for tragedy, although his natural fire and unbridled impetuoſity hurried him beyond all bounds of probability, and ſometimes were quite out of nature. The truth is, this poet's imagination ran away with his reaſon; ſo that at length he became quite crazy; and grew ſo mad, that his friends were obliged to confine him in bedlam, where he made that famous witty reply to a coxcomb ſcribbler, who had the cruelty to jeer him with his misfortune, by obſerving that it was an eaſy thing to write like a madman:—"No (ſaid Lee), it is not an eaſy thing to write like a madman; but it is very eaſy to write like a fool." Lee had the good fortune to recover the uſe of his reaſon ſo far as to be diſcharged from his melancholy confinement; but he did not long ſurvive his enlargement, dying at the early age of 34. Cibber, in his Lives of the Poets, ſays he periſhed unfortunately in a night-ramble in London ſtreets.—His Theodoſius and Alexander the Great are ſtock-plays, and to this day are often acted with great applauſe. The late Mr Barry was particularly fortunate in the character of the Macedonian Hero.

Lee-Penny, or *Lee-ſtone*, a curious piece of antiquity belonging to the family of Lee in Scotland, and of which the following account has been given in the Gentleman's Magazine for December 1787.

It is a ſtone of a dark red colour and triangular ſhape, and its ſize about half an inch each ſide. It is ſet in a piece of ſilver coin, which, though much defaced, by ſome letters ſtill remaining is ſuppoſed to be a ſhilling of Edward I. the croſs being very plain, as it is on his ſhillings.—It has been, by tradition, in the Lee family ſince the year 1320 odds; that is, a little after the death of King Robert Bruce, who having ordered his heart to be carried to the Holy Land, there to be buried, one of the noble family of Douglas was ſent with it, and it is ſaid got the Crowned Heart in his arms from that circumſtance: but the perſon who carried the heart was Simon Locard of Lee, who juſt about this time borrowed a large ſum of money from Sir William de Lendſay, prior of Air, for which he granted a bond of annuity of ten pounds of ſilver, during the life of the ſaid Sir William de Lendſay, out of his lands of Lee and Cartland. The original bond, dated 1323, and witneſſed by the principal nobility of the country, is ſtill remaining among the family papers.

As this was a great ſum in thoſe days, it is thought it was borrowed for that expedition; and, from his being the perſon who carried the royal heart, he changed his name to *Lockheart*, as it is ſometimes ſpelled, or Lockhart, and got a heart within a lock for part of his arms, with the motto *Corda ſerata pando*.—This Simon Lockhart having taken priſoner a Saracen prince or chief, his wife came to ranſom him; and on counting out the money or jewels, this ſtone fell out of her purſe, which ſhe haſtily ſnatched up; which Simon Lockhart obſerving, inſiſted to have it, elſe he would not give up his priſoner.—Upon this the lady gave it him, and told him its many virtues, *viz.* that it cured all diſeaſes in cattle, and the bite of a mad dog both in man and beaſt. It is uſed by dipping the ſtone in water, which is given to the diſeaſed cattle to drink; and the perſon who has been bit, and the wound or part infected, is waſhed with the water. There are no words uſed in the dipping of the ſtone, nor any money taken by the ſervants, without incurring the owner's diſpleaſure. Many are the cures ſaid to be performed by it, and people come from all parts of Scotland, and even as far up in England as Yorkſhire, to get the water in which the ſtone is dipped, to give their cattle when ill of the murrain eſpecially, and black-leg.—A great many years ago, a complaint was made to the eccleſiaſtical courts againſt the laird of Lee, then Sir James Lockhart, for uſing witchcraft.—It is ſaid, when the plague was laſt at Newcaſtle, the inhabitants ſent for the Lee-penny, and gave a bond for a large ſum in truſt for the loan; and that they thought it did ſo much good, that they offered to pay the money, and keep the Lee-penny; but the gentleman would not part with it. A copy of this bond is very well atteſted to have been among the family papers, but ſuppoſed to have been ſpoiled, along with many more valuable ones, about 50 years ago, by rain getting into the charter-room, during a long minority, and no family reſiding at Lee.

The moſt remarkable cure performed upon any perſon, was that of Lady Baird of Sauchtonhall, near Edinburgh; who having been bit by a mad dog, was come the length of a hydrophobia; upon which, having ſent to beg the Lee-penny might be ſent to her houſe, ſhe uſed it for ſome weeks, drinking and bathing in the water it was dipped in, and was quite recovered. This happened above 80 years ago; but it is very well atteſted, having been told by the lady of the then laird of Lee, and who died within theſe thirty years. She alſo told, that her huſband Mr Lockhart, and ſhe, were entertained at Sauchtonhall by Sir Robert Baird and his lady, for ſeveral days, in the moſt ſumptuous manner, on account of the lady's recovery, and in gratitude for the loan of the Lee-penny ſo long, as it was never allowed to be carried away from the houſe of Lee.

N. B. It was tried by a lapidary, and found to be a ſtone; but of what kind he could not tell.

LEECH, in zoology. See HIRUDO.

LEECHES in a ſhip, the borders or edges of a ſail which are either ſloping or perpendicular.

The leeches of all ſails whoſe tops and bottoms are parallel to the deck, or at right angles to the maſt, are denominated from the ſhip's ſide, and the ſail to which they belong; as the *ſtarboard*-leech of the mainſail, the *lee*-leech of the fore-top-ſail, &c. But the ſails which are fixed obliquely on the maſts have their leeches named from their ſituation with reſpect to the ſhip's length; as the *fore*-leech of the mizen, the *after*-leech of the jib or fore-ſtayſail, &c.

LEECH-Lines, certain ropes faſtened to the middle of the leeches of the main-ſail and fore-ſail, and communicating with blocks under the oppoſite ſides of the top, whence they paſs downwards to the deck, ſerving to truſs up thoſe ſails to the yard as occaſion requires. See BRAILS.

LEECH-Rope, a name given to that part of the bolt-rope to which the border or ſkirt of a ſail is ſewed. In all ſails whoſe oppoſite leeches are of the ſame length, it is terminated above the earing, and below the clue. See *BOLT-Rope*, CLUE, and EARING.

LEEDS, a town of the Weſt Riding of Yorkſhire, 196 miles from London, has a magnificent ſtone-bridge over the river Aire to the ſuburbs. It was incorporated by King Charles I. with a chief alderman, nine burgeſſes, and 20 aſſiſtants; and by Charles II. with a mayor, 12 aldermen, and 24 aſſiſtants. It has been a long time famous for the woollen manufacture, and is one of the largeſt and moſt flouriſhing towns in the county, yet had but one church till the reign of Charles I. By the late inland navigation, it has communication with the rivers Merſey, Dee, Ribble, Ouſe, Trent, Darwent, Severn, Humber, Thames, Avon, &c. which navigation, including its windings, extends above 500 miles in the counties of Lincoln, Nottingham, Lancaſter, Weſtmoreland, Cheſter, Stafford, Warwich, Leiſter, Oxford, Worceſter, &c. Here is a long ſtreet full of ſhops, and a hall for the ſale of cloth, built in 1758. The merchants of this place, York, and Hull, ſhip them off at the latter, for Holland, Hamburgh, and the north. After ringing of the market-bell at ſix or ſeven in the morning, the chapmen come and match their patterns, when they treat for the cloth with a whiſper, becauſe the colthiers ſtandings are ſo near each other; and perhaps 20,000 l. worth of cloth is ſold in an hour's time. At half an hour after eight the bell rings again, when the clothiers make room for the linen-drapers, hardware-men, ſhoemakers, fruiterers, &c. At the ſame time the ſhambles are well ſtored with all ſorts of fiſh and fleſh; and 500 horſe loads of apples have been counted here in a day. There is a magnificent hall, where they alſo ſell great quantities of white cloth; and here is a noble guildhall, with a fine marble ſtatue of Queen Anne, erected about the year 1714. Its river being navigable by boats, they ſend other goods, beſides their cloth, to Wakefield, York, and Hull, and furniſh York with coals. There is a houſe called *Red-hall*, bacauſe it was the firſt brick-building in the town. and K. Charles I. had an appartment in it, which is ever ſince called the *King's chamber*. There is another place called *Tower-hill*, on which there was once a tower; beſides which, there was a caſtle which King Stephen beſieged in his march to Scotland. Here was alſo a park, where are now incloſures. There is a workhouſe here of free-ſtone, where poor children are taught to mix-wool, and perform other eaſy branches of that manufacture, and a part of it has been uſed many years as an hoſpital for the reception of the aged poor. Here are three alms-houſes, and two charity-ſchools of blue-coat boys to the number of 100. In the ceiling of St Peter's, its only parochial church, the delivery of the law to Moſes is finely painted in freſco by Parmentier. It is a venerable free-ſtone pile built in the cathedral faſhion, and ſeems to have been the patch-work of ſeveral ages. The increaſe of building in Leeds in the year 1786, was nearly 400 houſes. There is a Preſbyterian meeting-houſe here, erected in 1691, called the *new chapel*, which is the ſtatelieſt, if not the oldeſt, of that denomination in the north of England; and in the town and its ſuburbs are ſeveral other meeting-houſes, as is always obſervable in towns of great trade and manufacture. It is noted for ſome medicinal ſprings; one of which, called *St Peter's*, is an extreme cold one, and has been very beneficial in rheumatiſms, rickets, &c. Here is an hoſpital for relief of the poor, who had been honeſt and induſtrious, endowed with 80 l. a-year, beſides 10 l. a-year for a maſter to read prayers and inſtruct them; alſo a free ſchool. Its markets are Tueſdays and Saturdays and the market-laws are more ſtrictly obſerved here than any where. It has two fairs in the year. Leeds, though a large town, ſends no members to parliament.

LEEK, in botany. See ALLIUM.

LEEK, a town of Staffordſhire in England, 155 miles from London. It lies among the barren moorlands, has a manufacture of buttons, a market on Wedneſday, and 7 fairs in the year. In the church-yard, at the ſouth-eaſt corner of the chancel, are the remains of a Daniſh croſs, now upright, and 10 feet high from the ground, beneath which are three ſteps. In Blue hills in the neighbourhood are coal-mines;

and a ſalt ſtream comes from thence, which tinges the ſtones and earth through which it runs with a ruſty colour, and, with the infuſion of galls, turns as black as ink. Here are rocks of a moſt ſurpriſing height, without any turf or mould upon them.

LEER, in glaſs-making, a ſort of third furnace, intended to anneal and cool by proper degrees the veſſels when made. This properly comprehends two parts, the tower and leer. The tower is that part which lies directly above the melting-furnace, with a partition between them of a foot thick, in the midſt whereof there is a round hole, placed exactly over the furnace, through which the flame and heat paſs into the tower: on the floor of this tower the veſſels are ſet to anneal. There are two openings by which the veſſels are put into this tower; and after ſtanding there ſome time they are put into iron pans, which by degrees are drawn out all along that part of this furnace, which is properly called the *leer;* which is five or ſix yards long, that the veſſels may cool by degrees. This leer is continued to its tower and arched all along, and is about four feet wide, and high within. The glaſſes are cool by that time they are come to the mouth of this, which enters into a room where the glaſſes are placed when taken out.

LEES, the groſſeſt and moſt ponderous parts of liquors, which, being ſeparated by fermentation, fall to the bottom. The word comes from the French *lie;* and that either from *limus* "mud," or from *Lyeus* one of the ſurnames of Bacchus; or, according to du Cange, from *lia,* a corrupt Latin word ſignifying the ſame.—The vinegar-makers make a great trade of the lees of wine dried and made into cakes, after having ſqueezed out the remains of the liquor in preſſes.

LEET, or COURT LEET *(leta viſus franci plegii)*, is a court of record, ordained for puniſhing offences againſt the crown; and is ſaid to be the moſt ancient court of England. It inquires of all offences under high treaſon; but thoſe who are to be puniſhed with loſs of life or member, are only inquirable and preſentable here, and to be certified over to the juſtices of aſſiſe, (Stat. 1 Edw. III.). And this court is called the view of frank pledge, becauſe the king is to be there certified by the view of the ſteward, how many people are within every leet, and have an account of their good manners and government; and every perſon of the age of 12 years, who hath remained there for a year and a day, may be ſworn to be faithful to the king, and the people are to be kept in peace, &c. A leet is incident to a hundred, as a court baron to a manor: for by grant of a hundred, a leet paſſeth; and a hundred cannot be without a leet.—The uſual method of puniſhment in the court-leet, is by fine and amercement; the former aſſeſſed by the ſteward, and the latter by the jury.

LEEUW (William de), an eminent engraver of the laſt century. He was a native of Flanders, and the diſciple of Soutman, whoſe manner of engraving, or rather etching, he imitated. His prints generally appear harſh at firſt ſight; but grow into favour upon examination, and ſeveral of them have great effect; particularly his Daniel in the lion's den, a large plate lengthwiſe, from Rubens. The firſt impreſſions of this plate are before the name of Dankertz was added, and are now extremely rare and dear.

LEEWARD Ship, a veſſel that falls much to leeward of her houſe, when ſailing cloſe-hauled, and conſequently loſes much ground.

To LEEWARD, towards that part of the horizon which lies under the lee, or whither the wind bloweth. Thus, "We ſaw a fleet *under the lee,*" and, "We ſaw a fleet *to leeward,*" are ſynonymous expreſſions.

LEG, in anatomy, the whole lower extremity from the acetabula of the oſſa innominata, commonly divided into three parts, viz. the thigh, the *leg* properly ſo called, and the foot. See ANATOMY, n° 60.

LEGACY, in Scots law, a donation by one perſon to another, to be paid by the giver's executor after his death. See LAW, n° clxxxi, 3.

LEGATE, a cardinal or biſhop, whom the pope ſends as his ambaſſador to ſovereign princes. See AMBASSADOR.

There are three kinds of legates, viz. legates *a latere,* legates *de latere,* and legates by office, or *legati nati:* of theſe the moſt conſiderable are the legates *a latere,* the next are the legates *de latere.* See the article LATERE.

Legates by office are thoſe who have not any particular legation given them; but who, by virtue of their dignity and rank in the church, become legates: ſuch are the archbiſhop of Rheims and Arles: but the authority of theſe legates is much inferior to that of the legates *a latĕre.*

The power of a legate is ſometimes given without the title. Some of the nuncios are inveſted with it. It was one of the eccleſiaſtical privileges of England from the Norman conqueſt, that no foreign legate ſhould be obtruded upon the Engliſh, unleſs the king ſhould deſire it upon ſome extraordinary emergency, as when a caſe was too difficult for the Engliſh prelates to determine.

The term *legate* comes from *legatus,* which Varro derives from *legere,* "to chooſe;" and others from *legare, delegare,* "to ſend, delegate."

Court of the LEGATE, was a court obtained by Cardinal Woolſey of Pope Leo X. in the ninth year of Henry VIII. wherein he, as legate of the pope, had power to prove wills, and diſpenſe with offences againſt the ſpiritual laws, &c. It was but of ſhort continuance.

LEGATEE, in Scots law, the perſon to whom a legacy is provided.

LEGATIO LIBERA, was a privilege frequently obtained of the ſtate, by ſenators of Rome, for going into any province or country, upon their own private buſineſs, in the quality of *legati* or envoys from the ſenate, that the dignity of this nominal office might ſecure them a good reception, and have an influence on the management of their concerns. The cities and towns through which they paſſed were obliged to defray their expences.—This was called *libera legatio,* becauſe they might lay aſide the office as ſoon as they pleaſed, and were not encumbered with any actual truſt.

LEGATUS, a military officer amongſt the Romans, who commanded as deputy of the commander in chief. The *legati,* at their firſt inſtitution, were not ſo much to command as to adviſe. They were generally choſen by the conſuls, with the approbation of the ſenate. As to the number of the *legati*, we have no certain information, though we may upon good grounds aſſign one to every legion. In the abſence of conſul or proconſul, they had the honour to uſe the *faſces*.

Under the emperors there were two ſorts of *legati*, *conſulares*, and *prætorii*. The firſt commanded whole armies, as the emperors lieutenant-generals; and the other had the command of particular legions.

The *legati* under the proconſuls in the provinces, ſerved for judging inferior cauſes, and management of ſmaller concerns, remitting things of great moment to the governor or preſident himſelf. This was the original office of the *legati*, as was hinted above; though, as we have ſeen, they were afterwards admitted to command in the army.

LEGEND, any idle or ridiculous ſtory told by the Romaniſts concerning their ſaints, and other perſons, in order to ſupport the credit of their religion.

The legend was originally a book uſed in the old Romiſh churches, containing the leſſons to be read at divine ſervice; hence the lives of the ſaints and martyrs came to be called *legends*, becauſe chapters were read out of them at matins, and at the refectories of religious houſes. Among theſe the golden legend, which is a collection of the lives of the ſaints, were received in the church with great applauſe, which it maintained for 200 years; though it is ſtill ſo full of ridiculous and romantic ſtories, that the Romaniſts themſelves are now aſhamed of it.

LEGEND is alſo uſed by authors to ſignify the words or letters engraven about the margins, &c. of coins. Thus the legend of a French crown is, SIT NOMEN DOMINI BENEDICTVM: that of a moidore, is IN HOC SIGNO VINCES: on thoſe of the laſt emperors of Conſtantinople, we find IESVS CHRISTVS BASILEVS BASILEON, IHS XPS NIKA IESVS CHRISTVS VINCIT.

LEGEND is alſo applied to the inſcription of medals, which ſerves to explain the figures of devices repreſented on them. In ſtrictneſs, the legend differs from the inſcription; this laſt properly ſignifying words placed on the reverſe of a medal, in lieu of figures.

It ſeems as if the ancients had intended their medals ſhould ſerve both as images and as emblems; the former for the common people, and the other for perſons of taſte and parts; the images to repreſent the faces of princes; emblems their virtues and great actions; ſo that the legend is to be looked on as the ſoul of the medal, and the figures as the body.

Every medal has properly two legends; that on the front and that on the reverſe. The firſt generally ſerves only to diſtinguiſh the perſon by his name, titles, offices, &c. the latter is intended to expreſs his noble and virtuous ſentiments, his good deeds, and the advantages the public has reaped by him. This, however, does not hold univerſally; for ſometimes we find the titles ſhared between both ſides, and ſometimes alſo the legend.

In the medals of cities and provinces, as the head is uſually the genius of the place, or at leaſt ſome deity adored there, the legend is the name of the city, province, or deity, or of both together; and the reverſe is ſome ſymbol of the city, &c. frequently without a legend, ſometimes with that of one of its magiſtrates.

Legends generally commemorate the virtues of princes, their honour and conſecrations, ſignal events, public monuments, deities, vows, privileges, &c. which are either in Latin or Greek, or a mixture of both, and are intended to eternize their names, and the benefits done by them to the empire.

LEGERDEMAIN,

Or Sleight of Hand.

A DENOMINATION given to certain deceptive performances, which either depend altogether on dexterity and addreſs or derive but a ſmall degree of aid from philoſophical principles. Of theſe we ſhall preſent our readers with a ſelection of the beſt that have been either explained in books or publicly exhibited.

Sect. I. *Performances with Cups and Balls.*

Preliminary explanation.

THE following method of exerciſing this ſimple and ingenious amuſement is that practiſed by one Mr Koop a German, whoſe performances are deſervedly preferred to thoſe of former artiſts. In this, however, as in all the other branches belonging to the art of ledergemain, it is not ſufficient that a perſon has the requiſite dexterity, or ſleight of hand; it is neceſſary alſo to take off the attention of the ſpectators by ſome entertaining diſcourſe; which not only prevents diſcovery, but adds greatly to the amuſement of the company; for which reaſon, ſuch diſcourſe is inſerted in this article.

To play his part properly, the performer on cups and balls ought to provide himſelf with a bag about 12 inches long, and from eight to ten inn depth. The inſide muſt be furniſhed with a number of pockets for holding the ſeveral articles neceſſary in the amuſement; and this bag the performer muſt hang before him.

The materials neceſſary for the performer are,

1. Three white poliſhed tin-cups, repreſented by A, B, and C (fig. 1.) in the ſhape of a truncated cone with a double ledge D, towards the baſe. This ledge, which is about half an inch in breadth, ſerves to raiſe the cups eaſily by, admitting alſo the hand to paſs a ſmall cork-ball (ſee fig. 5.) The upper part E of the cup ought to be hollowed in the form of a ſphere, ſufficient to contain the balls without their appearing above the upper edge of the cups.

Plate CCLXVII.

2. It is alſo neceſſary to have a ſmall rod, called *Jacob's ſtaff*; which is uſually made of ebony, and neatly tipt with ivory at both ends. This is frequently uſed for ſtriking on the cups; and being held in the hand where the balls are alſo kept, it gives the operator an

opportunity of keeping that hand generally ſhut, or of varying its poſition, in order to avoid being diſcovered. The balls are made of cork, blackened by ſlight burning on the outſide.

The dexterity in performing this operation conſiſts in artfully ſecreting a ball in the right hand, and making it to appear or diſappear in the ſame hand. The ſecreting it between the fingers is called *conjuring the ball*, at which time the ſpectators are to ſuppoſe that it is kept in the other hand, or that it was paſſed under a cup; but if it is made to reappear when held ſecretly in the hand, they muſt believe that it came out of the place laſt touched by the fingers.

Conjuring the ball is performed by putting it between the place of the thumb A and the finger B (fig. 2.), conveying it with the thumb, by rolling it upon the fingers the length of the line BC, moving the middle finger D to a diſtance, and placing the ball at the junction of the fingers C (fig. 3.); but in this part of the operation it is neceſſary to hold the ball rather tight, leſt it ſhould fall down and diſcover the ſecret. In order to make it appear, we muſt bring back the ball the ſame way from C to D; and every time that it is conjured, or made to diſappear, as well as when it is made to reappear, the palm of the hand ſhould be turned from the ſide of the table on which the operator is playing.

While this part of the trick is performing, the operator muſt let the ſpectators know that the ball has been paſſed under a cup, or into another hand; and in the firſt caſe he makes a motion with the hand (as repreſented fig. 4.) indicating that he had thrown it through the cup; at which time alſo he conjures it, approaching the two fingers of the right hand towards the left, which laſt he holds open, and makes a motion as if the ball had been placed there, ſhutting the left hand inſtantly. It is alſo to be ſuppoſed, at every time when a ball ſeems to be placed below a cup, that it has been held in the left hand; and when he raiſes the cup with the right hand as in fig. 5. the left hand muſt be opened, and he reſts the ball at that inſtant upon the hollow of the other, ſliding it along the fingers.

At the time the ball is to be put ſecretly under the cup, it ſhould lie between the two fingers of the right hand (fig. 5.) With this hand he raiſes the cup; and placing it on the table, lets go the ball, which, according to its poſition in fig. 6. ſhould be found near the edge of the cup when taken into the hand. If he would put the ball ſecretly between the two cups, it muſt be let go by jerking it towards the bottom of the cup which he holds; and places it very quickly on that in which the ball is to be found. When the ball is in this ſituation, if the operator ſhould want it to diſappear, he muſt raiſe the two cups with his right hand, and draw out haſtily that under which the ball is placed; at the ſame inſtant lowering with his left hand the other cup, under which he places it.

In ſpeaking of the tricks which follow, terms are made uſe of which explain whether what is ſaid be feigned or true; of which terms explanations are given, and numbers adapted to the explanations of the different operations which follow.

I. *To put the ball under the cup:* Really done, with the fingers of the right or left hand.

II. *To put the ball under the cup or in the hand.*—A feigned conjuration; pretending to ſhut it up in the left hand, which is afterwards opened, in order to have it ſuppoſed that the ball is under the cup or elſewhere. See fig. 3.

III. *To paſs the ball under the cup.*—The ball ſuppoſed to be conjured is to be really introduced.

IV. *To paſs the ball between the cups*, is likewiſe real.

V. *To make the ball which is between the cups diſappear.*—This is likewiſe real; and performed, as has already been deſcribed, by drawing back with much precipitation and dexterity the cup on which it is placed, and lowering upon the table that which is above, and under which the ball muſt of conſequence be found.

VI. *To take the ball.* Real.—It is taken between two fingers of the right-hand, and ſhown before conjuration.

VII. *To take away the ball from under the cub.* This is done by taking it away in the ſight of the ſpectators.

VIII. *To draw the ball.* Feigned; or by pretending to draw it from the end of the rod, from the cup, or any other place, by bringing into the fingers the ball which was ſecreted.

IX. *To throw the ball through the cup*, is to conjure it in pretending to throw it.

X. *To raiſe up the cups.* This is really done in three ways; viz. either with the right hand, the rod, or the left hand. The firſt is when the ball is to be ſecretly inſerted in returning the cup to its place. In the ſecond, the rod is to be put on the tops of the cups to turn them over again, ſo that the balls may be ſhown which were to be paſſed into them. The third is when the operator intends to ſhow that no balls are in the cups, or that there are ſome.

XI. *To cover a cup.* This is really done, by taking with the right hand that which is to be put over another, and introducing at the ſame time a ball between the two.

XII. *To recover a cup.* It is done by taking with the left hand the cup to be put over or above, without introducing any thing into it.

The PERFORMANCES.

Performances.

1 *To put a ball under each cup and take it out again.* Having placed on the table the three cups and little rod, as ſhown in fig. 1. the performer muſt begin his manœuvres, by endeavouring to amuſe the ſpectators with ſome kind of entertaining diſcourſe. Nothing can be more *a propos* than the origin of the little rod and cups; and he muſt be very aſſiduous in this ſort of diſcourſe to take off the eyes of the ſpectators as much as poſſible. The following may be a ſpecimen of the manner in which he ought to addreſs his audience: "There are many perſons who meddle with the play of the cups and balls, and yet know nothing about them. This is by no means extraordinary: even I who now play before you, pretend to know but little. Nay, ſome time ago, I was ſuch a novice as to think of playing before a numerous aſſembly with glaſs cups, in which you may gueſs I did not meet with great applauſe. I do not indeed practiſe this method but before ſuch as are actually blind; neither do I play with China cups, leſt, through aukwardneſs in feigning to break their handles, I ſhould do ſo in reality. Theſe are the cups which anſwer my purpoſes. They are made of ſuch metal as the alchemiſts attributed to

Jupiter and Mars, or, to ſpeak more properly and intelligibly, they are made of tin. Behold and examine theſe cups (*ſhowing the cups to the company, and putting them on the table:)* All my ſcience, and it is in that in which it is admirable, conſiſts in deceiving the eyes, and paſſing the balls into the cups without your perceiving how it is done. I adviſe you therefore to pay no attention to my words, but to examine well my hands, (*ſhowing his hands.*) If there is in this company any perſon who has the misfortune to uſe ſpectacles, he may retire; but the moſt clear-ſighted will ſee nothing there.

"Here is the little Jacob's rod (*ſhowing the rod with the left hand*); that is to ſay, the magazine from which I take all my balls (*taking ſecretly with the other hand a ball from his bag, which he hides between his fingers*). There is not one in England ſo well furniſhed. Obſerve, that the more I take from it the more remain: I draw from it (VIII.) this ball, (*ſhowing it and placing it upon the table,* (I.) Obſerve that there is nothing under the cups (*ſhowing the inſide of the cups*), and that I have no other ball in my hands, (*ſhowing his hands*). I take (VI.) this ball: I put it (II.) under this firſt cup. I draw (VIII.) a ſecond ball from my little rod, and I put it under this ſecond cup (*actually done*). It is proper here to tell you, that the generality of thoſe who play the cups only feign to put the balls there; but I do not deceive you and I actually put them there. (*He raiſes the cup* B, *and taking the ball which he has put under it in his right-hand fingers, ſhows it to the company*). I return it (II.) under the ſame cup. I take (VIII.) this third, and put it (II.) in the ſame way under this laſt cup. You are about to ſay that this is not very extraordinary, and that you could do it as well yourſelves. I agree with you; but the difficulty conſiſts in taking out theſe balls again through the cups, (*ſtriking the firſt cup with the rod*). I take (VIII.) this firſt ball (*ſhowing it*): I put it (II.) into my hand, and ſend it to Conſtantinople, (*he opens the left hand*). I take (VIII.) this, (*ſtriking with the rod on the ſecond cup*). I put it (II.) into my hand, and I ſend it to the Eaſt Indies, (*opening his left hand*). I take (VIII.) the laſt, and I put it (I.) on the table: Obſerve that there are no more under any of theſe cups, (*turning down the cups with the rod*).

2. *With the ſingle ball remaining on the table, to paſs a ball through each of the cups, and to take it off from the ſame.* "I return the cups to their places, and take (VI.) this ball, and I put it under this firſt cup. I take it back again (VIII.): obſerve that it is not there now, (*raiſing* (X.) *the cup with the left hand*). I put it (II.) under this other cup: I take it out again (VIII.) in the ſame manner, (*raiſing* (X.) *the cup*). I put it (II.) under the laſt cup, and take it out again, (VIII.) (*raiſing the laſt cup with the left hand, and placing the ball on the table*).

3. *With the ſingle ball remaining on the table, to take away a ball through two or three cups.*—In this performance the three cups are diſtinguiſhed by **A, B, C,** as in fig. 1.

"I never have any ball ſecreted in my hands, as the greateſt part of them who play the cups and balls have (*ſhowing his hands*). I take (VI.) this ball, and I put it (II.) under this cup B. cover it (XII.) with this cup C, and I take again (VIII.) this ball thro' the two cups (*ſhows the ball in placing it on the table, returns afterwards the cup* C *to its place, and raiſes* (X.) *the cup* B *to ſhow that there is nothing there*). I take again (VI.) this ſame ball. I put it (II.) under the ſame cup B: I cover it (XII.) with the two other cups C and A; and I take out (VIII.) this ball through the three cups (*ſhowing it and placing it on the table*).

4. *With the ſingle ball remaining on the table, to paſs the ſame ball from cup to cup.*—"I now beg of you to pay every poſſible attention, and you will very diſtinctly ſee this ball paſs from one cup into the other (*putting the cups at a greater diſtance from each other*). I take (VI.) this ball, and I put it (II.) under the cup C: there is nothing under this cup B (*raiſing it, introducing the ball, and taking the rod in his hand*). I command that which I have put under the cup C to paſs under that B. You ſee it (*moving the end of the rod from one cup to the other, as if he followed the ball*): obſerve that it is paſſed (*raiſing the cup with his left hand, and taking the ball with his right, ſhows it to the company*). I return it (II.) under this cup B; there is nothing under this A (*raiſing the cup with his right hand, and introducing the ball there*). I am going to paſs it under this laſt cup A. Look well; come near; (*making as if in ſeeing it he would ſhow with the end of the rod the path that it took*). You did not ſee it paſs? I am not much ſurpriſed: I did not ſee it myſelf; however, here it is under the cup (*raiſing the cup* A, *and placing it on the table*).

5. *With the ſame ball remaining on the table. The cups being covered, to paſs a ball from one into the other, without raiſing them up.*—"I was very right in telling you, that the moſt clear-ſighted would not ſee very much; but, for your comfort, here is a trick in which you will ſee nothing at all. I take this ball, and put it (II.) under this cup B. I cover it (XI.) with the two other cups (*taking one in each hand, and introducing the ball upon the cup* B): pay attention, that there is abſolutely nothing in my hands (*ſhowing them*). I command this ball to mount up upon the firſt cup (*taking up the two cups, and putting them in their places, he ſhows that it has mounted*). I return (II.) this ball under the ſame cup B. I cover it as before (*covers it in taking a cup in each hand, and introducing a ball between the ſecond and third cup*). I take (*the only ball with which he plays being under the third cup, he cannot ſhow it, but acts as if he had taken it out, and put it into the fingers of his left hand, which he holds in the air, in conducting the hand from one ſide to the other*). I take the ball, which is under theſe three cups; and I throw it thro' the firſt cup (*feigning to throw it*): obſerve that I have not conjured the ball, having nothing in my hands (*ſhowing them*); it is paſſed, however, (*raiſing the firſt cup with the left hand, putting the ball upon the table and the cups in their places.*)

6. *With the ſingle ball remaining on the table, to paſs a ball through the table and two cups.*—"You are undoubtedly ſurpriſed, that, having but a ſingle ball, I have been able, after having ſhown it to you, to paſs it under this cup without raiſing it; but let that not aſtoniſh you: I have ſecrets much more wonderful. I

convey, for example, the ſteeple of one village into another: I have ſympathetic quadrants, with which a converſation may be held at 200 leagues diſtance: I have a flying chariot which can conduct me to Rome in three days. I will ſhow all theſe curioſities as ſoon as my machines are entirely completed; that is to ſay, in a few centuries: but to amuſe you till the arrival of all theſe prodigies, I now continue the entertainment of the cups and balls. I put (II.) this ball under the cup A. I take it away again (VIII.) (*ſhowing it, and feigning to put it under his left-hand fingers*). I cover (XI.) this cup with the two others B and C (*introducing the ball between theſe two cups, uſing always the right hand, and feigning ſtill to hold it in his left*), and I paſs this ſame ball through the table and the two cups (*putting the left hand under the table.*) There it is paſſed (*raiſing the firſt cup.*)

7. *With the ſame ball. A ball having been put under a cup, to take it away again, and to paſs it between two others.*—" Here is again a very pretty trick: I take this ball, and I put it (II.) under this cup A. Obſerve, that there is nothing under the others (*ſhowing them and introducing the ball under the cup* C), nor in my hands: I take this ball, which is under the cup A (*feigning to take it out, and raiſing the bottom of the cup ſo that the ſpectators may not attend to his fingers*). I cover this cup C with the two others A and B, and I throw it (IX.) through theſe two cups (*raiſing them, and ſhowing that the ball is paſſed there*).

8. *With this ſingle ball and a ſhilling; to paſs a ball from one hand into the other*—" I take this ball; I put it (II.) into this hand, and I put into the other the ſhilling. In which hand do you think the ball is? or in which do you think the ſhilling may be? (*Whatever anſwer the ſpectator makes, the performer ſhows him that he is miſtaken, and that the whole is in the right hand; and this truth ſerves as a pretence to take a ball from the bag in putting the ſhilling back into it.*)

The performer may, however, without breaking the connection of theſe operations, diſpenſe with this trick, and feign to drop the ball he plays with, which affords him a pretence for taking another.

9. *With the ball remaining on the table, and that which is ſecretly taken out of the bag; to paſs under a cup the two balls put under the others.*—The operator goes on with his diſcourſe: "in order to give you ſtill farther amuſement, I take this ball and cut it in two (*taking it in his left hand, and holding the rod with his right; feigning to cut it, he puts afterwards the rod on the table, and brings back to his fingers ends the ball which he took out of the bag*). Nothing is ſo commodious as to be able in this manner to multiply the balls. When I am in want of money, I cut them again and again, until I may have had five or ſix buſhels (*placing the two balls on the table*). Obſerve that there is nothing under this cup A. I put there (II.) this firſt ball: there is nothing more under the two other cups (*introducing the ball under the cup* B). I take this ſecond ball, and I put it (II.) under the cup C: there is now a ball under theſe two cups A and C. I take away (VIII.) from this cup C this ball, and I throw it (IX.) through the middle cup B: obſerve that it is paſſed (*raiſing the cup* B, *and introducing there the ſecond ball*). I command this, which is under the other cup A, to paſs under the ſame cup B (*raiſing this cup, and ſhowing that they are both there, and placing them upon the table*).

10. *With the two balls which are upon the table. Two balls having been put under the ſame cup, to paſs them under the others.*—" When I was at college, the tutor told me it was neceſſary to know how to do my exerciſe in two ways. I have juſt now paſſed theſe two balls into the middle cup; I am now to make them go out; the one is not more difficult for me than the other. I take therefore theſe two balls, and place them under this cup B (*putting one ball under the cup, and conjuring the other*); obſerve that there is nothing under the cup A, nor under the other C (*introducing into this laſt the ball that he conjured*): I command one of theſe balls, which are under the middle cup, to paſs under the one or the other of theſe two cups A and C. Behold it already gone (*raiſing the cup* B *to ſhow that there is no more than a ſingle ball; and taking, with the right hand, the ball which is underneath, he ſhows it, and puts it* (II.) *under the ſame cup* B). Let us ſee into which cup it has paſſed (*raiſing immediately the cup* A, *and introducing the ball that he took from the cup* B): here it is under this cup C (*raiſing the cup;*) I command the other ball to paſs under this cup A (*he raiſes it, and ſhows that it paſſed there*)." This trick is frequently done with three balls, but it appears much more extraordinary with two.

11. *With theſe two balls, a third which he ſhows, and a fourth ſecreted in his hands; to paſs three balls under the ſame cup.*—" All this is but a trifle; I am going to ſhow you another trick with three balls (*taking out of the bag a third ball, and placing it on the table, ſecreting at the ſame time a fourth in his hand*). Obſerve that there is nothing under any of theſe cups (*raiſing them, and introducing them under the cup* C). I take this firſt ball, and throw it (IX.) through this cup C. Obſerve that it is paſſed (*raiſing* (X.) *the cup with the right hand*); I take this ſecond ball, and throw it (XI.) through the ſame cup. There it is paſſed (*raiſing* (X.) *again the cup*); I take the third, and I make it paſs the ſame (*raiſing* (X.) *the cup, and ſhowing that theſe are paſſed under all the three*).

12. *With the three balls remaining under the cup, and that held ſecretly in the hand; to paſs two balls from one cup into another, at the choice of a perſon, without touching any of the cups.*—" Here is another in which I have never been able to comprehend any thing; but it will aſtoniſh you much (*raiſing the cup* C, *and taking away the three balls from their places, he puts them under each cup, and in raiſing the cup* C *introduces there the fourth ball which he held ſecretly in his hand*). I take this ball (*that which is under the cup* B), and I put it (II.) under the ſame cup. I take this (*the ball from the cup* A), and I place it (I.) under the ſame cup (*putting there alſo that which was ſecreted in his hand*): I take this laſt, and I throw it (IX.) through the cup C; and to ſhow that I do not deceive you, behold it paſſed (*raiſing* (X.) *the cup that has been fixed upon, which ſuppoſe to be* C, *and ſhowing that there are two*). I take again theſe two balls, and put them under the cup C (*putting really but one*): obſerve that there is no more under this cup B (*introducing there the ball that he had juſt taken away, and ſhowing that he had no other in his hand*); I command one of theſe balls, which are under this cup C,

to go and join that which is under this A. Obſerve that it is paſſed. There! (*raiſing the cup* C, *and returning the two balls under the ſame cup, and raiſing* C, *in order to ſhow that there is but a ſingle one; and he places it again under the ſame cup: he does not raiſe the cup* B *under which a ball remains*).

13. *With the three balls that were placed upon cups, and that which remains hidden under the middle cup; to paſs under the ſame cup the balls put under the others.*—"I take this ball (*that which is upon the cup* C), and I put it (II.) under the ſame cup C; and I order it to paſs into this cup B: there it is paſſed (*in raiſing this cup he introduces a third ball*). I take this third ball, and put it (II.) under this cup C; and I command it to paſs into the cup B along the table, and in the ſight of the ſpectators (*taking the rod in his left hand, ſeigning to ſhow the way that it paſſed between the two cups*). Did you not ſee it then? Here it is (*He draws it* (VIII.) *from the end of the rod, which appears to ſhow it*). Go quickly (*throwing it* (IX.) *through the cup,* B; *and ſhowing that they are all three there, and that there is nothing under the two others; placing afterwards three of the balls on the table, and ſecreting the fourth in his hand*).

14. *With the three balls remaining upon the table, and that which is held ſecretly in his hand.—Multiplication of the balls.*

For this trick there muſt be a tin vaſe (ſee fig. 8.), at the bottom of which there muſt be contrived a falſe bottom A, which will fall down at pleaſure; that is to ſay, in reverſing it upon the table, by means of a ſmall trigger placed at the baſe of one of the handles B, introducing previouſly between the falſe and true bottoms a dozen of balls. The operator goes on with his diſcourſe.

"If any of the company believe in witches, I would give my advice that they ſhould believe in them no longer; as what I am about to do is much more ſurpriſing than the feats of any witch.—I put (I.) theſe three balls under the three cups you ſee on the table: I take away (VII.) this firſt ball (*that which is under the cup* C), and I put it (II.) into this vaſe. I take this, and I alſo put it (II.) into the vaſe. I take away (VII.) this third (*that which is under the cup* A), and I throw it (II.) the ſame way." (*Every time that he raiſes one of the cups to take away the ball, he introduces that which always remains ſecreted in his right hand; and this he repeats, conſtantly taking out one ball and putting in another, till he has introduced all the twelve balls; after which he reſumes his diſcourſe.*) "You imagine, perhaps, that I always make uſe of the ſame balls; but, to prove the contrary, here they are, (*inverting the vaſe ſo as to turn them all out*).

In this trick, if the vaſe be well made, the inſide may be ſhown, and it may even be previouſly inverted; in which caſe, it will not be ſuppoſed that any balls have been put into it.

15. *With the three balls remaining under each of the cups, and that which is hidden in his hand; to paſs one ball under each of the three cups.*

"I put all theſe balls into my pocket. I take (VI.) this (*the one ſecreted in his hand*), and I make it paſs through the table under this firſt cup C, (*conjuring it*). I take another from my bag (*ſhowing the ſame ball*). I make it paſs in the ſame manner through this B, (*conjures it again*). I take a third (*ſhowing ſtill the ſame*), and I make it paſs under this laſt cup A (*conjuring it*). Here are all the three paſſed (*turning over the cups, and in the taking them up again introduces the ball that he has in his hand under the cup* B, *and puts the three balls upon the three cups.*

16. *With the three balls put upon each cup, and that which was introduced under the middle cup; to draw two balls through the ſame cup.*—"There will be wanted now only two balls." Here the operator takes that which is under the cup C, and puts it (II.) into his bag. He takes in the fingers of his right hand the ball which is on the cup B, ſhowing it; and with the other covers the cup B, with that paſſing (IV.) there the ball which he feigned to put into his bag. He then takes the ball which is under the cup A with the right hand; and ſhowing a ball in each hand, tells the company that he put them (II.) under the cup A; though he actually puts but one, which he holds in his left. He then draws one of theſe balls through the ſame cup A, ſhowing it, and placing it upon the cup C. He then raiſes the cup A, and takes the ball which is under it with his right hand, adding, "There remains but one more." While pronouncing theſe words, he puts it (II.) under the cup. "I take (adds he) the other ball," (*raiſing the cup, and ſhowing that it is there no longer*); then, taking one of the two balls which ſeemed to remain alone, but put it (II.) into his bag, ſaying, "I return this into my bag."

17. *With a ball which is hidden under the middle cup, another hidden under that which covers it, that which remains in the hand, and a fourth which is upon the table; to paſs the ſame ball ſucceſſively through the three cups.*—The preceding trick was only on purpoſe to prepare the ſpectators for this; as they now imagine that the performer played only with one ball. He may now addreſs them in the following manner:

"I am now going to make a very pretty trick with this ſingle ball. I forgot to ſhow it to you at the beginning: I cover (XI.) theſe cups (*putting the cup* A *upon* C *and* B). I take (VI.) this ball, and I throw it (IX.) through the firſt cup;" (*raiſing* (X.) *the cup* A *with the right hand*). He then ſhows that it is paſſed between C and A; and, putting it in its place, he introduces there that which he has in his hand. "I take (ſays he) (VI.) this ſame ball, and I throw it through the other cup C;" and while he ſays ſo, he raiſes (X.) the cup C, ſhowing that it has paſſed, introducing there that which he has in his hand, and putting it in the place of the former. "I take again (continues he) (VI.) this ſame ball, and I throw it (IX.) through that laſt cup B," (*raiſing* (IX.) *the cup* B.) During which time he takes away the ball from under it with his left hand, then places it on the table, and returns the cup to its place, introducing there the ball which he has in his left hand.

18. *With the three balls which are under the cups, that which is on the table, and two which he takes from the bag; to paſs under a cup the balls put under the two others without raiſing theſe laſt.*—The performer may proceed in his diſcourſe in the following manner:

"Let us now return to the order of the entertainment which I have interrupted, and continue to play with three balls." He now takes two balls from his bag, by which means he in fact plays with ſix balls, though he pretends to play only with three. Theſe two balls, together with that which remains on the table, he puts on the top of each cup. “I take (ſays he) (VI.) this ball, *(that which is on the cup* C). I throw it (IX.) through that cup: there it is paſſed.” He now raiſes (X.) the cup, ſhows it; and thus has an opportunity of introducing the ball which he has in his hand. “I take (VI.) this (*the ball which is under the cup* B), and throw it (IX.) through the cup B.” At this he raiſes the cup with his left hand, ſhowing that it has paſſed, and covering it again. “I take again (VIII.) this ball from the ſame cup, and throw it (IX.) through that C: obſerve that it is paſſed.” Then raiſing up (X.) the cup C, ſhowing that there are then two there, he introduces other two which he had in his hand. “I take (ſays he (IV.) this ball *(that which is under the cup* A.), and I throw it (IX.) through the ſame cup A. There! it is paſſed,” *(raiſing the cup* C); after which he ſhows the three balls, and introduces there that which was in his hand, putting the three balls upon the table.

19. *With the three balls which remain under the cups, and the three others which remain upon the table; to paſs ſeparately the three balls through each cup.*—In this manœuvre the performer puts again the three balls which are upon the table upon the top of each cup. He takes that which is on the cup C, and throws it (IX.) through the ſame cup; and while he announces this to the company, he raiſes (X.) the cup: taking away (VIII.) the ball, ſhowing that it has paſſed, introducing there that which was in his hand, and putting the ſame ball upon the ſame cup. He then takes that which is upon the cup B, and throws it (IX.) through the ſame cup; ſhows that it is paſſed, takes it away (VII.) and introduces the ball that was in his hand under this cup, putting it in like manner on the cup. Then he takes the ball which is on the cup A, and throws it (IX.) through the ſame cup A. As he announces its paſſage he raiſes the cup, taking away (VII.) and ſhowing the ball; introducing in the ſame manner that which was in his hand; putting this firſt at the top of the cup A, and then ſhows that it is not in his hand, and that he has but three balls.

20. *With the three balls remaining upon the table, and thoſe which are under each cup. Having put the balls into the bag, to make them return under the cups.*—“I take theſe three balls, and I return them into my bag. *(keeping one in his hand.)* Behold to what all is reduced that I had to ſhow you for your amuſement. I did know ſome more very pretty tricks, but I have forgot them. *(Pretending to muſe for a moment)*: Ah! I ſtill remember two or three very pleaſing ones.—Come, my little balls! Return under the cups *(turning over the cups.)* See how nimble they are, and obedient at the ſame time;” *(covering them again with the cups.)*

21. *With the three balls which are under the cups, and that in his hand; to paſs the ball through the two cups.*—Here the operator begins with taking away (VII.) the ball which is under the cup C; he covers it with the cup B; and paſſes (III.) the other ball which he has in his right hand between the two cups. He then takes (VI.) the ball which he had in his left hand, and throws it (IX.) between the two cups B and C. In announcing its paſſage he raiſes the cup (X.), ſhows that it is paſſed, and introduces the ball in his hand. He then takes the ball under the cup B, and throws it (IX.) through the two cups C and B. Announcing to the company its paſſage, he raiſes (X.) the cup, and ſhows that there are two balls, introducing (III.) at the ſame time the third. He then takes the laſt ball, viz. that which is under the cup A, covers again with the left hand the two cups B and C, and throws (IX.) the third ball through theſe two cups. He then announces their paſſage, raiſes the two cups, and ſhows the three balls, covering again the cup C with the two others.

22. *With the three balls which are upon the cup C, and the one in his hand; to take out the three through two cups.*—“I take (ſays the performer) (VIII.) the firſt ball, and put it (II.(into my bag. I take (VIII.) in the ſame manner the ſecond, and I put it alſo into my bag. I take (VIII.) the third, and I put it into my bag. *(putting in really that which he had in his hand.)* While he deſires the ſpectators to obſerve that there are no more in the cups, he raiſes the cup A with the left hand, and, putting it in its place, raiſes with the right hand the cup C. In ſupporting it with the cup B, he puts it down quickly, and a little on the ſide of B, and at the ſame time places C on the table, under which will be found the three balls which had not time to ſeparate.

23. *With the three balls remaining under the middle cup, and three others taken out of the bag; to paſs in one action, three balls through a cup.*—This trick is begun by the performer taking three balls from his bag, and putting them on the top of the cup B, which he covers with the cup A. Ordering them to diſappear and to paſs under the cup C, he takes away very ſuddenly with the left hand the cup B, as is done in the preceding trick, leaving in the middle of the play the cup C, under which the balls are found. Taking them then away, and replacing them on the ſame cup, he makes them return again in the ſame manner under the cup C. At laſt he takes the three balls, and putting them in his bag, pretends to paſs them through the table under the cup where the others were. He then returns two or three of theſe laſt balls into his bag, and takes two white balls, which he puts upon the table.

24. *With the black ball remaining on the table, two other white balls, and a black one which he holds ſecretly in his hand; to paſs three balls from one cup into another.*

N. B. To make the ball white, they are rubbed with a litle chalk inſtead of being blackened with the candle.

“Let us now (ſays the operator) have a trick to prove that I do not conjure the balls. There is nothing under this cup C, *(introducing the black ball that was in his hand.)* There is no great thing under this B. I place there theſe three balls, *(the three which are upon the table, of which he conjures the white one.)* There is nothing more under this third cup A, *(introducing there the white ball)*. I order one of theſe two white balls which are under the cup B, to paſs under this A.” With theſe words he raiſes the cup B; and taking the white ball in the fingers of his left hand, and the black one in thoſe of the right, he ſhows them, ſaying, " Obſerve that there is but one white one. I put again theſe two balls under the cup B."—While ſpeaking thus he puts the white one under the cup, and conjures the other, while feigning to put it in with that of the left hand. He then announces its paſſage; and while he does ſo, raiſes the cup A, and introduces the black ball. Commanding then the black ball to paſs under the cup A, he raiſes the cup B, takes in his right-hand fingers the ball which is there, and ſhows it. " I put it again (ſays he) (II.) under this cup *(conjuring it)*; and I ſhow you that it is paſſed under this A, *(introducing there the white ball.)* I order at laſt the white ball, which is under this cup B, to paſs into this A." While telling the company that it is paſſed, he raiſes the cup A, and puts the three balls upon each cup, the black one upon the middle.

25. *With the three balls put at the top of the cups, and that which has been inſerted under one of them in the preceding trick; to change the colour of the balls.* The operator goes on with his diſcourſe: " If there is any one here who knows how to play the cups and balls, he will do well to obſerve, that it is not poſſible to do this trick by the common method, and with three balls only. However, I have no more, *(ſhowing his hands)*. I take this white ball *(that which is upon the cup* C), and I throw it (IX.) through this cup *(the ſame under which he left a black ball in the preceding trick)*. I take this black ball *(with the left-hand fingers)*; there is nothing under this cup B, *(introducing there the white ball)*. I throw it (IX.) through this cup B *(taking again the ball in his right-hand fingers)*. I take this other white ball, *(with his left-had fingers)*. There is nothing under this cup A, *(introducing the black ball)*: I throw it (IX.) through the cup A, *(taking it again into his right hand fingers to conjure it)*. Obſerve that they have all changed their colour," *(covering each of them with their cup)*.

26. *With the three balls which are left under the cups, two white balls, and a black one that he took trick by trick from his bag; to change the ſizes of the balls.*—In performing this trick the operator takes away the white ball which is under the cup C with his left hand fingers, and, raiſing the cup with his right, introduces there a white ball which he took out of his bag. The white ball which he introduces is kept in his hand with the fourth and little finger; and he raiſes the cup in the ſame manner as when he introduces the balls. In turning over the cup afterwards, he advances his hand to introduce this ball. Theſe balls ſhould be filled with horſe-hair or paper, ſo that they may be very light, and make no noiſe. The operator then tells his company, that he makes the ball paſs through the table under the ſame cup; and while he ſpeaks thus, he takes the ball again in his right hand, and while putting his hand under the table, he takes a black ball out of the bag. He then takes away the ball from the cup B, introducing the black one in its ſtead.—He then tells the ſpectators, that he makes it repaſs through the table; and while he tells them ſo, he takes a white ball; then, while taking away that which is under the cup A, he introduces that ball making it repaſs in the ſame manner through the table, and at laſt ſhows them to the company, and covers them with their cups.

27. *With the three balls which are under the cups, two other black balls, and a white one that was taken trick by trick from his bag; to paſs the ball from one cup into another.*—" Obſerve well (ſays the operator), that there are two white balls under theſe two cups A and C, and a black one under this *(raiſing the cups)*. I cover again theſe three balls *(covering each of them with a cup)*. I make to paſs out through the table the white ball which is under the cup C." Here he takes a white ball from his bag; and in order not to fail, the black and white balls ſhould be in ſeparate pockets. Having taken out the ball, he puts the firſt into his bag, telling the company that there is now nothing under the cup C; and while he ſays ſo, he raiſes it, holding the ball with his little finger, proceeding in his diſcourſe as follows. " I take away this ball *(that which is under the cup* A), and I paſs it through the table under the cup C *(taking a black ball from his bag.")* While the paſſage of his ball is announced, he raiſes the cup C to take it away and ſhow it; and introducing there this black ball, " I put again (ſays he) this other white ball into my bag, and I command the black one which is under the cup B to paſs under this. It is no longer under this cup;" and while he ſays ſo, he raiſes the cup B, in ſupporting with his little finger the ball which remains there. Announcing its paſſage, he raiſes the cup C and ſhows the ball; taking it afterwards into the left hand, throws it into the air, returning it into his right hand, and feigning to throw it into the air a ſecond time, he lets it fall into his bag; caſting his eyes upwards and downwards as if he ſaw it fall upon the cup B; he raiſes this cup, and ſhows it to the ſpectators, as the former, paſſed through the cup.

SECT. II. *Performances with the Cards.*

PREVIOUS to the performances with cards, it will be neceſſary to explain the method of making the paſs; that is bringing a certain number of cards from the bottom of the pack to the top; as many of theſe performances depend on that manœuvre.

Of making the paſs.

1. Hold the pack of cards in your right hand, ſo that the palm of your hand may be under the cards: place the thumb of that hand on one ſide of the pack, the firſt, ſecond, and third fingers on the other ſide, and your little finger between thoſe cards that are to be brought to the top and the reſt of the pack. Then place your left hand over the cards. in ſuch a manner that the thumb may be at C (fig. 20, 21.), the fore-finger at A, and the other fingers at B.

Plate CCLXVI.

The hands and the two parts of the cards being thus diſpoſed, you draw off the lower cards confined by the little finger and the other parts of the right hand, and place them, with an imperceptible motion, on the top of the pack.

It is quite neceſſary, before you attempt any of the experiments that depend on making the paſs, that you can perform it ſo dexterouſly that the eye cannot diſtinguiſh the motion of your hand; otherwiſe inſtead of deceiving others, you will expoſe yourſelf. It is alſo proper that the cards make no noiſe, as that will occaſion ſuſpicion. This dexterity is not to be attained without ſome practice.

There is a method of preparing a pack of cards, by inſerting one or more that are a ſmall matter longer or wider than the reſt; which preparation will be neceſſary in ſeveral of the following experiments.

The card of divination.

2. Have a pack in which there is a long card; open the pack at that part where the long card is, and preſent the pack to a perſon in ſuch a manner that he will naturally draw that card. He is then to put it into any part of the pack and ſhuffle the cards. You take the pack, and offer the ſame card in like manner to a ſecond or third perſon; obſerving, however, that they do not ſtand near enough to ſee the card each other draws. You then draw ſeveral cards yourſelf, among which is the long card, and aſk each of the parties if his card be among thoſe cards, and he will naturally ſay Yes, as they have all drawn the ſame card. You then ſhuffle all the cards together, and cutting them at the long card, you hold it before the firſt perſon ſo that the others may not ſee it, and tell him that is his card. You then put it again into the pack, and ſhuffling them a ſecond time, you cut again at the ſame card, and hold in like manner to the ſecond perſon, and ſo of the reſt (A).

If the firſt perſon ſhould not draw the long card, each of the parties muſt draw different cards; when, cutting the pack at the long card, you put thoſe they have drawn over it, and ſeeming to ſhuffle the cards indiſcriminately you cut them again at the long card, and ſhow one of them his card. You then ſhuffle and cut again in the ſame manner, and ſhow another perſon his card, and ſo on: remembering, that the card drawn by the laſt perſon is the firſt next the long card; and ſo of the others.

This experiment may be performed without the long card, in the following manner. Let a perſon draw any card whatever, and replace it in the pack: you then make the paſs, and bring that card to the top of the pack, and ſhuffle them without loſing ſight of that card. You then offer that card to a ſecond perſon, that he may draw it, and put it in the middle of the pack. You make the paſs and ſhuffle the cards a ſecond time in the ſame manner, and offer the card to a third perſon, and ſo again to a fourth or fifth, as is more fully explained further on.

The four confederated cards.

3. You let a perſon draw any four cards from the pack, and tell him to think on one of them. When he returns you the four cards, you dexterouſly place two of them under the pack, and two on the top. Under thoſe at the bottom you place four cards of any ſort; and then, taking eight or ten from the bottom cards, you ſpread them on the table, and aſk the perſon if the card he fixed upon be among them. If he ſay No, you are ſure it is one of the two cards on the top. You then paſs thoſe two cards to the bottom, and drawing off the loweſt of them, you aſk him if that is not his card. If he again ſay No, you take that card up, and bid him draw his card from the bottom of the pack.

If the perſon ſay his card is among thoſe you firſt drew from the bottom, you muſt dexterouſly take up the four cards that you put under them, and placing thoſe on the top, let the other two be the bottom cards of the pack, which you are to draw in the manner before deſcribed.

Divination by the ſword.

4. After a card has been drawn, you place it under the long card, and by ſhuffling them dexterouſly you bring it to the top of the pack. Then lay, or throw, the pack on the ground, obſerving where the top card lies. A handkerchief is then bound over your eyes, in ſuch a manner however, that you can ſee the ground, which may be eaſily done. A ſword is then put into your hand, with which you touch ſeveral of the cards, ſeemingly in great doubt, but never loſing ſight of the top card, in which, at laſt, you fix the point of the ſword, and preſent it to him that drew it. Two or three cards may be diſcovered in the ſame manner, that is, by placing them under the long card, and then bringing to the top of the pack.

The tranſmutable cards.

5. You muſt have in the pack two cards of the ſame ſort, ſuppoſe the king of ſpades. One of theſe is to be placed next the bottom card, which may be the ſeven of hearts, or any other card. The other is to be placed at top. You then ſhuffle the cards, without diſplacing thoſe three cards, and ſhow a perſon that the bottom card is the ſeven of hearts. Then drawing that card privately aſide with your finger, which you have wetted for that purpoſe, you take the king of ſpades from the bottom, which the perſon ſuppoſes to be the ſeven of hearts, and laying it on the table, telling him to cover it with his hand. You then ſhuffle the cards again without diſplacing the firſt and laſt card, and paſſing the other king of ſpades at the top to the bottom, you ſhow it to another perſon. You then draw that privately away; and taking the bottom card, which will then be the ſeven of hearts, you lay that on the table, and tell the ſecond perſon, who believes it to be the king of ſpades, to cover it with his hand.

You then command the ſeven of hearts, which is ſuppoſed to be under the hand of the firſt perſon, to change into the king of ſpades; and the king of ſpades, which is ſuppoſed to be under the hand of the ſecond perſon, to change into the ſeven of hearts; and when the two parties take their hands off, and turn up the cards, they will ſee, to their no ſmall aſtoniſhment, after having ſo carefully obſerved the bottom cards, that your commands are punctually obeyed.

The incomprehenſible tranſpoſition.

6. Take a card, the ſame as your long card, and rolling it up very cloſe, put it in an egg, by making a hole as ſmall as poſſible, and which you are to fill up carefully with white wax. You then offer the long card to be drawn; and when it is replaced in the pack you ſhuffle the cards ſeveral times, giving the egg to the perſon who drew the card, and, while he is breaking it, you privately withdraw the long card, that it may appear, upon examining the cards, to have gone from the pack into the egg. This experiment may be rendered more ſurpriſing by having ſeveral eggs, in each of which may be placed a card of the ſame ſort, and then giving the perſon the liberty to chooſe which egg he thinks fit.

(A) There is frequently exhibited another experiment, ſimilar to this, which is by making a perſon draw the long card; then giving him the pack, you tell him to place his card where he pleaſes and ſhuffle them, and you will then name his card or cut the pack where it is. You may alſo tell him to put the pack in his pocket, and you will draw the card; which you may eaſily do by the touch.

This deception may be ſtill further diverſified, by having, as moſt public performers have, a conſederate, who is previouſly to know the egg in which the card is placed; for you may then break the other eggs, and ſhow that the only one that contains a card is that in which you direct it to be.

To name ſeveral cards that two perſons have drawn

7. DIVIDE a piquet pack of cards into two parts by a long card. Let the firſt card contain a quint to a king in clubs and ſpades, the four eights, the ten of diamonds, and ten of hearts; and let the other part contain the two quart majors in hearts and diamonds, the four ſevens, and the four nines (B).

Then ſhuffle the cards, but obſerve not to diſplace any of thoſe cards of the laſt part which are under the long card. You then cut at that card, and leave the pack in two parts. Next, preſent the firſt of thoſe parts to a perſon, and tell him to draw two or three cards, and place the remainder on the table. You preſent the ſecond parcel in like manner to another. Then having dexterouſly placed the cards drawn by the firſt perſon in the ſecond parcel, and thoſe drawn by the ſecond perſon in the firſt parcel, you ſhuffle the cards, obſerving to diſplace none but the upper cards. Then ſpreading the cards on the table, you name thoſe that each perſon drew; which you will very eaſily do, by obſerving the cards that are changed in each parcel.

The two convertable aces.

8. ON the ace of ſpades fix, with ſoap, a heart, and on the ace of hearts, a ſpade, in ſuch a manner that they will eaſily ſlip off.

Show theſe two aces to the company; then taking the ace of ſpades, you deſire a perſon to put his foot upon it, and as you place it on the ground, draw away the ſpade. In like manner you place the ſeeming ace of hearts under the foot of another perſon. You then command the two cards to change their places; and that they obey your command, the two perſons, on taking up their cards, will have occular demonſtration. A deception ſimilar to this is ſometimes practiſed with one card, ſuppoſe the ace of ſpades, over which a heart is placed ſlightly. After ſhowing a perſon the card, you let him hold one end of it, and you hold the other, and while you amuſe him with diſcourſe, you ſlide off the heart. Then laying the card on the table, you bid him cover it with his hand. You then knock under the table and command the heart to turn into the ace of ſpades. By deceptions like theſe, people of little experience and much conceit are frequently deprived of their money, and rendered ridiculous.

The fifteen thouſand livres.

9. YOU muſt be prepared with two cards, like thoſe repreſented by fig. 22. and with a common ace and a five of diamonds.

The five of diamonds and the two prepared cards are to be diſpoſed as in fig. 23. and holding them in your hand, you ſay, "A certain Frenchman left 15,000 livres, which are repreſented by theſe three cards, to his three ſons. The two youngeſt agreed to leave their 5000, each of them, in the hands of the elder, that he might improve it." While you are telling this ſtory, you lay the 5 on the table, and put the ace in its place, and at the ſame time artfully change the poſition of the other two cards, that the three cards may appear as in fig. 24. You then reſume your diſcourſe. "The eldeſt brother, inſtead of improving the money, loſt it all by gaming, except 3000 livres, as you here ſee." You then lay the ace on the table, and taking up the 5, continue your ſtory: "The eldeſt, ſorry for having loſt the money, went to the Eaſt Indies with theſe 3000, and brought back 15,000." You then ſhow the cards in the ſame poſition as at firſt, in fig. 23.

To render this deception agreeable, it muſt be performed with dexterity, and ſhould not be repeated, but the cards immediately put in the pocket; and you ſhould have five common cards in your pocket, ready to ſhow, if any one ſhould deſire to ſee them.

To tell the number of cards by their weight.

10. TAKE a parcel of cards, ſuppoſe 40, among which inſert two long cards: let the firſt be, for example the 15th, and the other the 26th, from the top. Seem to ſhuffle the cards, and then cutting them at the firſt long card, poiſe thoſe you have cut off in your hand, and ſay, "there ſhould be here 15 cards." Cut them again at the ſecond long card, and ſay, There are here only eleven cards." Then poiſing the remainder, you ſay, "here are 14 cards."

To name ſeveral cards on which different perſons have fixed.

11. *Several different cards being ſhown to different perſons, that each of them may fix on one of theſe cards; to name that on which each perſon has fixed.* There muſt be as many different cards ſhown to each perſon as there are perſons to chooſe: therefore, ſuppoſe there are three perſons, then to each of them you muſt ſhow three cards; and telling the firſt perſon to retain one in his memory, you lay thoſe three cards down, and ſhow three others to the ſecond perſon, and ſo to the third. You then take up the firſt perſon's cards, and lay them down one by one, ſeparately, with their faces upward. You next place the ſecond perſon's card over the firſt, and in like manner the third perſon's card over the ſecond's; ſo that in each parcel there will be one card belonging to each perſon. You then aſk each of them in which parcel his card is; and when you know that, you immediately know which card it is; for the firſt perſon's card will always be the firſt, the ſecond perſon's the ſecond, and the third perſon's the third in that parcel where they each ſay his card is.

This experiment may be performed with a ſingle perſon, by letting him fix on three, four, or more cards. In this caſe you muſt ſhow him as many parcels as he is to chooſe cards, and every parcel muſt conſiſt of that number, out of which he muſt fix on one; and you then proceed as before, he telling you the parcel that contains each of his cards.

The magic ring.

12. MAKE a ring large enough to go on the ſecond or third finger (fig. 15.) in which let there be ſet a large tranſparent ſtone, to the bottom of which muſt be fixed a ſmall piece of black ſilk, that may be either drawn aſide or expanded by turning the ſtone round. Under the ſilk is to be the figure of a ſmall card.

Then make a perſon draw the ſame ſort of card as that at the bottom of the ring, and tell him to burn it in the candle. Having firſt ſhown him the ring, you take

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(B) The cards may be divided in any other manner that is eaſy to be remembered.

LEGERDEMAIN.

Plate CCLXVI.

Fig. 1.

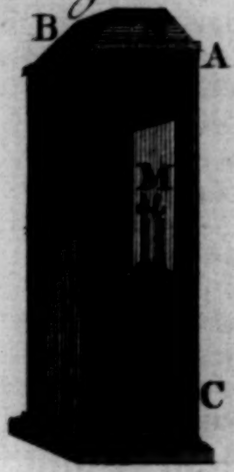


Fig. 2.

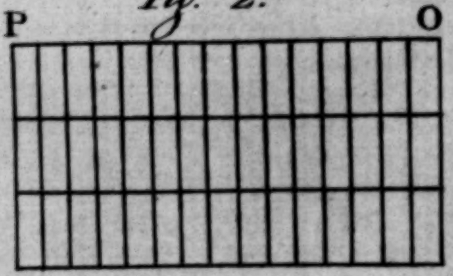


Fig. 3.

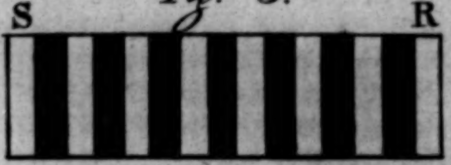


Fig. 6.

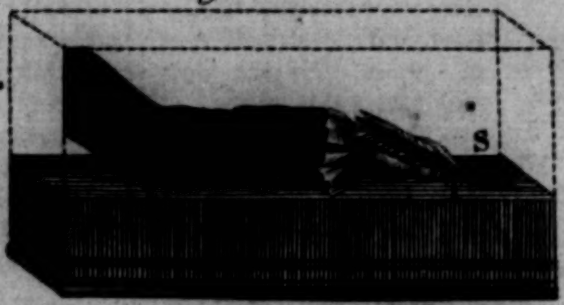


Fig. 8.

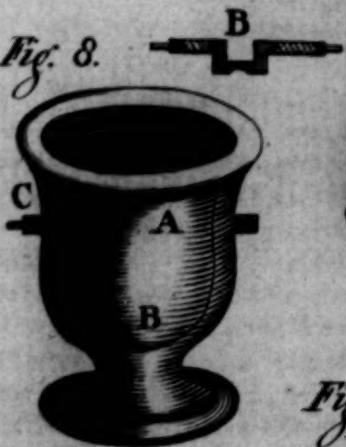
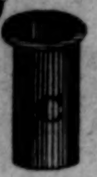


Fig. 10.



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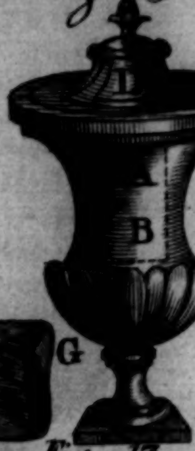

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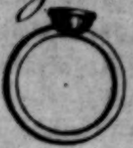

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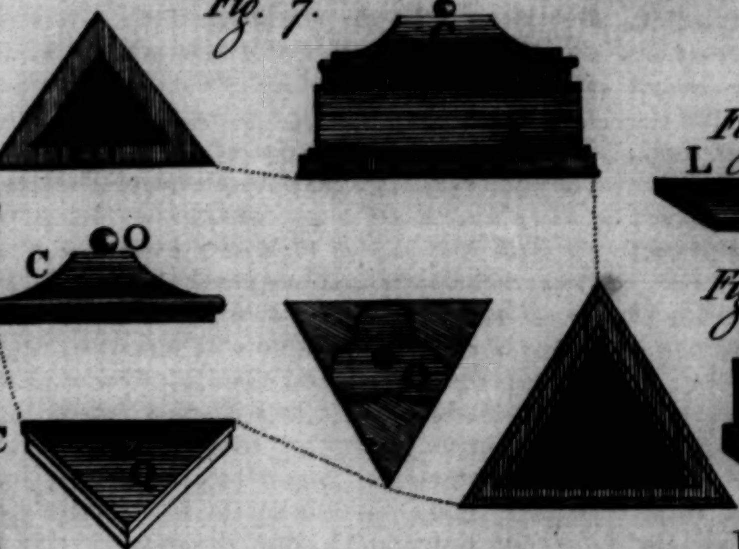

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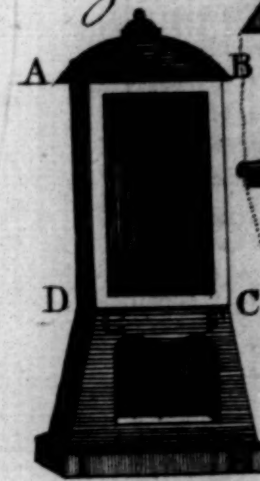

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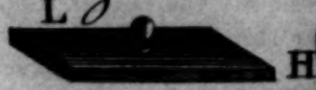

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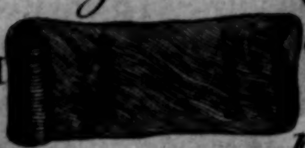
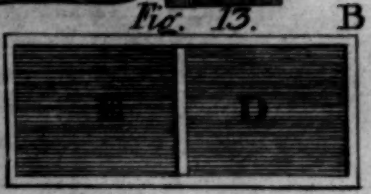


Fig. 14.

Fig. 13.



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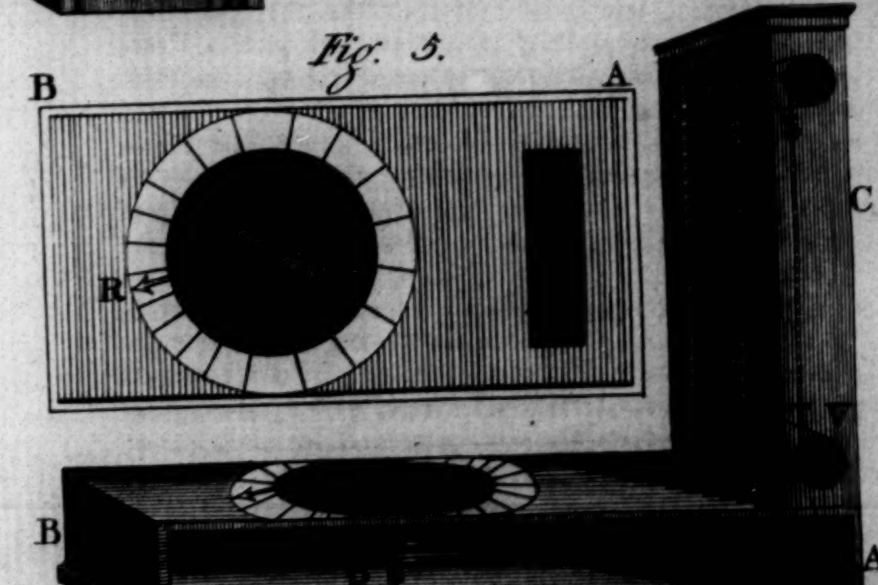

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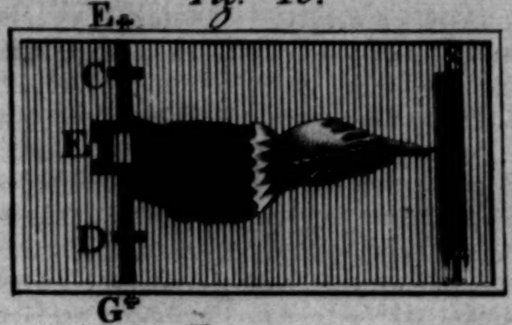


Fig. 17.

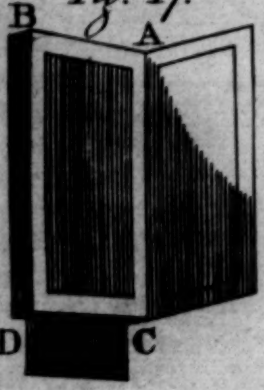


Fig. 19.

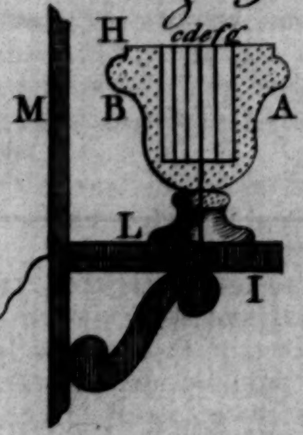

H
cdefg
M
B
A
L
I

Fig. 18.

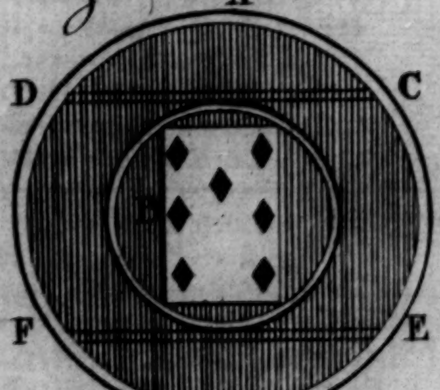


Fig. 20.

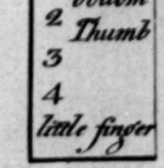
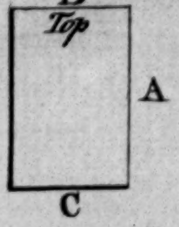

2 bottom
Thumb
3
4
little finger

Fig. 21.



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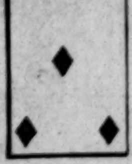


Fig. 23.

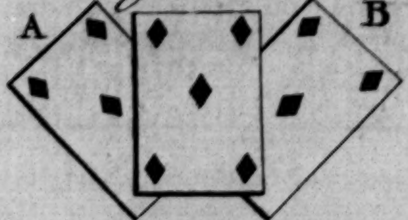
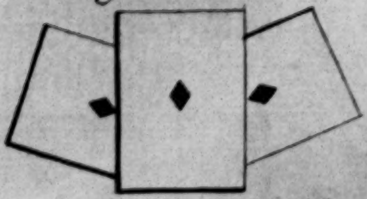


Fig. 24.



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take part of the burnt card, and reducing it to powder, you rub the ſtone with it, and at the ſame time turn it artfully about, ſo that the ſmall card at bottom may come in view.

The magic tea-caddy.

Plate CCLXVII

13. *To change one card into another.*—Provide a mahogany tea caddy about four or five inches deep, and long enough to admit a common ſized playing card: (ſee fig. 9.). This caddy muſt be furniſhed with a moving falſe bottom B, moveable upon hinges on the inſide edge of the front A. This bottom may be made of braſs, tin, or lead; and the falſe bottom muſt be ſo exactly fitted, that it cannot, from a ſlight view, be diſtinguiſhed from the other. The inſide of both caddy and falſe bottom ought to be lined with black or other dark-coloured cloth or velvet, ſo that it may not make any noiſe in falling down. It would be proper that the falſe bottom ſhould riſe with a ſpring towards the front, and it muſt be kept tight with a braſs ſpring-catch (*a*. fig. 10.) ſcrewed to the left ſide of the box near the top, and which is hid by the cloth covering. The end of this ſpring projects a little into the front. It is driven back, to let go the falſe bottom, by means of a ſmall bent wire *bb* let into the front of the caddy; and this pin is moved by the bolt *c*, which, when the box is locked, ſhoots out againſt it, by reaſon of the ſpring being driven in: by which means the bottom ſprings down, and covers the card placed in the box.

Before you attempt to ſhow any trick with this caddy, a card muſt be placed in the inſide between the front A and the falſe bottom B, ſpringing up the bottom afterwards againſt the front; after which it is ready for uſe, and ſhown openly to the company without any danger of a diſcovery.

Two perſons may now be deſired to draw two different cards from a pack, one of which muſt be the ſame with the one concealed in the caddy. Taking this card from the perſon who drew it, you put it in the pack, pretend to ſhuffle it, but keep the card either uppermoſt or undermoſt, ſo that you can eaſily find it afterwards. Deſiring then the other perſon to come forward and put his card very attentively into the caddy, you in the mean time ſecretly convey away from the pack the card drawn by the other; then, giving him the key, you deſire the caddy to be locked up. After ſome pretended conjurations, deſire him to unlock it again and take out the card; which he will find not to be his, but that drawn by his neighbour: his card being apparently vaniſhed from the caddy, as the other is from the pack.

The two magic port-folios.

14. PROVIDE two pieces of paſteboard A and B (fig. 11.) of equal dimenſions 3½ inches long and three broad. Place theſe beſide one another, as ſhown in the figure. Take then a very ſmooth ſilk ribbon, and put a band of it from C to E towards the edge of the paſteboard A, and another from D to F in ſuch a manner as to come beyond the paſteboard, and to admit of being folded over at the two ends. This muſt be glued on the back of the board A at the places C and D, and at the back of the board B at the places E and F. Place two other bands in a ſimilar manner on the paſteboard B, turning them over on the back of the ſame board at the places I and L, and at the back of A at the places G and H. Theſe two bands ſhould fall in the inſide of the paſteboard, according to the breadth of the ribbons. The two paſteboards being now placed the one upon the other, will form a kind of port-folio, one of the ſides of which will always be hinged when the other is opened. Four ſmall bands of the ſame ribbon are to be put at the four extremities of the ſides MNQR of the two pieces of paſteboard; obſerving that they paſs below the bands already placed. Glue their ends in the ſame manner as their ends at the back of the boards, ornamenting alſo the two ſides O and P of the paſteboard B with pieces of the ſame ribbon; but theſe ſix laſt bands are of no uſe in the performance.

Two pieces of paper folded like the cover of a letter muſt now be provided, large enough to cover the two ribbons GI and HL, as well as the ſpace contained within them. Glue one of theſe upon the two ribbons, and apply the other below this; ſo that the uppermoſt of theſe two wrappers may fall exactly over the other, incloſing and hiding the two ribbons entirely. A ſecond port-folio ſimilarly conſtructed is now to be provided, and both of them covered with coloured paper from the ſides where the ribbons are glued and folded.—The deceptions with theſe port-folios are as follows.

1. *Two cards, choſen at random, having been ſhut up in two ſeparate places, to make them paſs reciprocally from one into the other.*—The port-folios being conſtructed in the manner above deſcribed; if you open one of them either on the one ſide or on the other, one of the paper wrappers will always be viſible; and thus it will naturally be ſuppoſed that there is no more but one. Having then ſecretly incloſed a card in each of the wrappers of the port-folios, procure a pack of cards that has but two ſorts, and cauſe two perſons fairly draw two cards ſimilar to the firſt. Preſent then a port-folio, open, to the firſt perſon who drew a card ſimilar to that which was placed in the ſecond, deſiring him to place it in the wrapper which he finds vacant. Take back then the port-folio; and, in placing it on the table, artfully turn it over: having placed likewiſe in the vacant wrapper of the ſecond port-folio the card drawn by the ſecond perſon; and putting it in the ſame way upon the table, command the cards reciprocally to paſs from the one port-folio into the other; and open them ſo that each of the perſons may take out the card which the other inſerted.

1. *A card being ſhut up in the port-folio; to make it return into the pack.*—To perform this, procure a pack which has two cards of the ſame kind. One of theſe is to be openly drawn, and the perſon who has done ſo muſt be told to ſhut it up under the wrapper of one of the port-folios; and inform him that you will make it return into the pack. Give him the port-folio to blow upon; and on opening it, preſent him with the empty wrapper, to ſhow him that his card is not there; after which, preſenting him with the pack, he will find there the other card, which he will naturally imagine to be the one he put into the wrapper.

3. *To make an anſwer appear to a queſtion ſecretly written.* Tranſcribe on different cards a certain number of queſtions, and on others the ſame queſtions with their anſwers; taking care to have the hand-writing as much alike as poſſible, ſo that no difference can eaſily be perceived. The ſame caution muſt be obſerved with regard to the cards themſelves; which, for that reaſon,

ought to be plain ones. Having written with a pencil at the botton of the firſt queſtions their correſponding anſwers, ſhut up one of them ſecretly in the port-folio; and preſenting them to any perſon, let him draw as by chance that which is ſimilar to the one thus ſhut up. Make him then place in the other wrapper the queſtion which he had drawn, and telling him that you are about to write an anſwer even through the port-folio, take a glaſs, and pretend to read in it the anſwer to the queſtion. Open it afterwards, ſo that he may take out the other card himſelf, and he will imagine it to be the one he ſelected.

In performing this trick, it will be proper to have a port-folio of the ſame kind with the two deſcribed, which opens only at one ſide, and which conſequently has but one wrapper. This muſt be ſhown to ſuch as ſeem to be too inquiſitive, and will be of uſe to prevent them from entertaining any idea that the folio opens upon both ſides. The former muſt therefore be immediately put in the pocket, in order to give an opportunity of drawing out the other in caſe the port-folio ſhould be aſked for.

The card in the mirror. Plate CCLXVI.

15. **Provide** a mirror, either round, as A (fig. 8.) or oval, the frame of which muſt be at leaſt as wide as a card. The glaſs in the middle muſt be made to move in the two grooves CD and EF, and ſo much of the quickſilver muſt be ſcraped off as is equal to the ſize of a common card. You will obſerve that the glaſs muſt likewiſe be wider than the diſtance between the frame by at leaſt the width of a card.

Then paſte over the part where the quickſilver is rubbed off a piece of paſteboard, on which is a card that muſt exactly fit the ſpace, which muſt at firſt be placed behind the frame.

This mirror muſt be placed againſt a partition, through which is to go two ſtrings, by which an aſſiſtant in the adjoining room can eaſily move the glaſs in the grooves, and conſequently make the card appear or diſappear at pleaſure (c.)

Matters being thus prepared, you contrive to make a perſon draw the ſame ſort of card with that fixed to the mirror, and place it in the middle of the pack: you then make the paſs, and bring it to the bottom; you then direct the perſon to look for his card in the mirror, when the confederate behind the partition is to draw it ſlowly forward, and it will appear as if placed between the glaſs and the quickſilver. While the glaſs is drawing forward, you ſlide off the card from the bottom of the pack, and convey it away.

The card fixed to the mirror may eaſily be changed each time the experiment is performed. This experiment may alſo be made with a print that has a glaſs before it and a frame of ſufficient width, by making a ſlit in the frame through which the card is to paſs; but the effect will not be ſo ſtriking as in the mirror.

The marvellous vaſe.

16. **Place** a vaſe of wood or paſteboard AB (fig. 19.) on a bracket L, fixed to the partition M. Let the inſide of this vaſe be divided into five parts, *c, d, e, f, g:* and let the diviſions *c* and *d* be wide enough to admit a pack of cards, and thoſe of *e, f, g,* one card only.

Fix a thread of ſilk at the point H, the other end of which paſſing down the diviſion *d*, and over the pully I, runs along the bracket L, and goes out behind the partition M.

Take three cards from a piquet pack, and place one of them in each of the diviſions *e, f, g,* making the ſilk thread or line go under each of them. In the diviſion *c*, put the pack of cards from which you have taken the three cards that are in the other diviſions.

Then take another pack of cards, at the top of which are to be three cards of the ſame ſort with thoſe in the three ſmall diviſions; and making the paſs, bring them to the middle of the pack, and let them be drawn by three different perſons. Then give them all the cards to ſhuffle; after which place the pack in the diviſion *d*, and tell the parties they ſhall ſee the three cards they drew come, at their command, ſeparately out of the vaſe.

An aſſiſtant behind the partition then drawing the line with a gentle and equal motion, the three cards will gradually riſe out of the vaſe. Then take the cards out of the diviſion *c*, and ſhow that thoſe three cards are gone from the pack.

The vaſe muſt be placed ſo high that the inſide cannot be ſeen by the company. You may perform this experiment alſo without an aſſiſtant, by fixing a weight to the end of the ſilk line, which is to be placed on a ſupport, and let down at pleaſure by means of a ſpring in the partition.

The divinating perſpective glaſs.

17. **Let** a ſmall perſpective glaſs be made, that is wide enough, at the end where the object glaſs is placed, to hold a table ſimilar to the following.

1.131	10..132	19.133
2.231	11..232	20.233
3.331	12..332	21.333
4 121	13..122	22.123
5.221	14..222	23.223
6.321	15..322	24.323
7.111	16..112	25.113
8.211	17..212	26.213
9.311	18..312	27.313

Take a pack of cards that conſiſts of 27 only, and giving them to a perſon, deſire him to fix on any one, then ſhuffle them, and give the pack to you. Place the 27 cards in three heaps, by laying down one alternately on each heap; but before you lay each card down, ſhow it to the perſon, without ſeeing it yourſelf; and when the three heaps are finiſhed, aſk him at what number, from 1 to 27, he will have his card appear,

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(c) This experiment may be performed without an aſſiſtant, if a table be placed againſt the partition, and the ſtring from the glaſs be made to paſs through a leg of it, and communicate with a ſmall trigger, which you may eaſily puſh down with your foot; and at the ſame time wiping the glaſs with your handkerchief, as if to make the card appear the more conſpicuous. It may alſo be diverſified, by having the figure of a head, ſuppoſe that of ſome abſent friend, in the place of the card.

appear, and in which heap it then is? Then look at the heap through the glaſs, and if the firſt of the three numbers which ſtands againſt that number it is be appear at be 1, put that heap at top; if the number be 2, put it in the middle; and if it be 3, put it at bottom. Then divide the cards into three heaps, in the ſame manner, a ſecond and a third time, and his card will then be at the number he choſe.

For example: Suppoſe he deſire that his card ſhall be the 20th from the top, and the firſt time of making the heaps, he ſay it is in the third heap: you then look at the table in the perſpective, holding it at the ſame time over that heap, and you ſee that the firſt figure is 2; you therefore put that figure in the middle of the pack. The ſecond and third times you in like manner put the heap in which he ſays it is, at the bottom, the number each time being 3. Then looking at the pack with your glaſs, as if to diſcover which the card was, you lay the cards down one by one, and the twentieth card will be that he fixed on.

You may ſhow the perſon his card in the ſame manner without aſking him at what number it ſhall appear, by fixing on any number yourſelf.

The foregoing experiments with the cards will be found ſufficient to explain moſt others of a ſimilar nature that have or may be made: the number of which is very great. To perform thoſe we have deſcribed requires no great practice; the two principal points are, the making the paſs in a dexterous manner, and a certain addreſs by which you influence a perſon to draw the card you preſent. Thoſe that are performed by the long card are in general the moſt eaſy, but they are confined to a pack of cards that is ready prepared; whereas thoſe which depend on making the paſs, may be performed with any pack that is offered.

Sect. III. *Experiments with Sympathetic Inks.* [See *Sympathetic Ink.*]

Experiments with Class I.

The book of fate.

1. Make a book of 70 or 80 leaves; and in the cover at the end of it let there be a caſe, which opens next the binding that it be not perceived.

At the top of each right hand page write any queſtion you pleaſe; and at the beginning of the book let there be a table of all thoſe queſtions, with the number of the page where each is contained. Then write with the common ink on ſeparate papers, each about half the ſize of the pages in the book, the ſame queſtions that are in the book, and under each of them write, with the ink made of the impregnation of ſaturn, or the diſſolution of biſmuth, the anſwer.

Soak a double paper in the vivifying liquor made of quick-lime and orpiment, or the phlogiſton of the liver of ſulphur, and place it, juſt before you make the experiment, in the caſe that is in the cover of the book.

Then deliver ſome of the papers on which the queſtions are wrote to the company; and after they have choſen ſuch as they would have anſwered, they put them in thoſe leaves where the ſame queſtions are contained, and, ſhutting the book for a few minutes, the ſulphureous ſpirit with which the paper in the cover of the book is imbibed, will penetrate the leaves, and make the anſwers viſible, which will be of a brown colour, and more or leſs deep in proportion to the time the book has been cloſed (d).

The marvellous portrait, fig. 17.

2. Make a box about four inches long, and three wide, as ABCD, and quite ſhallow. Let it ſhut with hinges and faſten with a hook; and let it have two bottoms, the loweſt of wood, that draws out by a groove, and the uppermoſt of paſteboard. Between theſe two bottoms is to be placed a paper dipped in the vivifying liquor mentioned in the laſt experiment. Let there be alſo a board of the ſame ſize with the inſide of the box, which being placed in it may preſs a paper againſt the paſteboard bottom.

Then take ſeveral pieces of paper, of the ſame ſize with the inſide of the box, and draw on them the figures of men and women, in different attitudes and employments, as walking, riding, reading, writing, &c. Theſe figures muſt be drawn with a new pen, or pencil, dipped in the impregnation of Saturn.

Being thus provided, and having privately placed the paper dipped in the vivyfying liquor between the two bottoms, you tell a perſon you will ſhow him what an abſent friend of his is doing at the preſent hour. You then give him the paper adapted to the employment you intend, and tell to write his friend's name at the bottom, that you may not change the paper. Then placing that paper next the paſteboard bottom, and putting the piece of wood over it, you ſhut the box. After amuſing him with diſcourſe for three or four minutes, you take out the paper, when he will ſee his friend in the employment you have aſſigned him.

The artificial hand.

3. Let a workman make a hand of wood, as in fig. 16. fixed at the end next the elbow to the piece E, the ends of which go through the ſcrews CD and EF. The fore and middle fingers, and the thumb, are to be moveable at their joints. There muſt go a wire through the arm, that is fixed at one end to the fore-finger, and at the other to the piece E, round which it is to move: under the two joints of the two fingers are alſo placed two ſmall ſprings, which are to raiſe it up.

To the fore-finger and thumb fix two ſmall rings, through which a pen may be put, ſo as not to impede their motion. Under the arm at the point I, place a ſmall braſs roller, which ſerves to ſuſtain the arm.

The pedeſtal on which this hand is placed muſt be at leaſt a foot long, if the hand be of the natural ſize, and about eight inches wide. This pedeſtal muſt be hollow, and at the part ST there muſt be an opening about three inches long, and two inches wide; the whole pedeſtal may be covered with a thin ſtuff, by which the hole will be concealed. There is to be a valve, or ſort of trap-door, on the inſide of the pedeſtal, which is to faſten againſt the opening.

Over the hand and pedeſtal place a glaſs frame, as in the figure: cover the hand with fine leather of fleſh colour, and decorate the arm with a ruffle and cuff, which will entirely conceal the machinery.

Then take a number of cards and write on them different queſtions; and on the ſame number of papers write, with the impregnation of lead, the anſwers. Give the cards to any one, and let him chooſe a queſtion; and you place the paper with the anſwer under the pen in the hand, letting him firſt ſee there is no writing on it (E). Now the pedeſtal being placed againſt a partition, the end F is to go through it. Therefore an aſſiſtant, upon a ſignal given, turns a handle fixed to F; and, as the piece E turns round, the wires that move the fingers and thumb are alternately lengthened and ſhortened, by which their joints are kept in continual motion; and the ſcrew at the ſame time turning gently from F towards G, gives the whole arm a motion which very much reſembles that of nature (F).

(d) If a weight be placed upon the book, the effect will be the ſooner produced. Or you may put the book in a box that will preſs it cloſe down.

The hand and pen ſerve here merely to aſſiſt the illuſion: but if a bit of ſponge, dipped in the vivifying liquor be placed at the end of the pen, as it goes over the writing on the paper, it will make it become gradually viſible, and in this caſe the trap-door and dipped paper may be omitted (G).

DECEPTION with CLASS II.

The writing againſt the wall.

4. TAKE ſeveral pieces of paper, of a ſize that you can put in any book that will go into your pocket, and write at the top of each of them a queſtion, with common ink, and under it write the anſwer with the ſolution of gold or ſilver. Give any of theſe papers, cloſely wrapt up, to a perſon, and tell him to place it againſt the wall of his chamber, and keeping the door locked he will next day find the anſwer wrote on it.

As the gold ink will ſometimes give a yellow caſt to the paper, you may previouſly give a ſlight tincture of that kind to the papers you uſe for this purpoſe.

DECEPTION with CLASS III.

Magical vegetations

5. On different papers draw the figures of ſeveral leaves or flowers with one of the colourleſs juices mentioned: then take one of the correſponding leaves or flowers, and laying it on an iron plate over a chafing-diſh of hot coals, let it burn to aſhes. Put theſe aſhes into a ſieve, in which there is ſome very fine ſteel-filings, and ſift them over the paper on which the flower is drawn, when they will adhere to the glutinous liquor, and form an exact repreſentation of the figure of the leaf or flower.

DECEPTIONS with CLASS IV.

The taliſman, fig. 7.

6. MAKE a little-triangular box, each ſide of which is to be about five inches, and let its inſide be divided into three parts. The firſt part A, which makes the bottom of the box, is to be covered by the ſecond part B, in form of a caſe, and let the top C exactly cover the part B, as expreſſed in the figure and the profiles.

Upon the bottom of the box let there be a plate of copper, about one-twentieth of an inch thick, on which let there be a number of hieroglyphic characters contiguous to each other, and cut in different ſorts of metal.

On the top of the cover place a knob O, that goes through it, and to which the copper triangle Q is to be fixed occaſionally, in ſuch a manner as it may go into the caſe B. There muſt be a ſpace of one quarter of an inch between the triangle Q and the bottom of the caſe B; into which another plate of copper, of that thickneſs may be placed.

The outſide of this taliſman may be decorated with uncommon figures or characters, to give it the appearance of greater myſtery.

On ſeveral pieces of paper, of the ſame ſize with the inſide of the taliſman, write different queſtions in common ink, and write the anſwers in thoſe different ſorts of ſympathetic ink that appear when heated, obſerving that each word of the anſwer is to be wrote in a different ink.

Having properly heated the triangle, and placed it under the cover, you introduce the taliſman, and tell any one of the company to chooſe one of the papers on which the queſtions are wrote, and place it in the taliſman, and he will immediately have an anſwer wrote on that paper, the words of which will be of different colours, according to the different metals of which the taliſman is compoſed. The paper being placed in the taliſman, and the cover placed over it, the heat of the triangle will make the anſwer viſible in a few moments. This experiment may be repeated if the triangle be made ſufficiently hot; and two papers may be placed in the taliſman at the ſame time.

This deception, when well executed, occaſions a ſurpriſe that cannot be conceived by a mere deſcription.

The ſibyls, fig. 5.

7. MAKE a wooden pedeſtal AB, about ten inches long, eight wide, and one deep: and at one end erect a box C, about ten inches high, eight broad, and two and an half deep.

The top of the pedeſtal muſt ſlide in a groove, on which inſcribe a dial M, of ſix inches diameter, and which is to be divided into nineteen equal parts, in twelve of which write the names of the months, and mark the reſpective ſigns of the zodiac; and in the ſeven other diviſions, which muſt be next the end B, write the days of the week, and mark the figures of the planets. Next the inner circle NO, make an opening into the box, of about one tenth of an inch, On the centre of the dial place an index that turns, freely on its centre.

Within the pedeſtal place a pulley P, about four inches diameter, which is to turn on an axis that is directly

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(E) The paper dipped in the vivifying liquor is to be previouſly placed againſt the opening in the table, and ſupported by the trap-door.

(F) This might be performed without an aſſiſtant by means of a trigger placed in the leg of the table, and communicating with the handles, which the operator might thruſt down with his foot. Where expence is not regarded, there may be a complete figure of a man in wood, or plaſter of Paris, ſeated by the table.

(G) You may alſo have a glaſs ink-ſtand, with ſome of the vivifying liquor, into which the pen may be dipped, and it will then appear to write with common ink. The ſpectators ſhould not be permitted to come near this machine, which may be applied to ſeveral other purpoſes.

directly under the centre of the dial; and on the upper part of that axis fix a bent index R. which comes out at the opening made by the inner circle (H), and paſſes over thoſe ſeven diviſions only on which are wrote the days of the week.

Within the box C, let their be two rollers S and T, as in the figure: let that of S contain a ſpring: and at the end of T let there be a pulley V, of three quarters of an inch diameter, round which goes a ſtring or thread that paſſes under the ſmall pulley X, and is faſtened to that of P; ſo that when the laſt pulley makes about one-third of a turn, that of V may make three or four turns.

There muſt alſo be a ſcroll of paper, about two feet long, and each end of which muſt be paſted to one of the rollers. In the front of the box, between the two rollers, make an aperture D, about four inches long, and one inch and an half wide: to this opening let there be a little flap or ſlider, by which it may be cloſed at pleaſure.

The apparatus being thus diſpoſed, place the index R ſucceſſively againſt each of the diviſions marked with one of the planets; and as the paper is gradually wound upon the roller, mark, againſt that part which is at the aperture D, the name of one of the following ſibyls:

The Helleſpontian
Cumean
Artemiſian
Phrygian } ſibyl.
Albunean
Perſian
Libyan

On each of the ſeven cards write a different queſtion, and draw one of the ſeven planets. Next, take a memorandum book that contains ſeven leaves, and on each of them write the name of one of the foregoing ſibyls; in each of the leaves place ſeveral pieces of paper, and on each of them write, with the ſympathetic ink that does not appear till the paper is heated, different anſwers to the ſame queſtion.

Then give a perſon the ſeven cards on which the queſtions are wrote, and tell him to chooſe one of them privately, and conceal the reſt, ſo that it cannot poſſibly be known which of them he has choſen.

Next, tell him to place the index that points to the month againſt that in which he was born (I), and to place the index of the planets againſt that which is on the card he has choſen, and which is to preſide over the anſwer: you tell him to do this privately, that no one may ſee him, and after that to cover the dial with his handkerchief. Then let him open the door that is before the aperture in the box, and tell you the name of the ſibyl there viſible.

You then open the memorandum-book, and taking out the papers that are in the leaf where the name of the ſibyl juſt mentioned is wrote, you deſire him to chooſe any one of them he thinks proper. The taliſman uſed in the laſt experiment being properly heated, is then to be introduced, when you direct the perſon to put the blank paper into it; and taking it out a few moments after, he will find the anſwer to his queſtion.

To make this operation appear the more extraordinary, it will be proper to have a ſmall preſs or cupboard, at the back of which there is a door that opens into an adjoining room, by which means an aſſiſtant having prepared the taliſman, may place it in the cup-board the moment before it is wanted. This contrivance will be uſeful on many other occaſions.

The magic urn.

8. PROVIDE an urn of wood or metal about ſix inches high, and two and an half diameter in the wideſt part, and of ſuch figure in other reſpects as you think proper (ſee fig. 9.). Let there be a cylinder of copper C, fig. 10.) of about one-eighth of an inch diameter, which is to fill a hole AB made in the urn.— The top of this cylinder is to be in the top of the urn, ſo that it may be eaſily taken out. To this urn there muſt be a cover D, which fits it exactly.

On a ſmall ſquare piece of paper draw the figure of a flower or leaf, with that ſort of ſympathetic ink whoſe colour moſt reſembles it. You then preſent ſeveral ſorts of flowers or leaves to a perſon, and deſire him to chooſe any one of them. Then put that flower on a chafingdiſh of hot coals; and, taking the paper on which it is ſecretly drawn, you give it to the perſon to examine, and then put it in the urn, having previouſly heated the cylinder (K). Then taking ſome of the aſhes of the burnt flower, you ſtrew them over the paper, after which you take it out and ſhow the company the figure of that flower. While the flower is burning, you may ſprinkle ſome powder over it, ſuppoſe that of ſaltpetre; and by that, mixed with the aſhes of the flower, the company may imagine the effect is produced.

The preſs or cupboard mentioned in the preceding experiment, will be here very convenient for heating the cylinder and placing it in the urn. A ſimilar deception may be performed by putting the paper in a copper veſſel, that may be placed on an iron plate over the chafingdiſh in which the flower is burnt. But this method has not ſo myſterious an appearance as the other, and in ſome perſons may cauſe a ſuſpicion that the effect is produced by heat.

The convertible card.

9. To perform this experiment, you muſt obſerve, that there are ſeveral letters which may be changed into others, without any appearance of the alteration; as, the *a* into *d*, the *c* into *a*, *e*, *d*, *g*, *o*, or *q*, the *i* into *b*, *d*, or *l*, the *l* into *t*, the *o* into *a*, *d*, *g*, or *q*, the *v* into *y*, &c.

Take a parcel of cards, ſuppoſe 20, and on one of them write, with the ink of the fourth claſs, the word *law* (L), and on the other, with the ſame ink, the words *old woman*; then holding them to the fire, they will both become viſible. Now you will obſerve, that

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(H) If the axis be made to paſs through the top of the pedeſtal, this opening will not be neceſſary.

(I) Theſe months and the index are of no other uſe than to give the experiment an air of great myſtery.

(K) There are ſome ſorts of ſympathetic inks that require much more heat than others.

(L) Theſe letters ſhould not be joined.

by altering the *a* in the word *law* into *d*, and adding *o* before the *l*, and *oman* after the *w*, it becomes *old woman*. Therefore, you make thoſe alterations with the inviſible ink, and let it remain ſo. On the reſt of the cards you write any words you think fit.

Preſent the cards in ſuch a manner to two perſons, that one of them ſhould draw the word *law*, and the other the words *old woman*. You then tell the perſon who drew the word *law*, that it ſhall diſappear, and the words on the other card ſhall be wrote in its place; and that you may not change the cards, deſire each of the parties to write his name on his card. Then putting the cards together, and holding them before the fire, as if to dry the names juſt wrote, the word *law* will preſently change into *old woman*.

This experiment may be varied by fixing on a word that may be changed into three other words, and making four perſons draw the cards on which thoſe words are wrote; and it may be further diverſified by chooſing three ſuch words, as that the firſt can be changed into the ſecond, and the ſecond into the third. You then tell him who drew the firſt word, that it ſhall be changed into that drawn by the ſecond perſon; and him you tell, that his word ſhall be changed into that of the third perſon.

The oracular letters.

10. Write on ſeveral ſlips of paper different queſtions, and ſuch as may be anſwered by the name of ſome perſon; for example, Who is the merrieſt man in the company? Anſwer, Mr * * *. To whom will Miſs * * * be married? Anſwer, To Mr * * *. Theſe queſtions are to be wrote in the ſympathetic ink of this claſs, and expoſed to the fire, and the anſwers wrote in the ſame ink, and left inviſible. The papers are to be folded in form of letters, and in ſuch manner that the part where the name is wrote ſhall be directly under the ſeal, and the heat of the wax will make it viſible. Then give the letter to the perſon who requires the anſwer, and he will find it plainly wrote.

A deception ſimilar to this may be made with a number of blank cards, on each of which an ace of ſpades is drawn with the inviſible ink; then let a perſon chooſe any one of them, and incloſe it in a letter-caſe, prepared in ſuch manner that the figure of the ace ſhall be directly under the ſeal, and on opening the letter it will be immediately viſible.

Deceptions with Class V.

The incomprehenſible writing.

11. Have a box that is divided into three parts, after the ſame manner as the taliſman in the 21ſt experiment, except that, inſtead of being triangular, it muſt be of a long ſquare (ſee fig. 14.). Divide its top B into two equal parts D and E, as in fig. 13. and to the part D adjuſt a plate of copper L, about one quarter of an inch thick, and under both the plate L and the opening E place a cloth. The upper part C muſt have a button by which it may be fixed on the cover B, ſo as to appear of one piece with it.

At the bottom of the box place a piece of cloth, or other ſtuff, on which you may ſtamp certain myſterious characters, and obſerve that the bottom of the cover muſt reſt upon this cloth.

Then provide a ſlip of paper GH (fig. 12.) of the ſame ſize with the bottom of the box; and at each end of it write, with the green ſympathetic ink, the name of a different card, and make ſome private mark by which you can tell at which end each name is wrote (m).

Take a parcel of cards, and offer thoſe two of them whoſe names are wrote on the paper to the two perſons, that they may draw them. You tell the parties to keep their cards to themſelves, and you propoſe to make the names of thoſe cards appear upon a ſlip of paper, which you put into the box. You then aſk which name of the two cards ſhall appear firſt. The copperplate being previouſly heated and placed in the cover, you put it over that end of the paper on which is the name required, and it will preſently appear. Then taking the paper out and ſhowing the name wrote, you put it in again, turning the other end to the ſide of the box where the plate is, and it will in like manner become viſible.

The firſt name may be made to diſappear at the ſame time that the ſecond appears, if the cloth at the end oppoſite to that where the plate is be made damp.

Winter changed into ſpring.

12. Take a print that repreſents winter, and trace over the proper parts of the trees, plants, and ground with the green ſympathetic ink; obſerving to make ſome parts deeper than others, according to their diſtance. When thoſe parts are dry, paint the other objects with their natural colours. Then put the print in a frame with a glaſs, and cover the back of it with a paper that is paſted over its border only.

When this print is expoſed to the heat of a moderate fire, or the warm rays of the ſun, all the graſs and foliage will turn to a pleaſing green; and if a yellow tint be given to ſome parts of the print, before the ſympathetic ink be drawn over, this green will be of different ſhades; and the ſcene that a minute before repreſented winter, will now be changed to ſpring. When this print is placed in the cold, winter will again appear, and will again be driven away by the warm rays of the ſun. This alternate change of ſeaſons may be repeated as often as you pleaſe; remembering, however, as was before obſerved, not to make the print at any time too hot, for then a faded autumn will for ever remain.

Deceptions with Class VII.

The revivified bouquets.

13. Provide a number of artificial flowers, ſuch as roſes, jonquils, pinks, or any other you find convenient. Theſe flowers muſt be made of white thread or ſilk, and their leaves of parchment. Dip the roſes in the red ſympathetic ink, the jonquils in the yellow, the pinks in the violet, and their leaves in a ſolution of ſalt of tartar. When they are all dry, form them into ſmall bouquets, which will appear white, and may be uſed in this experiment, either the day they are dipped, or ſeveral days after.

You take one of theſe bouquets, and after ſhowing the company that every part of it is white, you dip it in an infuſion of any of the blue colours mentioned under the article *Colour-Making*, nº 13, and, drawing it preſently out, all the flowers and leaves will appear in their natural colours (n).

(m) That there may be no ſuſpicion of the paper being prepared, you may cut it from a whole ſheet, before the company, having previouſly wrote the name.

The transcolorated writing.

15. Write on a paper, with the violet liquor, as many letters or words as you pleaſe; and aſk any perſon whether he will have that writing turn to yellow, green, or red.

Have a ſponge with three ſides that you can readily diſtinguiſh, and dip each of its ſides in one of the three ſympathetic inks. Draw the ſide of the ſponge that correſponds to the colour the perſon has choſe, over the writing once only; and it will directly change to the colour required (o).

Sect. III. *Miſcellaneous performances.*

To tell odds or evens.

15. *A perſon having an even number of counters in one hand, and an odd number in the other, to tell in which hand the odd or even number is.* Let the perſon multiply the number in his right-hand by an odd number, and the number in his left-hand by an even number, and tell you if the ſum of the products added together be odd or even. If it be even, the even number is in the right-hand; but, if it be odd, the even number is in the left-hand.

Example.

1. Number in the right hand	18	In the left	7
Multipliers	3		2
	54		14
	14		
Their ſum	68		

2. Number in the right hand	7	In the left	18
Multipliers	3		2
	21		36
	36		
Their ſum	57		

To tell at what hour any perſon intends to riſe.

16. *To tell, by the dial of a watch, at what hour any perſon intends to riſe.* Let the perſon ſet the hand of the dial to any hour he pleaſes, and tell you what hour that is; and to the number of that hour you add, in your mind, 12. Then tell him to count privately the number of that amount upon the dial, beginning with the next hour to that on which he propoſes to riſe, and counting backwards, firſt reckoning the number of the hour at which he has placed the hand. An example will make this plain.

Suppoſe the hour at which he intends to riſe be 8, and that he has placed the hand at 5. You add 12 to 5, and tell him to count 17 on the dial, firſt reckoning 5, the hour at which the index ſtands, and counting backwards from the hour at which he intends to riſe; and the number 17 will neceſſarily end at 8, which ſhows that to be the hour he choſe.

That the hour at which the counting ends muſt be that on which he propoſed to riſe, will be evident on a little reflection; for if he had began at that hour and counted 12, he would neceſſarily have come to it again; and calling the number 17, by adding 5 to it, only ſerves to diſguiſe the matter, but can make no ſort of difference in the counting.

The magical century

17. If the number 11 be multiplied by any one of the nine digits, the two figures of the product will always be ſimilar. As follows:

11	11	11	11	11	11	11	11	11
1	2	3	4	5	6	7	8	9
11	22	33	44	55	66	77	88	99

Place a parcel of counters on a table, and propoſe to any one to add alternately, a certain number of thoſe counters, till they amount to 100, but never to add more than 10 at a time. You tell him, moreover, that, if you ſtake firſt, he ſhall never make the even century, but you will. In order to which, you muſt firſt ſtake 1, and remembering the order of the above ſeries, 11, 22, 33, &c. you conſtantly add, to what he ſtakes, as many as will make one more than the numbers of that ſeries, that is, as will make 12, 23, 34, &c. till you come to 89, after which the other party cannot make the century himſelf, nor prevent you from making it.

If the other party has no knowledge of numbers, you may ſtake any other number firſt, under ten, provided you take care to ſecure ſome one of the laſt terms, as 56, 67, 78, &c.

This deception may be performed with other numbers; and in order to ſucceed, you muſt divide the number to be attained by a number that has one digit more than what you can ſtake each time, and the remainder will be the number you muſt firſt ſtake. Obſerve, that, to be ſure of ſucceſs, there muſt be always a remainder. Suppoſe, for example, the number to be attained is 52, making uſe of a pack of cards inſtead of counters, and that you are never to add more than 6: then divide 52 by the next number above 6, that is, by 7, and the remainder, which is 3, will be the number you muſt ſtake firſt; and whatever the other ſtakes, you muſt add as much to it as will make it equal to the number by which you divided, that is, 7. Therefore, if his firſt ſtake be 1, you muſt ſtake 6, &c. ſo that your ſecond ſtake will make the heap 10, your third ſtake will make it 17, and ſo on, till you come to 45, when, as he cannot ſtake more than 6, you muſt make the number 52.

In this, as in the former caſe, if the other perſon has no knowledge of numbers, you may ſtake any number firſt under 7; or you may let him ſtake firſt, only taking care to ſecure either of the numbers 10, 17, 24, 31, &c. after which he cannot make 52, if you

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(n) The liquor ſhould be put into a ſort of jar with a narrow neck, that it may not be ſeen by the company; and you ſhould draw the flowers gently out, that the liquor may drop if thin, and they may have time to acquire their colours.

(o) The ſponge ſhould be well cleaned immediately after the experiment.

you conſtantly add as many to his ſtake as will make it 7.

To tell what number a perſon privately fixes on.

18. *A perſon privately fixing on any number, to tell him that number.* After the perſon has fixed on a number, bid him double it and add 4 to that ſum, then multiply the whole by 5; to the product let him add 12, and multiply the amount by 10. From the ſum of the whole let him deduct 320, and tell you the remainder; from which if you cut off the two laſt figures, the number that remains will be that fixed on.

Example.

Let the number choſen be - -	7
Which doubled is - - -	14
And 4 added to it, makes - - -	18
Which multiplied by 5, gives - -	90
To which 12 being added, it is -	102
That multiplied by 10 makes - -	1020
From which deducting 320, the remainder is	700
And by ſtriking off the two cyphers, it becomes the original number - - -	7

To tell the number of points thrown up by 3 dice, without ſeeing them.

19. *Three dice being thrown on a table, to tell the number of each of them, and the order in which they ſtand.* Let the perſon who has thrown the dice double the number of that next his left hand, and add 5 to that ſum; then multiply the amount by 5, and to the product add the number of the middle die; then let the whole be multiplied by 10, and to that product add the number of the third die. From the total let there be ſubtracted 250, and the figure of the number that remains will anſwer to the points of the three dice as they ſtand on the table.

Example. Suppoſe the points of the three dice thrown on the table to be 4, 6, and 2,

Then the double of the firſt die will be -	8
To which add - - - -	5
	13
	5
That ſum multiplied by 5 will be -	65
To which add the number of the middle die	6
	71
And multiply the ſum by - - -	10
	710
To that product add the number of the third die	2
From the total - - -	7 2
Subtract - - -	250
And the three remaining figures	264

will anſwer to the number on the dice, and ſhew the order in which they ſtand.

To tell in what finger, joint, &c. a ring has been privately put.

20. *Some perſon in company having put a ring privately on one of his fingers; to name the perſon, the hand, the finger, and the joint, to which it is placed.* Let a third perſon double the number of the order in which he ſtands who has the ring, and add 5 to that number; then multiply that ſum by 5, and to the product add 10. Let him next add 1 to the laſt number if the ring be on the right hand, and 2 if on the left, and multiply the whole by 10: to this product he muſt add the number of the finger (counting the thumb as the firſt finger), then multiply the whole again by 10. Let him then add the number of the joint; and, laſtly, to the whole join 35.

He is then to tell you the amount of the whole, from which you are to ſubtract 3535, and the remainder will conſiſt of four figures, the firſt of which will expreſs the rank in which the perſon ſtands, the ſecond the hand (the number 1 ſignifying the right hand, and 2 the left), the third number the finger, and the fourth the joint.

Example. Suppoſe the perſon who ſtands the third in order has put the ring upon the ſecond joint of the thumb of his left hand; then

The double of the rank of the third perſon is	6
To which add	5
	11
Multiply the ſum by	5
	55
To which add	10
And the number of the left hand	2
	67
Which being multipled by	10
	670
To which add the number of the thumb	1
	671
And multiply again by	10
	6710
Then add the number of the joint	2
And laſtly the number	35
	6747
From which deducting	3535
The remainder is	3212

Of which, as we have ſaid, the 3 denotes the third perſon, the 2 the left hand, the 1 the thumb, and the laſt 2 the ſecond joint.

The burnt writing reſtored.

21. Cover the outſide of a ſmall memorandum-book with black paper, and in one of its inſide covers make a flap, to open ſecretly, and obſerve there muſt be nothing over the flap but the black paper that covers the book.

Mix ſoot with black or brown ſoap, with which rub the ſide of the black paper next the flap; then wipe it quite clean, ſo that a white paper preſſed againſt it will not receive any mark.

Provide a black lead pencil that will not mark without preſſing hard on the paper. Have likewiſe a ſmall box, about the ſize of the memorandum-book, and that opens on both ſides, but on one of them by a private method. Give a perſon the pencil, and a ſlip of thin paper, on which he is to write what he thinks proper: you preſent him the memorandum-book at the ſame time, that he may not write on the bare board. You tell him to keep what he writes to himſelf, and direct him to burn it on an iron plate laid on a chafingdiſh of coals, and give you the aſhes. You then go into another room to fetch your magic box above deſcribed, and take with you the memorandum-book. Having previouſly placed a paper under the flap in the cover of the book, when he preſſes hard with the pencil, to write on the paper, every ſtroke, by means of the ſtuff rubbed on the black paper, will appear on that under the flap. You therefore take it out, and put it into one ſide of the box.

You then return to the other room, and taking a ſlip of blank paper, you put it into the other ſide of the box, ſtrewing the aſhes of the burnt paper over it. Then ſhaking the box for a few moments, and at the ſame time turning it dexterouſly over, you open the other ſide, and ſhow the perſon the paper you firſt put in, the writing on which he will readily acknowledge to be his.

The tranſpoſable pieces.

22. Take two guineas and two ſhillings, and grind part of them away, on one ſide only, ſo that they may be but of half the common thickneſs; and obſerve that they muſt be quite thin at the edge: then rivet a guinea and a ſhilling together. Lay one of theſe double pieces with the ſhilling upwards, on the palm of your hand, at the bottom of your three firſt fingers; and lay the other piece, with the guinea upward, in like manner, in the other hand. Let the company take notice in which hand is the guinea, and in which the ſhilling. Then as you ſhut your hands, you naturally turn the pieces over; and when you open them again, the ſhilling and the guinea will appear to have changed their places.

The penetrative guinea.

23. Provide a round tin-box, of the ſize of a large ſnuff-box; and in this place eight other boxes, which will go eaſily into each other, and let the leaſt of them be of a ſize to hold a guinea. Each of theſe boxes ſhould ſhut with a hinge: and to the leaſt of them there muſt be a ſmall lock, that is faſtened with a ſpring, but cannot be opened without a key: and obſerve that all theſe boxes muſt ſhut ſo freely, that they may be all cloſed at once. Place theſe boxes in each other, with their tops open (ſee fig. 12.), in the drawer of the table on which you make your experiments; or, if you pleaſe, in your pocket, in ſuch a manner that they cannot be diſplaced.

Then aſk a perſon to lend you a new guinea, and deſire him to mark it, that it may not be changed. You take this piece in one hand, and in the other you have another of the ſame appearance; and putting your hand in the drawer you ſlip the piece that is marked into the leaſt box, and ſhutting them all at once, you take them out. Then ſhowing the piece you have in your hand, and which the company ſuppoſe to be the ſame that was marked, you pretend to make it paſs through the box, and dexterouſly convey it away.

You then preſent the box, for the ſpectators do not yet know there are more than one, to any perſon in company; who, when he opens it, finds another, and another, till he comes to the laſt, but that he cannot open without the key (ſee fig. 13.) which you then give him, and retiring to a diſtant part of the room, you tell him to take out the guinea himſelf, and ſee if it be that he marked.

This deception may be made more ſurpriſing, by putting the key into the ſnuff-box of one of the company; which you may do by aſking him for a pinch of his ſnuff, and at the ſame time conceal the key, which muſt be very ſmall, among the ſnuff: and when the perſon who is to open the box aſks for the key, you tell him that one of the company has it in his ſnuff-box. This part of the deception may likewiſe be performed by means of a confederate.

The three magic pictures. Plate CCLXVII. fig. 14, 15.

24. ABCD, fig. 15. repreſents a ſmall wooden box ſeven or eight inches long, two and a half broad, and half an inch deep; the bottom of which by means of two croſs-pieces, is divided into three equal parts. EFGH repreſents the lid, which is faſtened to the bottom by a hinge, and has in front a ſmall plate ſhaped like a lock, and two ſmall eyes for hooks, which ſerve to faſten it when it is ſhut. ILM are three ſmall flexible ſprings, flat, and about ¾ inch long. NOP are three wooden tablets of the ſame ſize, upon which are marked the figures 3, 4, and 5. The tablets are of different thickneſſes, and the difference is ſo ſmall as not to be perceived by the eye. The outſide of the box is covered with ſhagreen or morocco leather, and on the inſide with ſilk taffety; theſe coverings being indiſpenſibly neceſſary to hide the three ſmall ſprings abovementioned. Fig. 14. ſhows the two hinges E and F bent cloſe to the top of the lid ABCD; the piece of braſs G, ſimilar to a lock, being alſo curved to the lid. A ſmall braſs ſtud is rivetted upon the end of each of theſe ſprings inſerted into the lid, and paſſes through the curved part of each of the hinges and the lock; ſo that on the outſide they appear as the heads of ſmall pins which faſten them upon the lid. Theſe ſmall ſtuds will be elevated more or leſs according to the thickneſſes of the tablets, that may be ſhut up in each of the partitions in which they may be found placed; ſo that the tablet N elevates them more than the tablet O, and the latter leſs than P; though theſe elevations are but barely ſenſible to the ſight or touch, and that by a perſon accuſtomed to look at or handle them. Thus it may be eaſily known in whatever order the tablets are placed, however carefully ſhut up; and conſequently the numbers named as incloſed.

Give now the box to any indifferent perſon, leave him at liberty to form with the tablets any number he pleaſes, deſiring him to return the box well ſhut up; then taking the box, and determining by the touch, or rather by the eye, what order the tablets are in, it will be very ſurpriſing to hear you declare the number without ſeeing it.

N. B. It will ſtill be equally poſſible to diſcover the number, though the tablets ſhould be returned with the bottom upwards, or even though one ſhould be withdrawn in order to defeat your deſign; particularly if care has been taken to make the ſtuds remain even with the plates when a number is omitted.

The numerical table.

25. *To diſcover any particular counter which has been ſecretly placed within a box that turns upon it.*—This table, which is made of wood, is repreſented by A, fig. 16. It is of an hexagonal ſhape, and about three or four inches diameter. For the ſake of neatneſs in appearance, a proportionably ſized pillar with a foot is fixed to it, round a center there turns a ſmall round box B of about ¾ inch diameter in the inſide, the lid of which takes off at B. At the bottom of this box, near the circumference in the inſide, is fixed a braſs pin to fit a hole made in a flat ivory counter ſhown at *b*, fig. 17. The pin and counter are repreſented in fig. 18. which is a flat view of fig. 16, with the lid of the box B taken off. Oppoſite to the pin *b*

in the ſame figure, D repreſents a fine dot deſigned as a ſecret mark on the outſide of the box, which ſerves always as a guide to the number of the counter privately placed in the inſide of the box, as is afterwards particularly explained. Upon one of the corners of the table is an ivory mark C, fig. 16. and 18. which ſerves to place the ſpot *a* upon the counters in its proper poſition. See fig. 17. There are 12 counters fitted to the box B, marked 10, 20, &c. as far as 120, on the middle of each. On each of thoſe counters is the hole *b*, fig 17, and 11, which goes over the pin in the bottom of the box; and on one ſide of this hole a red or black ſpot is placed in the following manner. When n° 10 is put into the box, the ſpot muſt be ſo far to the left hand of the hole, that when it is brought to the mark C, fig. 18, the hole *b* will be oppoſite to the ſide marked 1. When n° 20 is put in, the ſpot being brought to the mark C, will carry the hole to the corner marked 2. When n° 30 is put in, and the ſpot brought oppoſite to C, the hole will be brought againſt the ſide marked 3, as is ſhown in the figure, and ſo on for the reſt. Therefore, as oppoſite to the braſs pin, or hole in the counter on the outſide of the box B, there is a ſecret mark D already mentioned, this muſt ſerve as an index to the number contained, in the box, according as it is oppoſite to a ſide or corner of the table.

Give now the table with the box and the 12 counters to any perſon, and deſire him to put one of the counters ſecretly into the box, keeping the reſt to himſelf; and after having placed the hole over the pin in the box, to place particularly, by turning the box round, the ſpot *a* againſt the mark C on the table. Let him then cover the box, give you the table, and keep the counters to himſelf. Obſerve then privately what ſide or corner the ſecret outſide mark D ſtands againſt, reckon the tens accordingly, and tell him the number.

The magic well.

26. *To draw out of the well with a bucket any one of four liquors which have been previouſly mixed and put into it.* Provide two tin cylinders of ſeven or eight inches height; the diameter of the largeſt, repreſented by AB fig. 19. to be four inches, and that of the leaſt, CD, two inches. Place the ſmall one within the larger, and connect them together by ſoldering to them four tin partitions, making the equal ſpaces *e*, *f*, *g*, *h*. Turn a piece of wood three inches thick, hollow withinſide, and lined with tin, of which a ſection is given, fig. 20. Into this the exterior cylinder ſhould be cloſely fitted at *a* and *b*. Another circle of wood (of which a ſection is given fig. 21.) hollowed at *a*, *b*, and *c*, is alſo to be procured, and which may cover exactly the ſpace between the two cylinders; and laſtly, let the whole be conſtructed in ſuch a manner, that when theſe three ſeparate pieces are placed together, they may repreſent a well, as in fig. 22. The two braſs or wooden pillars AA, with the axis and handle C, ſerve to let down and draw up a ſmall glaſs bucket B, an inch and an half in diameter. Make alſo four tin reſervoirs of the ſame height with the cylinder, and ſo ſhaped as to fill the four ſpaces *e*, *f*, *g*, *h*, (fig. 19.) which muſt be well cloſed at their extremities B and C. On the top of each make a ſmall hole about the tenth part of an inch diameter, and ſolder at the baſe C a ſmall tube D, the end of which ſhould be bent towards the inſide of the well when the reſervoir is placed in it. Solder on the top of each reſervoir a ſmall ſpring lever and prop ABDE, fig. 23. This ſpring will ſerve always to preſs the end of the lever D down upon the hole at the top of the reſervoir B; and in order to cover it more perfectly, a ſmall piece of leather is to be glued on to the end of the lever D. Laſtly, a ſmall peg or ſtud C is placed at the end of each of the levers, and which muſt be cloſe to the under part of the wooden circle which covers the reſervoirs. To conceal theſe ſtuds, and at the ſame time to be able to preſs upon them with the fingers, circular apertures, as ſhown in fig. 21. muſt be made in the piece of wood, the top covered with a piece of vellum, and the whole neatly painted with oil-colour.

If now you plunge one of theſe reſervoirs perpendicularly into any liquor, in preſſing on the ſtud, ſo as to uncover the hole at the top, it will be filled with the liquor in proportion to the depth to which it is immerged; and as long as the lever continues to preſs upon the hole by means of the ſpring, the liquor cannot run out for want of air, though it will do ſo the moment the ſtud is preſſed upon and the air admitted. If the reſervoir is properly placed, then the liquor will flow out of it into the glaſs-bucket when let down to a proper depth.

Fill now the four reſervoirs with the four different liquors; putting them in their places, and covering them with the circular top. Take a quantity of the ſame liquors, mix them well together and pour the whole into the well; after which you may draw out any one which the company deſires, by letting down the bucket, and preſſing ſecretly upon the ſtud belonging to the reſervoir which contains it, and which will thus diſcharge the liquor it contains.

The reſuſcitated flower. Plate CCLXVI.

27. Provide a ſmall tin mortar, that is double, as A (fig. 8,) whoſe bottom B turns round on an axis, by means of a ſpring which communicates with the piece C. There muſt be a hollow ſpace under the falſe bottom. To the under ſide of the bottom faſten, by a thread of fine ſilk, a flower, with its ſtalk and leaves.

Then take a flower that exactly reſembles the other, and plucking it from the ſtalk, and all the leaves from each other, put them into the mortar, and pound them with a ſmall peſtle; after which you ſhow the mortar to the company, that they may ſee the parts are all bruiſed.

Then taking the mortar up in your hands, you hold it over the flame of a lamp or candle, by whoſe warmth the flower is ſuppoſed to be reſtored; and at the ſame time preſſing the piece at C, the bottom will turn round, the bruiſed parts deſcend into the ſpace under the bottom, and the whole flower will be at top: you then put your hand into the mortar, and eaſily breaking the ſilk thread, which may be very ſhort as well as fine, you take the flower out and preſent it to the company.

There is an experiment ſimilar to this, in which a live bird is concealed at the bottom of the mortar, and one that is dead is pounded in it; after which, by the motion of the bottom, the live bird is ſet at liberty. But ſurely the pounding of a bird in a mortar, though it be dead, muſt produce, in perſons of any delicacy, more diſguſt than entertainment.

LEGERDEMAIN. Plate CCLXVII.

Fig. 1.

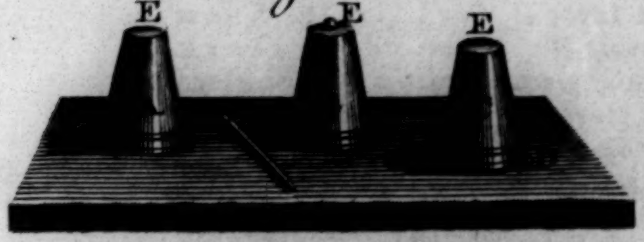


Fig. 2.

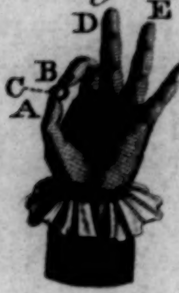


Fig. 3.

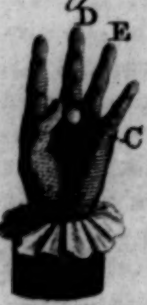


Fig. 4.

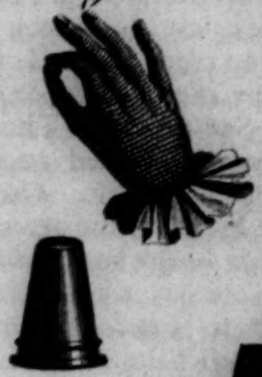


Fig. 5.

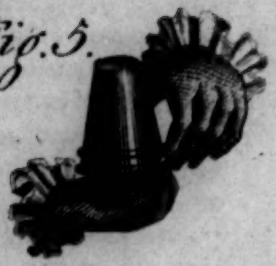


Fig. 6.

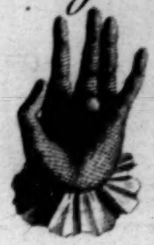


Fig. 7.

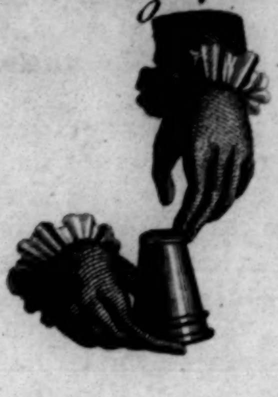


Fig. 8.

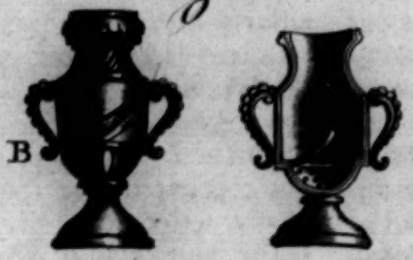


Fig. 9.

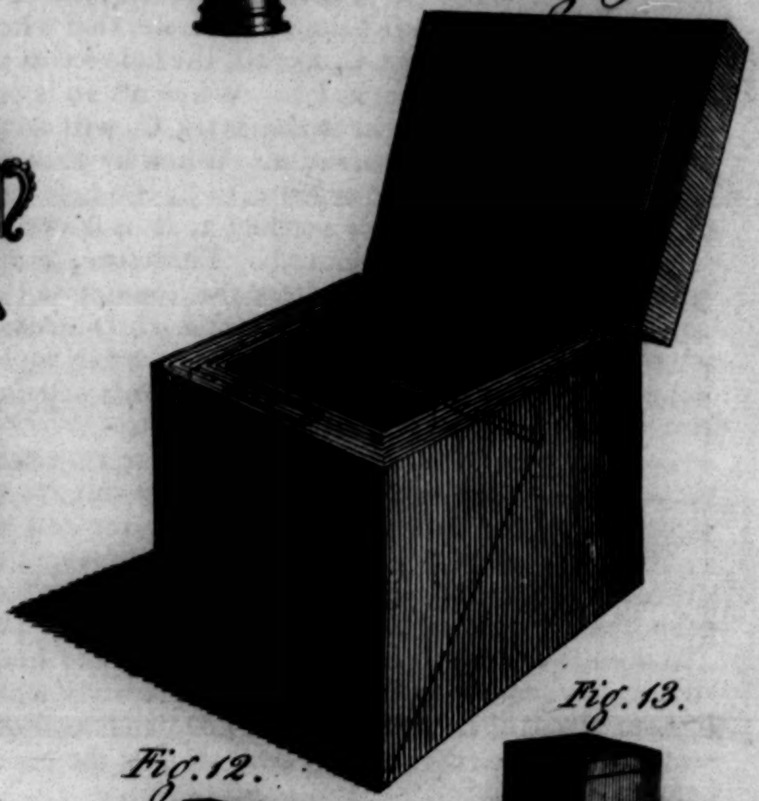


Fig. 10.

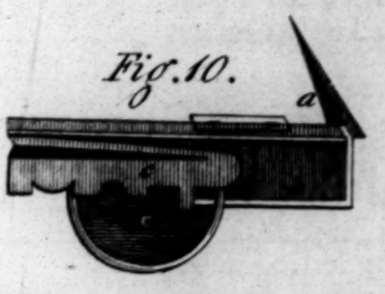


Fig. 11.

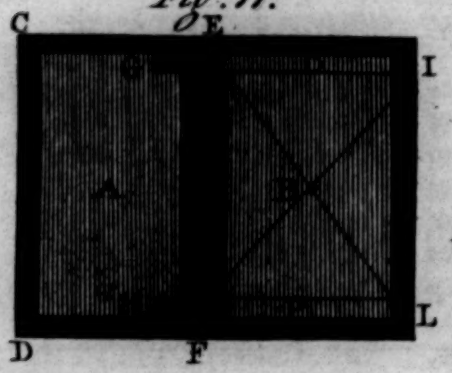


Fig. 14.

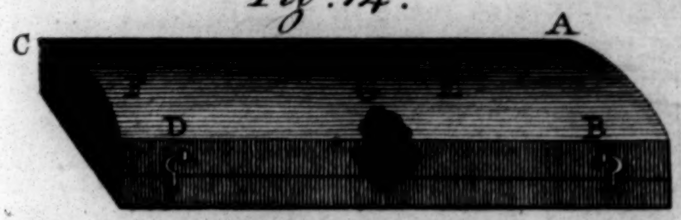


Fig. 19.

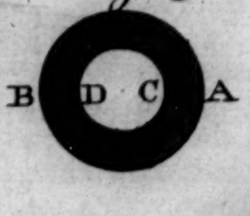


Fig. 12.

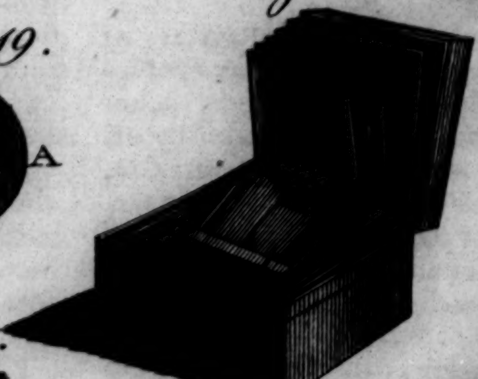


Fig. 13.

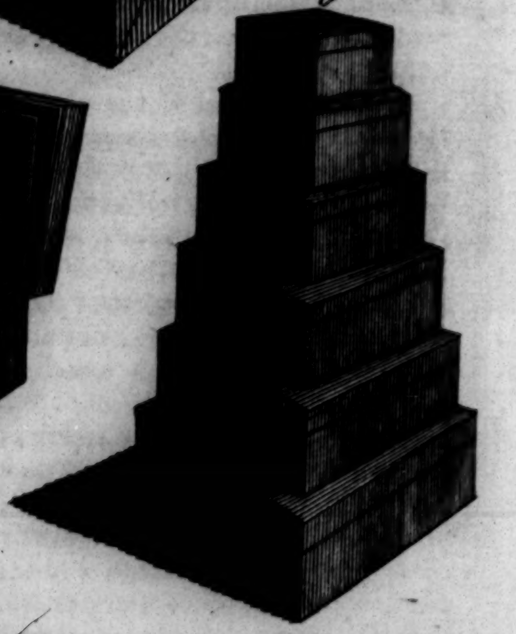


Fig. 15.

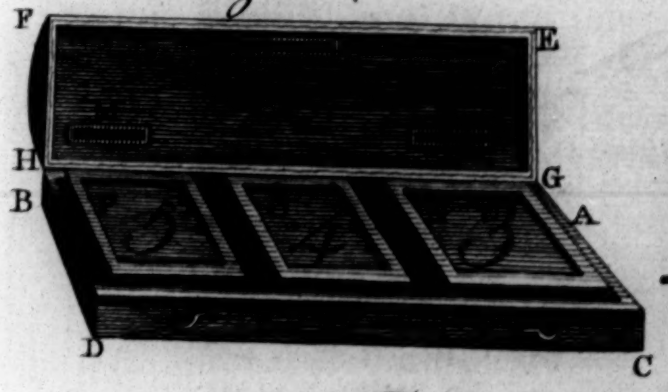


Fig. 22.

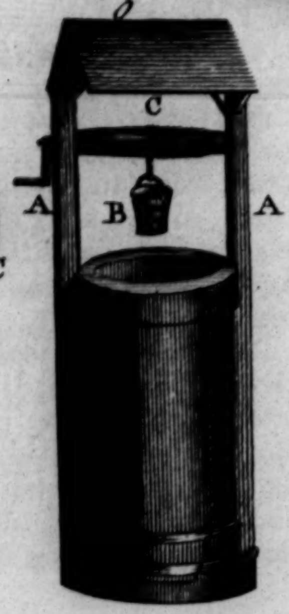


Fig. 16.

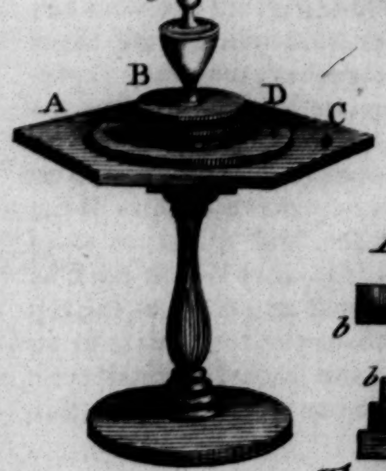


Fig. 23.

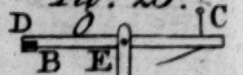


Fig. 17.

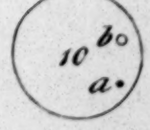


Fig. 18.

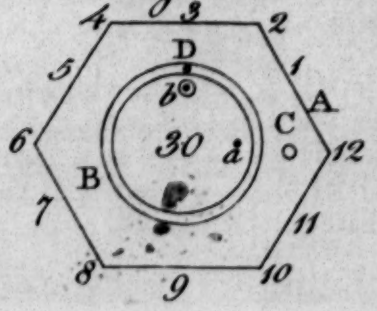

4
3
2
D
5
1
A
b
C
6
30
d
12
B
7
11
8
9
10

Fig. 21.

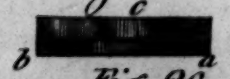
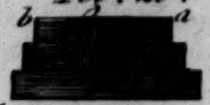
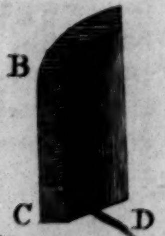


Fig. 20.





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The luminous oracle

28. Procure a tin box ABCD (fig. 1.) about eight inches high, four wide, and two deep, and let it be fixed on the wooden ſtand E. On two of the inſides let there be a groove FG; and in the front an opening I, three inches wide and one high.

At the back of the box let there be a little tin-door, that opens outward, by which two wax candles M may be put in. Let the top of the box have a cover of the ſame metal, in which there are ſeveral holes, and which may be taken off at pleaſure.

Provide a double glaſs OP (fig. 2.) conſtructed in the ſame manner as that in the laſt experiment. On one of its ſides you are to paſte a black paper, the length of which is to be divided into three parts, and the breadth into fifteen; in every two of theſe fifteen diviſions you cut out letters, which will make in the whole three anſwers to three queſtions that may be propoſed. On the other ſide of the glaſs paſte a very thin paper, and to the top faſten a ſmall cord, by which they may be made to riſe or deſcend in the groove FG.

Then take a ſlip of paſteboard RS (fig. 3.), one inch and a half wide and three inches long, which is to be divided into fifteen equal parts ſimilar to thoſe of the paper OP, and cut out ſpaces, as in the figure, ſo that this paper, ſliding horizontally before OP, will either cover or conceal the letters cut in that.

This paſteboard is to ſlide between two braſs wires, and is to be faſtened to one ſide of the box, by a ſtring that communicates with a ſmall braſs ſpring; and to the other ſide, by a ſtring faſtened to the box by a ſmall piece of wax, ſo ſituated that the ſtring may be eaſily ſet at liberty by the heat of the candles placed in the box.

Take a parcel of cards, and write on them different queſtions, three of which are to correſpond with the anſwers on the glaſs. Shuffle theſe cards, and let a perſon draw any one of the three queſtions. Then by raiſing the glaſs you bring the anſwer againſt the hole in the front of the box. You next place the candles in the box, the heat of which will melt the wax that holds the paper RS, which being then drawn by the ſpring, the anſwer will be viſible; and in proportion as the compoſition between the glaſſes becomes diluted by the increaſe of the heat, the letters will become more ſtrongly illuminated.

The letters cut in the paper may be made to anſwer ſeveral different queſtions, as have been explained in other experiments; and the whole parcel of cards may conſiſt of queſtions that may be anſwered by one or other of the three diviſions in the paper.

A flower produced from its aſhes.

29. Make a tin box ABCD (fig. 4.) with a cover M, that takes off. Let this box be ſupported by the pedeſtal FGHI, of the ſame metal, and on which there is a little door L. In the front of this box is to be a glaſs O.

In a groove, at a ſmall diſtance from O, place a double glaſs of the ſame ſort with that in the laſt experiment. Between the front and back glaſſes place a ſmall upright tin tube ſupported by the croſs-piece R. Let there be alſo a ſmall chafingdiſh placed in the pedeſtal FGHI. The box is to be open behind. You privately place a flower (Q) in the tin tube R; and preſenting one that reſembles it to any perſon (R) deſire him to burn it on the coals in the chafing-diſh.

You then ſtrew ſome powder over the coals, which may be ſuppoſed to aid the aſhes in producing the flower; and then put the chafingdiſh in the pedeſtal, under the box. As the heat by degrees melts the compoſition between the glaſſes, the flower will gradually appear; but when the chafingdiſh is taken away, and the power of the aſhes is ſuppoſed to be removed, the flower ſoon diſappears.

For entertaining experiments, illuſions, &c. of a philoſophical nature, ſee the articles ACOUSTICS, CATOPTRICS, CHROMATICS, DIOPTRICS, ELECTRICITY, HYDROSTATICS, MAGNETISM, PYROTECHNICS, &c.

Leger-line, Leghorn.

Leghorn.

LEGER-line, in muſic, one added to the ſtaff of five lines, when the aſcending or deſcending notes run very high or low; there are ſometimes many of theſe lines both above and below the ſtaff, to the number of four or five.

LEGHORN, anciently called *Liburnus Portus*, but by the modern Italians *Livorno*, a handſome town of Italy, in the duchy of Tuſcany, and a free port, about 30 miles ſouth weſt from Florence, in the territory of Piſa. The only defect of the harbour is its being too ſhallow for large ſhips. Coſmo I. had this town in exchange for Sarzana, from the Genoeſe: and it is the only ſea-port in the duchy. It was then but a mean unhealthy place; but it is now very handſome and well-built, with broad, ſtraight, parallel ſtreets. It is alſo well fortified; but wants good water, which muſt be brought from Piſa, 14 miles diſtant. It is about 2 miles in circuit, and the general form of it is ſquare. Part of it has the convenience of canals; one of which is 5 miles in length, and joining the Arno, merchandiſe and paſſengers are thus conveyed to Piſa. The port, conſiſting of two havens, one for the duke's galleys, and the other for merchant ſhips, is ſurrounded with a double mole, above a mile and a half in length, and defended, together with the town, by a good citadel and 12 forts. Roman Catholics, Jews, Greeks, Armenians, Mahometans, and even the Engliſh factory, are indulged in the public exerciſe of their religion, but other Proteſtants muſt be ſatisfied with the private. The trade carried on here is very great, and moſt of it paſſes through the hands of the Jews. Though only two piaſtres, or ſcudi, are paid for every bale,

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(Q) This flower muſt not be placed ſo near as to make it in the leaſt degree viſible.

(R) You may preſent ſeveral flowers, and let the perſon chooſe any one of them. In this caſe, while he is burning the flower, you fetch the box from another apartment, and at the ſame time put in a correſponding flower, which will make the experiment ſtill more ſurpriſing.

bale, great or ſmall, imported or exported, yet the duties on all proviſions and commodities brought from the continent to the town are very heavy. The number of the inhabitants is ſaid to be about 45,000; and one third of theſe are Jews, who live in a particular quarter, but without any mark of diſtinction, and have a fine ſynagogue. They have engroſſed the coral manufactory, have a conſiderable trade, and poſſeſs the chief riches of the place. The garriſon conſiſts of 2000 men. The walks on the ramparts are very agreeable. There is good anchorage in the road; but ſhips riding there are much expoſed to the weather and the Barbary corſairs. The number of Engliſh families in Leghorn are about 36; they are much favoured by the government, and carry on a good trade. The power of the inquiſition is limited to eccleſiaſtical matters and Roman Catholics. There are a great many Turkiſh ſlaves here, brought in by the duke's galleys, who are often ſent out on a cruiſe againſt the corſairs of Barbary. The lighthouſe ſtands on a rock in the ſea; near which is the Lazaretto, where quarantine is performed. Another ſource, from which the duke draws a great revenue, is the monopoly of brandy, tobacco, and ſalt; but that, with the heavy duties, makes proviſions dear. The Turks, who are not ſlaves, live in a particular quarter near that of the Jews. The common proſtitutes alſo have a particular place aſſigned them, out of which they muſt not be ſeen, without leave from the commiſſary. The number of the rowers in the galleys, whether Turkiſh ſlaves, criminals, or volunteers, are about 2000. In the area before the darſena or inner harbour, is a fine ſtatue of Duke Ferdinand, with four Turkiſh ſlaves in bronze, chained to the pedeſtal. The ducal palace is one of the fineſt ſtructures in the town, and the ordinary reſidence of the governor. Leghorn is the ſee of a biſhop, and has a noble cathedral; but the other churches are not remarkable. E. Long. 11. 0. N. Lat. 43. 30.

LEGIO VII. GEMINA, (anc. geog), a town or ſtation of that legion in the Aſtures. Now *Leon*, capital of the province of that name in Spain. W. Long. 6. 5. Lat. 43—Another LEGIO, a town of Galilee; from which Jerome determines the diſtances of the places in Galilee; not a bare encampment, though the name might originally be owing to that circumſtance; it lay 15 miles to the weſt of Nazareth, between mount Tabor and the Mediterranean. Now thought to be *Legune*.

LEGION, in Roman antiquity, a body of foot which conſiſted of different numbers at different periods of time. The word comes from the Latin *legere*, to chooſe; becauſe, when the legions were raiſed, they made choice of ſuch of their youth as were moſt proper to bear arms.

In the time of Romulus the legion conſiſted of 3000 foot and 300 horſe; though, after the reception of the Sabines, it was augmented to 4000. In the war with Hannibal, it was raiſed to 5000, after this it ſunk to 4000 or 4500; this was the number in the time of Polybius. The number of legions kept in pay together, differed according to times and occaſions. During the conſular ſtate four legions were fitted up every year, and divided betwixt the two conſuls; yet we meet with the number of 16 or 18, as the ſituation of affairs required. Auguſtus maintained a ſtanding army of 23 or 25 legions; but this number in after times is ſeldom found. The different legions borrowed their names from the order in which they were raiſed, hence we read of *legio prima, ſecunda, tertia, &c.* but as there might be many *primæ, ſecundæ, tertiæ, &c.* they were ſurnamed from the emperors, as *Auguſta, Claudiana, Galbiana, Flavia, Ulpia, Trajana, Antoniana*, &c. or from the provinces which had been conquered by their means, as *Parthica, Scythica, Gallica, Arabica*, &c. or from the deities under whoſe protection the commanders had particularly placed themſelves, as *Minervia, Apollinaris*, &c. or from the region where they were quartered, as *Cretenſis, Cyrenaica, Britannica*, &c. or from particular accidents, as *adjutrix, martia, fulminatrix, rapax, victrix.*

Each legion was divided into 10 cohorts, each cohort into 10 companies, and each company into two centuries. The chief commander of the legion was called *legatus*, i. e. lieutenant.

The ſtandards borne by the legions were various; at firſt, the ſtandard was a wolf, in honour of Romulus's nurſe; afterwards an hog, which animal was uſually ſacrificed at the concluſion of a treaty, to indicate that war is undertaken with a view to peace; ſometimes a minotaur, to remind the general of his duty of ſecrecy, of which the labyrinth was an emblem, and conſequently the Minotaur; a horſe was alſo borne, alſo a boar; and Marius, we are told, was the firſt who changed all theſe for the eagle.

LEGISLATOR, a lawgiver, or perſon who eſtabliſhes the polity and laws of a ſtate. Such was Moſes, among the Jews; Lycurgus, among the Lacedemonians, &c. See MOSAIC *Law.*

The firſt laws among the Athenians ſeem to have been thoſe of Theſeus; for what we can find earlier than this period is involved in fable. After Theſeus came Draco the Archon, whoſe laws were ſaid, for their ſeverity, to have been written with blood: by his laws every offence was puniſhed with death; ſo that ſtealing an apple, and betraying their country, were treated as equal crimes. Theſe laws were afterwards repealed by Solon, except ſuch as related to murder: By way of diſtinction, Draco's laws were called Θεσμοι, and Solon's Νομοι. The laws of Solon were in a great meaſure ſuſpended during the uſurpation of Piſiſtratus; but, after the expulſion of his family, were revived with ſome additions by Cliſthenes. After this, the form of government was again changed, firſt by the four hundred, and afterwards by the thirty tyrants; but theſe ſtorms being over, the ancient laws were again reſtored in the Archonſhip of Euclides, and others eſtabliſhed at the inſtance of Diocles, Ariſtophon, and, laſt of all, of Demetrius the Phalerian. This is a ſhort ſketch of the hiſtory of the Athenian legiſlation, before that ſtate ſubmitted to the Roman yoke. But many laws were enacted by the ſuffrages of the people on particular exigencies; the decrees of the ſenate continued to have the force of laws no longer than a year. If a new law was to be propoſed to the aſſembly, it was neceſſary to write it upon a white tablet, and fix it up ſome days before the meeting, leſt their judgment ſhould be caught by ſurpriſe. The laws were carefully reviſed every year; and if any of them, from a change of circumſtances, were found unſuitable or prejudicial, they were repealed: This was called επιχειροτονια των νομων, becauſe the ſuffrages were given by holding up of hands. The firſt laws amongſt the Grecians were unwritten and compoſed in verſe, that the common people might with more eaſe commit them to memory. Solon penned his laws upon wooden tablets, called Αξονες; and ſome authors with great probability aſſert, that they were written in the manner called Βȣϛροφηδον, from left to right, and from right again to left, in the ſame manner as oxen walk the furrows in plowing thus,

ΕΚΔΙΟΣ ΑΡ
VΘΣΙΝUΧ

It was againſt the law for any perſon to eraſe a decree, and certain perſons called Γραμματεις, were appointed to prevent any corruption; whoſe buſineſs it was alſo to tranſcribe the old and enter the new ones.

At Rome the people were in a great meaſure their own legiſlators; though Solon may be ſaid, in ſome ſenſe, to have been their legiſlator, as the decemviri, who were created for the making of laws, borrowed a great number from thoſe of Solon. See Lex.

In Britain the legiſlative power is lodged in the king, lords, and commons aſſembled in parliament. See Law and Parliament.

LEGITIMATION, an act whereby illegitimate children are rendered legitimate. See Bastard.

LEGITIME, in Scots law, that ſhare of the moveable effects belonging to a huſband and wife, which upon the huſband's death falls to the children.

LEGUMEN, or Pod, in botany; a ſpecies of ſeed-veſſel which has two valves or external openings incloſing a number of ſeeds that are faſtened along one ſuture only. In this laſt circumſtance the ſeed-veſſel in queſtion differs from that termed by botaniſts *ſiliqua*, in which the incloſed ſeeds are faſtened alternately to both the ſutures or joinings of the pod.

The ſeed-veſſel of all the pea bloom or butterfly-ſhaped flowers, the *diadelphia* of Linnæus, is of this pod kind. Such, for inſtance, is the ſeed-veſſel of the pea, vetch, lupine, and broom.

LEGUMINOUS, an appellation given to all plants whoſe fruit is a legumen.

LEIBNITZ (Godfrey William-de), an eminent mathematician, and philoſopher, was born at Leipſic in Saxony in 1646. At the age of 15 years, he applied himſelf to mathematics at Leipſic and Jena; and in 1663, maintained a theſis *de Principiis Individuationis*. The year following he was admitted maſter of arts. He read with great attention the Greek philoſophers; and endeavoured to reconcile Plato with Ariſtotle, as he afterwards did Ariſtotle with Des Cartes. But the ſtudy of the law was his principal view; in which faculty he was admitted bachelor in 1665. The year following he would have taken the degree of doctor; but was refuſed it on pretence that he was too young, though in reality becauſe he had raiſed himſelf ſeveral enemies by rejecting the principles of Ariſtotle and the ſchoolmen. Upon this he went to Altorf, where he maintained a theſis *de Caſibus Perplexis*, with ſuch applauſe, that he had the degree of doctor conferred on him. He might have ſettled to great advantage at Paris; but as it would have been neceſſary to have embraced the Roman Catholic religion, he refuſed all offers. In 1673, he went to England; where he became acquainted with Mr Oldenburg, ſecretary of the royal ſociety, and Mr John Collins, fellow of that ſociety. In 1676, he returned to England, and thence went into Holland, in order to proceed to Hanover, where he propoſed to ſettle. Upon his arrival there, he applied himſelf to enrich the duke's library with the beſt books of all kinds. The duke dying in 1679, his ſucceſſor Erneſt Auguſtus, then biſhop of Oſnaburgh, ſhowed our author the ſame favour as his predeceſſor had done, and ordered him to write the hiſtory of the houſe of Brunſwick. He undertook it, and travelled over Germany and Italy in order to collect materials. The elector of Brandenburgh, afterwards king of Pruſſia, founded an academy at Berlin by his advice; and he was appointed perpetual preſident, though his affairs would not permit him to reſide conſtantly at Berlin. He projected an academy of the ſame kind at Dreſden; and this deſign would have been executed, if it had not been prevented by the confuſions in Poland. He was engaged likewiſe in a ſcheme for an univerſal language. His writings had long before made him famous over all Europe. Beſide the office of privy-counſellor of juſtice, which the elector of Hanover had given him, the emperor appointed him in 1711 aulic counſellor; and the czar made him privy counſellor of juſtice, with a penſion of 1000 ducats. He undertook at the ſame time the eſtabliſhment of an academy of ſcience at Vienna; but the plague prevented the execution of it. However, the emperor, as a mark of his favour, ſettled a penſion on him of 2000 florins, and promiſed him another of 4000 if he would come and reſide at Vienna. He would have complied with this offer, but he was prevented by death in 1716. His memory was ſo ſtrong, that in order to fix any thing in it, he had no more to do but to write it once; and he could even in his old age repeat Virgil exactly. He profeſſed the Lutheran religion, but never went to ſermon; and upon his death bed, his coachman, who was his favourite ſervant, deſiring him to ſend for a miniſter, he refuſed, ſaying, *he had no need of one*. Mr Locke and Mr Molyneux plainly ſeem to think that he was not ſo great a man as he had the reputation of being. Foreigners did for ſome time aſcribe to him the honour of an invention, of which he received the firſt hints from Sir Iſaac Newton's letters, who had diſcovered the method of fluxions in 1664 and 1665. But it would be tedious to give the reader a detail of the diſpute concerning the right to that invention.

LEIBNITZIAN philoſophy, or the philoſophy of Leibnitz, is a ſyſtem of philoſophy formed and publiſhed by its author in the laſt century, partly in emendation of the Carteſian, and partly in oppoſition to the Newtonian. The baſis of Mr Leibnitz's philoſophy was that of Des Cartes; for he retained the Carteſian ſubtile matter, with the univerſal plenitude and vortices; and repreſented the univerſe as a machine that ſhould proceed for ever by the laws of mechaniſm, in the moſt perfect ſtate, by an abſolute inviolable neceſſity, though in ſome things he differs from Des Cartes. After Sir Iſaac Newton's philoſophy was publiſhed in 1687, he printed an eſſay on the celeſtial motions, Act. Erud. 1689, where he admits of the circulation of the ether with Des Cartes, and of gravity with Sir Iſaac Newton; though he has not reconciled theſe principles, nor ſhown how gravity aroſe from the impulſe of this ether, nor how to account for the planetary revolutions, and the laws of the planetary motions in their reſpective orbits. That what he calls the *harmonical circulation*, is the angular velocity of any one planet, which decreaſes from the perihelium to the aphelium in the ſame proportion as its diſtance from the ſun increaſes; but this law does not apply to the motions of the different planets compared together; becauſe the velocities of the planets, at their mean diſtances, decreaſe in the ſame proportion as the ſquare roots of the numbers expreſſing thoſe diſtances. Beſides, his ſyſtem is defective, as it does not reconcile the circulation of the ether with the free motions of the comets in all directions, or with the obliquity of the planes of the planetary orbits; nor reſolve other objections to which the hypotheſis of the plenum and vortices is liable. Soon after the period juſt mentioned, the diſpute commenced concerning the invention of the method of fluxions, which led Mr Leibnitz to take a very decided part in oppoſition to the philoſophy of Sir Iſaac Newton. From the wiſdom and goodneſs of the Deity, and his principle of a ſufficient reaſon, he concluded that the univerſe was a perfect work, or the beſt that could poſſibly have been made; and that other things, which were incommodious and evil, were permitted as neceſſary conſequences of what was beſt: the material ſyſtem, conſidered as a perfect machine, can never fall into diſorder, or require to be ſet right; and to ſuppoſe that God interpoſes in it, is to leſſen the ſkill of the author, and the perfection of his work. He expreſſly charges an impious tendency on the philoſophy of Sir Iſaac Newton, becauſe he aſſerts, that the fabric of the univerſe and courſe of nature could not continue for ever in its preſent ſtate, but would require, in proceſs of time, to be re-eſtabliſhed or renewed by the hand of its Former. The perfection of the univerſe, by reaſon of which it is capable of continuing for ever by mechanical laws in its preſent ſtate, led Mr Leibnitz to diſtinguiſh between the quantity of motion and the force of bodies; and, whilſt he owns, in oppoſition to Des Cartes, that the former varies, to maintain that the quantity of force is for ever the ſame in the univerſe, and to meaſure the forces of bodies by the ſquares of their velocities.

This ſyſtem alſo requires the utter excluſion of atoms, or of any perfectly hard and inflexible bodies. The advocates of it alledge, that according to the law of continuity, as they call a law of nature invented for the ſake of the theory, all changes in nature are produced by inſenſible and infinitely ſmall degrees; ſo that no body can, in any caſe, paſs from motion to reſt, or from reſt to motion, without paſſing through all poſſible intermediate degrees of motion: whence they conclude, that atoms or perfectly hard bodies are impoſſible: becauſe if two of them ſhould meet with equal motions, in contrary directions, they would neceſſarily ſtop at once, in violation of the law of continuity.

Mr Leibnitz propoſes two principles as the foundation of all our knowledge; the firſt, that it is impoſſible for a thing to be and not to be at the ſame time, which, he ſays, is the foundation of ſpeculative truth: the other is, that nothing is without a ſufficient reaſon why it ſhould be ſo rather than otherwiſe; and by this principle, according to him, we make a tranſition from abſtracted truths to natural philoſophy. Hence he concludes, that the mind is naturally determined, in its volitions and elections, by the greateſt apparent good, and that it is impoſſible to make a choice between things perfectly like, which he calls *indiſcernibles*; from whence he infers, that two things perfectly like could not have been produced even by the Deity: and he rejects a vacuum, partly becauſe the parts of it muſt be ſuppoſed perfectly like to each other. For the ſame reaſon he alſo rejects atoms, and all ſimilar particles of matter, to each of which, though diviſible *in infinitum*, he aſcribes a *monad* (Act. Lipſiæ 1698, p. 435.) or active kind of principle, endued, as he ſays, with perception and appetite. The eſſence of ſubſtance he places in action or activity, or, as he expreſſes it, in ſomething that is between acting and the faculty of acting. He affirms abſolute reſt to be impoſſible, and holds motion, or a ſort of *niſus*, to be eſſential to all material ſubſtances. Each monad he deſcribes as repreſentative of the whole univerſe from its point of ſight; and after all, in one of his letters he tells us, that matter is not a ſubſtance, but a *ſubſtantiatum*, or *phenomené bien fonde*. He frequently urges the compariſon between the effects of oppoſite motives on the mind, and of weights placed in the ſcales of a balance, or of powers acting upon the ſame body with contrary directions. His learned antagoniſt Dr Clarke denies that there is a ſimilitude between a balance moved by weights, and a mind acting upon the view of certain motives; becauſe the one is entirely paſſive, and the other not only is acted upon, but acts alſo. The mind, he owns, is purely paſſive in receiving the impreſſion of the motive, which is only a perception, and is not to be confounded with the power of acting after, or in conſequence of, that perception. The difference between a man and a machine does not conſiſt only in ſenſation and intelligence, but in this power of acting alſo. The balance, for want of this power, cannot move at all when the weights are equal; but a free agent, he ſays, when there appear two perfectly alike reaſonable ways of acting, has ſtill within itſelf a power of chooſing; and it may have ſtrong and very good reaſons not to forbear.

The tranſlator of Moſheim's Eccleſiaſtical Hiſtory obſerves, that the progreſs of Arminianiſm has declined in Germany and ſeveral parts of Switzerland, in conſequence of the influence of the Leibnitzian and Wolſian philoſophy Leibnitz and Wolf, by attacking that liberty of indifference, which is ſuppoſed to imply the power of acting not only without, but againſt, motives, ſtruck, he ſays, at the very foundation of the Arminian ſyſtem. He adds, that the greateſt poſſible perfection of the univerſe, conſidered as the ultimate end of creating goodneſs, removes from the doctrine of predeſtination thoſe arbitrary procedures and narrow views with which the Calviniſts are ſuppoſed to have loaded it, and gives it a new, a more pleaſing, and a more philoſophical aſpect. As the Leibnitzians laid down this great end as the ſupreme object of God's univerſal dominion, and the hope to which all his diſpenſations are directed; ſo they concluded, that if this end was propoſed, it muſt be accompliſhed. Hence the doctrine of neceſſity, to fulfil the purpoſes of a predeſtination founded in wiſdom and goodneſs; a neceſſity, phyſical and mechanical, in the motions of material and inanimate things, but a neceſſity moral and ſpiritual in the voluntary determinations of intelligent beings, in conſequence of propellent motives, which produce their effects with certainty, though theſe effects be contingent, and by no means the offspring of an abſolute and eſſentially immutable fatality. Theſe principles, ſays the ſame writer, are evidently applicable to the main doctrines of Calviniſm; by them predeſtination is confirmed, though modified with reſpect to its reaſons and its end; by them irreſiſtable grace (irreſiſtable in a moral ſenſe) is maintained upon the hypotheſis of propellent motives and a moral neceſſity: the perſeverance of the ſaints is alſo explicable upon the ſame ſyſtem, by a ſeries of moral cauſes producing a ſeries of moral effects.

LEICESTER, the capital of a county of the ſame name in England, upon the river Loire, now called *Soare*. From its ſituation on the Foſſe-way, and the many coins and antiquities diſcovered here, it ſeems probable that it was a place of ſome note in the time of the Romans. In the time of the Saxons it was a biſhop's ſee, and afterwards ſo prepared and fortified by Edelfiida, that it became, according to Matthew Paris, a moſt wealthy place, having 32 pariſh-churches; but in Henry the Second's reign it was in a manner quite ruined, for joining in rebellion againſt him with Robert earl of Leiceſter. In the reign of Edward III. however, it began to recover by the favour of his ſon Henry Plantagenet, duke and earl of Lancaſter, who founded and endowed a collegiate church and hoſpital here. It is a borough and corporation, governed by a mayor, recorder, ſteward, bailiff, 24 aldermen, 48 common-council men, a ſolicitor, a town-clerk, and two chamberlains. It had its firſt charter from king John. The freemen are exempt from paying toll in all the fairs and markets of England. It has three hoſpitals, that mentioned above, built by Henry Plantagenet duke of Lancaſter, and capable of ſupporting 100 aged people decently; another erected and endowed in the reign of Henry VIII. for 12 poor lazars; and another for ſix poor widows. The caſtle was a prodigious large building, where the duke of Lancaſter kept his court. The hall and kitchen ſtill remain entire, of which the former is very ſpacious and lofty; and in the tower over one of the gate-ways is kept the Magazine for the county militia. There was a famous monaſtery here, anciently called, from its ſituation in the meadows, *St Mary de Pratis* or *Prez*. In theſe meadows is now the courſe for the horſe-race. It is ſaid that Richard III. who was killed at the battle of Boſworth, lies interred in St Margaret's church. The chief buſineſs of Leiceſter is the ſtocking trade, which hath produced in general to the amount of 60,000l. a-year. In a parliament held here in the reign of Henry V. the firſt law for the burning of heretics was made, levelled againſt the followers of Wickliffe, who was rector of Lutterworth in this county, and where his pulpit is ſaid ſtill to remain. The town ſuffered greatly in the civil wars, by two ſieges upon the back of one another. It has given the title of *earl* to ſeveral noble families. The preſent earl was created in 1784, and is the marquis of Townſhend's ſon. Its market on Saturday is one of the greateſt in England for proviſions, eſpecially for corn and cattle; and it has four fairs in the year.

LEICESTERSHIRE, an inland county of England, in form almoſt circular. It has Nottinghamſhire and Derbyſhire to the north; Rutlandſhire and Lincolnſhire on the eaſt; Warwickſhire on the weſt, from which it is parted by the Roman military way called *Watling-ſtreet;* and by Northamptonſhire on the ſouth; and is about 170 miles in circumference. As it lies at a great diſtance from the ſea, and is free from bogs and marſhes, the air is ſweet and wholeſome. It is a champaign country in general, and abundantly fertile in corn and graſs, being watered by ſeveral rivers, as the Soure, or Sare, which paſſes through the middle of it, and abounds in excellent ſalmon and other fiſh; the Wreke; Trent, Eye, Senſe, Auker, and Aven. Theſe rivers being moſtly navigable, greatly facilitate the trade of the county. In ſome parts there is a great ſcarcity of fuel, both wood and coal; but in the more hilly parts there is plenty of both, together with great flocks of ſheep. Beſides wheat, barley, oats, and peaſe, it produces the beſt beans in England. They grow ſo tall and luxuriant in ſome places, particularly about Barton in the Beans, that they look, towards the harveſt-time, like a foreſt; and the inhabitants eat them not only when they are green, as in other places, but all the year round; for which reaſon their neighbours nickname them *bean-bellies*. They have plenty of very good wool, of which they not only make great quantities of ſtockings, but ſend a great quantity unmanufactured into other parts of England. They make great profit of their corn and pulſe; and likewiſe breed great numbers of coach and dray horſes, moſt of the gentlemen being graziers; and it is not uncommom to rent graſs-farms from 500l. to 2000l. a-year. It is in the midland circuit, and dioceſe of Lincoln; and ſends four members to parliament, two for Leiceſter, and two for the county.

LEIGH (Sir Edward), a very learned Engliſhman, was born at Shawell in Leiceſterſhire, and educated at Magdalen Hall, Oxford. He was a member of the long parliament, and one of the members of the houſe of commons who were appointed to ſit in the aſſembly of divines. He was afterwards colonel of a regiment for the parliament; but in 1648 was numbered among the Preſbyterians who were turned out, and in December he was impriſoned. From this period to the Reſtoration he employed himſelf in writing a conſiderable number of learned and valuable books, which ſhowed profound learning, a knowledge of the languages, and much critical ſagacity; and of which a liſt is given by Anthony Wood. Sir Edward died at his houſe called Ruſhal Hall, in Staffordſhire, June 2. 1671: and was buried in the chancel of Ruſhall church.

LEIGHLIN, a town of Ireland, ſituated in the county of Carlow, and province of Leinſter; about 43 miles from Dublin, near the river Barrow. It is a borough, and returns two members to parliament; patronage in the biſhop of the dioceſe, this being a biſhopric united to Ferns. At the eaſt end of the church of Old-Leighlin is a famous well covered with great aſh trees, and dedicated to St Laſarian. This place was formerly a city, though now a very mean village, and the cathedral has been kept in good repair. It was a *ſole* biſhopric, founded in 632, and joined to

Ferns in 1600. It is reported, that Gurmundus a Daniſh prince was buried in this church. The laſt biſhop of Leighlin before its union with Ferns, was the Right Rev. Robert Grave, who coming by ſea to be inſtalled, ſuffered ſhipwreck in the harbour of Dublin, and periſhed in the waves. This cathedral was burnt to the ground, it is ſaid, by lightning; and rebuilt, A. D. 1232, then dedicated to St Laſarian or Laxarinus, before-mentioned; ſince the ſees were joined, it is made uſe of as a pariſh-church. Leighlin-bridge is ſituated about two miles from this village; it was deſtroyed by the Iriſh in 1577. Here are the remains of a caſtle and of an old abbey. This is a poſt town, and has fairs in May, September, and October.

LEIGHTON (Robert), archbiſhop of Glaſgow. During Cromwell's uſurpation, he was miniſter of a church near Edinburgh, and diſtinguiſhed himſelf by his charity, and his averſion to religious and political diſputes. The miniſters were then called over yearly in the ſynod, and were commonly aſked, Whether they had preached to the times? "For God's ſake (anſwered Leighton), when all my brethren preach to the times, ſuffer me to preach about eternity." His moderation, however, giving offence, he retired to a life of privacy. But ſoon after, he was called by the unanimous voice of the magiſtrates, to preſide over the college of Edinburgh; where, during ten years, he diſplayed all the talents of a prudent, wiſe, and prudential governor. Soon after the Reſtoration, when the ill-judged affair of introducing epiſcopacy into Scotland was reſolved on, Leighton was conſecrated biſhop of Dunblane, and immediately gave an inſtance of his moderation: for when Sharpe and the other biſhops intended to enter Edinburgh in a pompous manner, Leighton remonſtrated againſt it: but finding that what he ſaid had no weight, he left them, and went to Edinburgh alone. Leighton, in his own dioceſe, ſet ſuch a remarkable example of moderation, that he was revered even by the moſt rigid of the oppoſite party. He went about, preaching without any appearance of pomp; gave all he had to the poor; and removed none of the miniſters, however exceptionable he might think their political principles. But finding that none of the other biſhop's would be induced to join, as he thought, properly in the work, he went to the king, and reſigned his biſhopric, telling him he would not have a hand in ſuch oppreſſive meaſures. Soon after, the king and council, partly induced by this good biſhop's remonſtrances, and partly by their own obſervations, reſolved to carry on the cauſe of epiſcopacy in Scotland on a different plan; and with this view, Leighton was perſuaded to accept of the archbiſhopric of Glaſgow, on which he made one effort more; but finding it not in his power to ſtem the violence of the times, he reſigned his archbiſhopric, and retired into Suſſex, where he devoted himſelf to acts of piety. He died in the year 1684. He was of a moſt amiable diſpoſition, ſtrict in his life, polite, cheerful, engaging in his manners, and profoundly learned. He left many ſermons and uſeful tracts, which are greatly eſteemed.

LEINSTER, the eaſtern province of Ireland, bounded by Ulſter on the north; St George's, or the Iriſh Channel, on the eaſt and ſouth; and by the provinces of Connaught and Munſter on the weſt. The capital city of this province and of the kingdom is Dublin. It contains 12 counties, viz. Carlow, Dublin, Kildare, Kilkenny, King's-county, Longford, Louth, Meath, Queen's-county, Weſt-meath, Wexford, and Wicklow. It is the moſt level and beſt cultivated province in the kingdom; containing 2,642,258 Iriſh plantation acres, 858 pariſhes, 99 baronies, and 53 boroughs; it is about 124 miles long and 74 broad, and extends from 51° 45′ to 55° 45′ north latitude. Dermod king of Leinſter marrying his daughter Eva to Strongbow earl of Pembroke, on his deceaſe made him his univerſal heir; whereby the Earl inherited the province of Leinſter, and was afterwards enfeoffed of it by Hen. II. He died in 1176, and left an only daughter Iſabel, eſpouſed to William Marſhal earl of Pembroke; by her he had five ſons, who ſucceeded to his great eſtates in Leinſter. This province gives title of Duke to the ancient and noble family of Fitzgerald. In the early ages, this diſtrict was almoſt one continued foreſt, and was principally the ſeat of the Kinſelaghs.

LEIPSIC, a large, ſtrong, and populous town of Miſnia in Germany, with a caſtle, and a famous univerſity. It is neat, and regularly built, and the ſtreets are lighted in the night; it carries on a great trade, and has a right to ſtop and ſell the merchandizes deſigned to paſs through it, and the country for 75 miles round has the ſame privilege. There are three great fairs every year; at the beginning of the year, Eaſter and Michaelmas, which laſt 15 days each. There are ſix handſome colleges belonging to the univerſity, beſides the private colleges. The town-houſe makes an indifferent appearance, but the exchange is a fine ſtructure. The town was taken by the king of Pruſſia in the late war, but given up by the peace in 1763. It is ſeated in a plain between the rivers Saale and Muld near the confluence of the Playſſe, Elſter, and the Barde. E. Long. 12. 55. N. Lat. 51. 19.

LEITH, (anciently called *Inverleith*), the port of Edinburgh, is ſeated on the banks of the Forth, about two miles from the capital. It is built on both ſides of the harbour; by which it is divided into two parts, called *North* and *South Leith*. The communication between theſe was by a ſtone-bridge of three arches founded by Robert Ballentyne abbot of Holyrood-houſe in 1493, but lately pulled down. The harbour is formed by the conflux of the rivulet called the *Water of Leith* with the Frith of Forth. The depth of water, at neap-tides, is about nine feet; but in high ſpring-tides, it is about 16 feet. In the beginning of the preſent century, the town-council of Edindingh improved the harbour at an enormous expence, by extending a ſtone-pier a conſiderable way into the ſea. In 1777, they erected an additional ſtone quay towards its weſt ſide. Upwards of 100 ſhips could then lie conveniently in this port; but it can now admit of a much greater number, in conſequence of having lately undergone great improvements. In order to enlarge it, the old bridge has been pulled down, and an elegant draw-bridge erected a little to the eaſtward of the former ſite. It is accommodated with wet and dry docks, and other conveniences for ſhip-building, which is there carried on to ſome extent, as veſſels come to Leith to be repaired from all parts of Scotland. A new baſon and docks are propoſed to be added; which, when completed, will render this a very capacious, as well as a moſt ſafe and convenient, ſtation for trading veſſels. And the road of Leith affords good anchorage for ſhips of the greateſt ſize.

The harbour of Leith was granted to the community of Edinburgh by king Robert in 1329; but the banks of the harbour belonged to Logan of Reſtalrig, a turbulent and ambitious baron, from whom the citizens were under the neceſſity of purchaſing the bank or waſte piece of ground between the houſes and the rivulet abovementioned, for the purpoſes of wharfs, as well as for erecting ſhops and granaries, neither of which they could do before. As the ſituation of Leith, however, is much more convenient for trade than that of Edinburgh, which is two miles diſtant from the harbour, the inhabitants of the metropolis have fallen upon various methods of reſtraining the trade of Leith. They firſt purchaſed, from Logan of Reſtalrig, an excluſive privilege of carrying on every ſpecies of traffic in the town of Leith, and of keeping warehouſes and inns for the entertainment of ſtrangers in that place; and in 1483, the town-council prohibited, under ſevere penalties, the citizens of Edinburgh from taking into partnerſhip any inhabitant of Leith. To free themſelves from this oppreſſion, the people of Leith purchaſed the ſuperiority of their town from Logan of Reſtalrig for 3000 l. Scots, and it was erected into a burgh of barony by the queen-regent, Mary of Lorraine, who promiſed to erect it into a royal borough. She died, however, before this was accompliſhed; and upon her death, Francis and Mary, in violation of the private rights of the people of Leith, reſold the ſuperiority to the town of Edinburgh, to whom it has ſince been confirmed by grants from ſucceſſive ſovereigns.

On the breaking out of the diſturbances at the Reformation, the queen-regent cauſed the whole town to be fortified, that the French troops might have a more ready inlet into the kingdom. It was accordingly ſurrounded with a wall, having eight baſtions: but this wall went no farther than the ſtreet now called *Bernard's nook*, becauſe at that time the ſea came up the length of that ſtreet; and even as late as 1623, a houſe ſituated exactly where the weight-houſe is at preſent, is deſcribed as bounded on the eaſt by the "ſand of the ſea-ſhore." All that ſpace, therefore on which the row of houſes neareſt the harbour of Leith now ſtands, has been gained ſince that time from the ſea.

In the time of Charles I. a fortification was erected at Leith by the Covenanters. Cromwell built a ſtrong fort at the place ſtill called the *citadel* in North Leith; but it was pulled down on the reſtoration of Charles II. by order of government. A gate with portcullices are the preſent remains of that fortification.—A palace alſo appears to have formerly ſtood here, ſituated at the north-eaſt boundaries of the former town, on the ſpot where the preſent weight-houſe ſtands. It was deſtroyed by the Engliſh in the time of Henry VIII. The remains of this building, called the *king's work*, with a garden, and a piece of waſte land that ſurrounded it, was erected into a barony by James VI. and beſtowed upon Bernard Lindſay of Lochill, groom of the chamber to that prince. He is ſaid to have fully repaired, and appropriated it to the recreations of the court; but it ſoon fell from its dignity, and became ſubſervient to much more ignoble purpoſes. The tennis court was converted into a weigh-houſe; and the ſtreet which bounds it ſtill bears the name of the founder, from whom it is called *Bernard's nook*.

As Leith lay within the pariſh of Reſtalrig, the church of Reſtalrig was of conſequence the place of worſhip for the inhabitants of Leith; but in 1650 the Aſſembly ordered that church to be pulled down as a monument of idolatry, ſo that Leith wanted a pariſh-church for upwards of 50 years. During that period they reſorted for worſhip to a large and beautiful chapel already built, and dedicated to St Mary, which is now called *South Leith church*: and in 1609 this chapel was by authority of parliament declared to be the pariſh church of the diſtrict; ſo that Reſtalrig is now in the pariſh of South-Leith, as the latter was formerly in that of Reſtalrig. In 1772, a Chapel of eaſe was erected by the inhabitants, as the pariſh-church was inſufficient to contain the number of hearers. There are alſo an epiſcopal and ſeveral diſſenting congregations in Leith. North-Leith is a pariſh by itſelf, and the church is ſituated at what was the north end of the old bridge.

Though a very great trade is carried on between Leith and many foreign ports, yet the articles of export and import fluctuate ſo much, that it would be uſeleſs to enter into any details either as to ſpecies or quantity. In general, the imports from France, Spain and Portugal, are wine, brandy, and fruits; from the Weſt Indies and America, rice indigo, rum, ſugar, and logwood. But the principal foreign trade of Leith is by the eaſtern ſeas, for the navigation of which it is moſt happily ſituated. To Germany, Holland, and the Baltic, it exports lead, glaſs-ware, linen and woollen ſtuffs, and a variety of other goods; and from thence it imports immenſe quantities of timber, oak-bark, hides linen rags, pearl-aſhes, flax, hemp, tar, and many other articles. The Baltic trade, however, is at preſent rather on the decline, the great extent to which it was carried on for ſome years paſt having been chiefly owing to the vaſt increaſe of new buildings in Edinburgh and its environs. The coaſting trade is at preſent the principal branch that employs the ſhipping at Leith, including thoſe which belong to other ports on the Forth, which are ſaid to make about one-fourth of the tonage of the Leith veſſels. The ſhips employed in the London trade are in general of a large ſize, elegantly conſtructed, and furniſhed with excellent accommodations for paſſengers. They make at an average four voyages up and down in the year. The largeſt ſhips in this port, however, are thoſe employed in the Greenland fiſhery.

The ſhipping at Leith renders the demand for ropes, ſail cloth, and cordage, very conſiderable. There were lately three different companies, who carried on theſe manufactures, beſides ſome private perſons who dealt leſs conſiderably. The firſt of thoſe companies was eſtabliſhed in the beginning of the preſent century; and 20 years ago made, it is ſaid, larger dividends among the partners than any trading or manufacturing company in the nation. There are only three companies at preſent, but a number of private manufacturers.

In the middle of the laſt century, a manufactory of green glaſs was eſtabliſhed at the citadel of Leith. Chopin bottles were ſold at 4s. 6d. per dozen, and other bottles in proportion. Soon afterwards this article was manufactured alſo in North Leith; and, in 1707, chopin bottles were ſold at 2s. 6d. per dozen, and ſo proportionably. That houſe being burnt down in 1746, a new houſe was built the following year on South-Leith ſands, and an additional one in 1764. The annual expence of both houſes was between 800l. and 900l. Another was afterwards added, and three more have lately been erected. They manufacture not only bottles, but alſo window-glaſs and cryſtal-ware of all ſorts.

Manufactures of ſoft ſoap and candles were erected by St Clair of Roſlin and ſome merchants; the former in 1750, and the latter in 1770: a manufacture of hard ſoap was alſo eſtabliſhed in 1770. Beſides theſe, there are a conſiderable manufacture for making cards with which wool is combed, a great carpet factory, and ſeveral iron-forges. There was alſo a ſugar-houſe; but it has been given up, as has likewiſe Mr St Clair's ſoap-work.

The inhabitants of Leith were divided into four claſſes; and theſe erected into corporations by the queen dowager, Mary of Lorraine. Theſe were mariners, maltmen, traders, and traffickers. The firſt of theſe conſiſted of ſhip-maſters and ſailors; the ſecond, of malt-makers and brewers; the third, of coopers, bakers, ſmiths, wrights, &c.; and the fourth of merchants and ſhop-keepers. Of theſe corporations the mariners are the moſt conſiderable. They obtained from Mary of Lorraine a gift, afterwards ratified by William and Mary, of one penny duty on the ton of goods in the harbour of Leith, for the ſupport of their poor. This duty, which not many years ago did not amount to 40 l. a-year, now riſes from 70l. to 120l. as trade flouriſhes. For the ſame purpoſe the ſhip-maſters alſo pay 6d. a-pound out of their own wages annually; and the like ſum they give upon the wages of their ſailors. From theſe and other donations, this corporation is enabled to pay from 600l. to 700l. a-year to their poor. Oppoſite to South-Leith church there is a large houſe belonging to them, called the *Trinity-hoſpital*, becauſe originally conſecrated to the Holy Trinity. In this houſe ſome of their poor uſed formerly to be mantained, but now they are all out-penſioners. Beſides other apartments, this hoſpital contains a large handſome hall for the meetings of the corporation. Adjoining to the ſchool-houſe there is another hoſpital, called *king James's hoſpital*; and bears upon its front the cypher and arms of that prince. Here ſome poor women belonging to the other corporations are maintained.

As the town of Leith was very ill ſupplied with water, and the ſtreets were neither properly cleaned nor lighted, an act for remedying theſe defects was paſſed in the year 1771, appointing certain perſons from among the magiſtrates of Edinburgh, lords of ſeſſion, inhabitants of Edinburgh and Leith, and members of the corporations of Leith, *commiſſioners of police*; empowering them to put this act in execution; and, for that purpoſe, to levy a ſum not exceeding 6d. in the pound upon the valued rent of Leith. The great change which has ſince taken place on the ſtreets of Leith ſhows the good effect of this act, and that it has both been judiciouſly prepared, and attentively executed.

Leith is computed to contain about thirteen thouſand inhabitants. The government of the town is veſted in a magiſtrate ſent from Edinburgh, having admirals's power; and in two reſiding bailies, elected by the town council.

LEITRIM, a county of Ireland, ſituated in the province of Connaught, is bounded on the north by the bay of Donnegal and part of Fermanagh, on the ſouth and weſt by Sligo and Roſcommon, and on the eaſt by Fermanagh and Cavan. It is a fruitful county; and, though mountainous, produces great herds of black cattle; but has few places of note. It contains 206,830 Iriſh plantation acres, 21 pariſhes, 5 baronies, and 2 boroughs; and ſends ſix members to parliament; it is about 42 miles long, and 17 broad.

LEITRIM, the ſhire town of the county of that name, is pleaſantly ſituated on the banks of the river Shannon, about 80 miles from Dublin; and appears to have been formerly a place of ſome note. St Mac Liegus, ſon of Cernac, was biſhop here: and his feſtival is obſerved on the 8th of February. It has ſix fairs in the year.

LEIXLIP, a poſt and fair town of Ireland pleaſantly ſituated in the county of Kildare and province of Leinſter, about 8 miles from Dublin. Near it are the ruins of the church and caſtle of Confy. The caſtle of Leixlip is beautifully ſeated on the banks of the river Liffey; it is a fine edifice with large and pleaſant gardens, at on ſide of which is a fine waterfall called the *Salmon leap*, there being plenty of that ſpecies of fiſh hereabouts. A mile from this is Caſtle town, the magnificent ſeat of Mr Conolly. There are three fairs here in the year.

LELAND (John), the great Engliſh antiquary, was born in London about the year 1507. Having loſt his parents when a child, he had the good fortune to find a friend and patron in one Mr Thomas Miles, who placed him in St Paul's ſchool, of which the grammarian Lilye was maſter. From that ſchool he was ſent to Chriſt's college, Cambridge; whence, after ſome years reſidence, he removed to All-Souls, Oxford. From Oxford he went to Paris, chiefly with a deſign to ſtudy the Greek language, which at that time was but little underſtood in England. On his return to England he took orders, and was ſoon appointed chaplain to king Henry VIII. who alſo gave him the rectory of Poppelng, in the marſhes of Calais, appointed him his librarian, and in 1533 granted to him, by commiſſion under the great ſeal, the office of king's antiquary; an office never borne by any other perſon before or ſince. By this commiſſion he was empowered to ſearch for ancient writings in all the libraries of colleges, abbeys, priories, &c. in his majeſty's dominions. We are told by his laſt biographer, that he renounced popery ſoon after his return to England; but he quotes no authority. Be this as it may, in 1536, he obtained a diſpenſation to keep a curate at Poppeling, and ſet out on his journey in ſearch of antiquities. In this employment he ſpent ſix years, during which time he viſited every part of England where monuments of antiquity were to be expected. After his return, in the year 1542, he was preſented by the king to the rich rectory of Haſeley in Oxfordſhire; and in the following year he gave him a prebend of King's College, now Chriſt's church, in Oxford, beſides that of Eaſt and Weſt Knowle, in the cathedral of Saliſbury. Being thus amply provided for, he retired to a houſe of his own in the pariſh of St Michael le Querne in London, where he ſpent ſix years more in digeſting the materials which he had collected. King Henry VIII. died in 1547; and in a ſhort time after, poor Leland loſt his ſenſes. He was at firſt ſeized with a deep melancholy, which was ſucceeded by a total deprivation of his reaſon. In this dreadful ſtate he continued till the beginning of the year 1552, when he was happily releaſed by death. He was buried in the church of St Michael le Querne, which was deſtroyed by the fire in 1666. Mr Leland is remembered as a man of great learning, an univerſal linguiſt, an excellent Latin poet, and a moſt indefatigable and ſkilful antiquary. On his death, king Edward VI. gave all his papers to Sir John Checke, his tutor and Latin ſecretary of ſtate. The king dying, and Sir John being obliged to leave the kingdom, he gave four folio volumes of Leland's collections to Humphrey Purefoy, Eſq; which, in 1612, were by his ſon given to William Burton, author of the hiſtory of Leiceſterſhire. This gentleman alſo became poſſeſſed of the Itinerary in 8 vols folio, which, in 1632, he depoſited in the Bodleian library. Many other of Leland's manuſcripts, after the death of Sir John Checke, fell into the hands of lord Paget, Sir William Cecil, and others, which at laſt fortunately came into the poſſeſſion of Sir John Cotton. Theſe manuſcripts were of great uſe to all our ſubſequent antiquarians, particularly Cambden, Sir William Dugdale, Stowe, Lambard, Dr Batteley, Ant. Wood, &c. His Itinerary throughout moſt parts of England and Wales, was publiſhed by Mr Hearne, 9 vols 8vo. in 1710 11; as was alſo his *Collectanea de rebus Britannicis*, 6 vols 8vo, in 1715.

Leland (John), well known by his writings in defence of Chriſtianity, was born at Wigan in Lancaſhire in 1691, of eminently pious and virtuous parents. They took the earlieſt care to ſeaſon his mind with proper inſtructions; but, in his ſixth year, the ſmall-pox deprived him of his underſtanding and memory, and expunged all his former ideas. He continued in this deplorable ſtate near a twelvemonth, when his faculties ſeemed to ſpring up anew; and though he did not retain the leaſt traces of any impreſſions made on him before the diſtemper, yet he now diſcovered a quick apprehenſion and ſtrong memory. In a few years after, his parents ſettled in Dublin, which ſituation gave him an eaſy introduction to learning and the ſciences. When he was properly qualified by years and ſtudy, he was called to be paſtor to a congregation of Proteſtant diſſenters in that city. He was an able and acceptable preacher, but his labours were not confined to the pulpit. The many attacks made on Chriſtianity, and by ſome writers of no contemptible abilities, engaged him to conſider the ſubject with the exacteſt care, and the moſt faithful examination. Upon the moſt deliberate inquiry, the truth and divine original, as well as the excellence and importance of Chriſtianity, appearing to him with great luſtre, he publiſhed anſwers to ſeveral authors who ſucceſſively appeared in that cauſe. He was indeed a maſter in this controverſy; and his hiſtory of it, ſtyled “A View of the Deiſtical Writers that have appeared in England in the laſt and preſent Century, &c.” is very greatly and deſervedly eſteemed. In the decline of life he publiſhed another laborious work, intitled, “The Advantage and Neceſſity of the Chriſtian Revelation, ſhown from the State of Religion in the ancient Heathen World, eſpecially with reſpect to the Knowledge and Worſhip of the One true God; a Rule of moral Duty, and a State of future Rewards and Puniſhments; to which is prefixed, a long and preliminary Diſcourſe on Natural and Revealed Religion,” 2 vols 4to. This noble and extenſive ſubject, the ſeveral parts of which have been ſlightly and occaſionally handled by other writers, Leland has treated at large with the greateſt care, accuracy, and candour. And, in his “View of the Deiſtical Writers,” his cool and diſpaſſionate manner of treating their arguments, and his ſolid confutation of them, have contributed more to depreſs the cauſe of atheiſm and infidelity, than the angry zeal of warm diſputants. But not only his learning and abilities, but alſo his amiable temper, great modeſty, and exemplary life, recommended his memory to general eſteem and affection. He died in 1766.

LELEGEIS, the ancient name of Miletus, from the Leleges, the firſt inhabitants of it.

LELEGES, anciently a people of Aſia, of Greek original; the name denoting “a collection of people:” they firſt occupied the iſlands; then paſſing over to the continent, they ſettled partly in Myſia on the Sinus Adramyttenus, and partly in that part of Ionia next Caria.—There were Leleges alſo of Laconia. Theſe went to the Trojan war with Altes their king. Achilles plundered their country, and obliged them to retire to the neighbourhood of Halicarnaſſus, where they fixed their habitation.—The inhabitants of Laconia and of Megara alſo bore this name for ſome time, from Lelex one of their kings.

LELEX, an Egyptian who came with a colony to Megara, where he reigned about 200 years before the Trojan war. His ſubjects were called from him *Leleges*.—Alſo the name of a Greek who was the firſt king of Laconia in Peloponneſus. His ſubjects were alſo called *Leleges*, and the country where he reigned *Lelegia*.

LELY (Sir Peter), an excellent painter, born in Weſtphalia in the year 1617. He was placed as a diſciple with Peter Grebber at Haerlem; and in 1641 was induced, by the encouragement Charles I. gave to the fine arts, to come to England. He became ſtate-painter to Charles II. who knighted him; and being as complete a gentleman as a painter, that king took pleaſure in converſing with him. He practiſed portrait painting, and ſucceeded ſo well that he was preferred before all his cotemporaries. Hence he became perpetually involved in buſineſs; ſo that he was thereby prevented from going into Italy to finiſh the courſe of his ſtudies, which in his younger days he was very deſirous of: however, he made himſelf amends, by getting the beſt drawings, prints, and paintings, of the moſt celebrated Italian maſters. Among theſe were the better part of the Arundel Collection, which he had from that family, many whereof were ſold after his death at prodigious rates, bearing upon them his uſual mark of P. L.—The advantage he reaped from this collection, the beſt choſen of any one of his time, appears from that admirable ſtyle which he acquired by daily converſing with the works of thoſe great maſters. In his correct draught and beautiful colouring, but more eſpecially in the graceful airs of his heads, and the pleaſing variety of his poſtures, together with the gentle and looofe management of the draperies, he excelled moſt of his predeceſſors. Yet the critics remark, that he preſerved in almoſt all his female faces a drowſy ſweetneſs of the eyes peculiar to himſelf; for which he is reckoned a manneriſt. The hands of his portraits are remarkably fine and elegantly turned; and he frequently added landſcapes in the back-grounds of his pictures, in a ſtyle peculiar to himſelf, and better ſuited to his ſubject than moſt men could do. He excelled likewiſe in crayon-painting. He was familiar with, and much reſpected by perſons of the greateſt eminence in the kingdom. He became enamoured of a beautiful Engliſh lady, to whom he was ſome time after married; and he purchaſed an eſtate at Kew in the county of Surrey, to which he often retired in the latter part of his life. He died of an apoplexy in 1680 at London; and was buried at Covent-Garden church, where there is a marble monument erected to his memory, with his buſt, carved by Mr Gibbons, and a Latin epitaph, written, as is ſaid, by Mr Flatman.

LEMBERG, a town of Poland, capital of Red Ruſſia, ſeated in the palatinate of Lemburg, on the river Pelteu. It is pretty well fortified, and defended by two citadels, one of which is ſeated on an eminence without the town. The ſquare, the churches, and the public buildings, are magnificent; and it is a large and rich trading place. It has a Roman catholic archbiſhop, and an Armenian as well as a Ruſſian biſhop; but the Proteſtants are not tolerated. This city was reduced to the laſt extremity by the rebel Coſſacs and Tartars, and was forced to redeem itſelf with a large ſum of money. In 1672, it was beſieged in vain by the Turks; but in 1704, was taken by ſtorm by Char. XII of Sweden. E. Long. 24. 46. N. Lat. 49. 51.

LEMERY (Nicholas), a celebrated chemiſt, born at Rouen in Normandy in 1645. After having made the tour of France, he, in 1672, commenced an acquaintance with M. Martyn apothecary to Monſieur the Prince; and performed ſeveral courſes of chemiſtry in the laboratory of this chemiſt at the Hotel de Conde; which brought him to the knowledge and eſteem of the prince. He provided himſelf at length with a laboratory of his own, and might have been made a doctor of phyſic: but he choſe to continue an apothecary, from his attachment to chemiſtry, in which he opened public lectures; and his confluence of ſcholars was ſo great as ſcarcely to allow him room to perform his operations. The true principles of chemiſtry in his time were but ill underſtood; Lemery was the firſt who aboliſhed the ſenſeleſs jargon of barbarous terms, reduced the ſcience to clear and ſimple ideas, and promiſed nothing that he did not perform. In 1681, he was diſturbed on account of his religion; and came to England, where he was well received by Charles II.; but affairs not promiſing him the ſame tranquillity, he returned to France, and ſought for ſhelter under a Doctor's degree; but the revocation of the edict of Nantz drove him into the Romiſh communion to avoid perſecution. He then became aſſociate chemiſt and penſionary in the royal academy of ſciences, and died in 1715. He wrote, A courſe of chemiſtry; An univerſal pharmacopœia; An univerſal treatiſe of drugs; and, A treatiſe on antimony.

LEMING, in zoology. See Mus.

LEMMA, (of λαμβανω, "I aſſume,") in mathematics, denotes a previous propoſition, laid down in order to clear the way for ſome following demonſtration; and prefixed either to theorems, in order to render their demonſtration leſs perplexed and intricate; or to problems, to make their reſolution more eaſy and ſhort. Thus, to prove a pyramid one third of a priſm, or parallelopiped, of the ſame baſe and height with it, the demonſtration whereof in the ordinary way is difficult and troubleſome; this lemma may be premiſed, which is proved in the rules of progreſſion, that the ſum of the ſeries of the ſquares, in numbers in arithmetical progreſſion, beginning from 0, and going to 1, 4, 9, 16, 25, 36, &c. is always ſubtriple of the ſum of as many terms, each equal to the greateſt; or is always one-third of the greateſt term multiplied by the number of terms. Thus, to find the inflection of a curve line, this lemma is firſt premiſed, that a tangent may be drawn to the given curve in a given point.

So in phyſics, to the demonſtration of moſt propoſitions, ſuch lemmata as theſe are neceſſary firſt to be allowed: that there is no penetration of dimenſions; that all matter is diviſible; and the like. As alſo in the theory of medicine, that where the blood circulates, there is life, &c.

LEMNA, Duck-meat, in botany; a genus of the diandria order, belonging to the monœcia claſs of plants; and in the natural method ranking under the 54th order, *Miſcellaneæ*. The male calyx is monophyllous; there is no corolla; the female calyx monophyllous; there is no coralla, one ſtyle; the capſule unilocular. There are three ſpecies, all natives of Britain, growing frequently in ditches and the ſhallow parts of ſtagnant waters. All of them are acceptable food for ducks and geeſe.

LEMNIAN-earth, *Terra Lemnia*, a medicinal, aſtringent ſort of earth, of a fatty conſiſtence and reddiſh colour; uſed in the ſame caſes as bole. It has its name from the iſland of Lemnos, whence it is chiefly brought. Many form it into round cakes, and impreſs a ſeal upon it; whence it is alſo called *terra ſigillata*. A ſort is ſaid to be imported from Senegal, which is not properly an earth, though ſo called, but compoſed of the dried pulp of the fruit of the Baobas.

LEMNIUS (Lævinus), a famous phyſician, born at Ziric Zee in Zealand, in 1505. He practiſed phyſic with applauſe; and after his wife's death being made prieſt, became canon of Ziric-Zee, where he died in 1560. He left ſeveral eſteemed works, the principal of which is intitled *De occultis naturæ miraculis*.

LEMNOS (anc. geo.), a noble iſland in the Ægean ſea, near Thrace, called alſo *Dipolis*, from its conſiſting of two towns. The firſt inhabitants were the Pelaſgi, or rather the Thracians, who were murdered by their wives. After them came the children of the Lemnian widows by the Argonauts, whoſe deſcendants were at laſt expelled by the Pelaſgi, about 1100 years before the Chriſtian era. Lemnos is about 112 miles in circumference according to Pliny; who ſays, that it is often

ten ſhadowed by mount Athos, though at the diſtance of 87 miles. It has been called *Hipſipyle*, from queen Hipſipyle. It is famous for a certain kind of earth or chalk called *terra Lemuia*, or *terra ſigillata* from the ſeal or impreſſion which it can bear, and which is uſed for conſolidating wounds. As the inhabitants were blackſmiths, the poets have taken occaſion to fix the forges of Vulcan in that iſland, and to conſecrate the whole country to his divinity. Lemnos is alſo celebrated for a labyrinth, which, according to ſome traditions, ſurpaſſed thoſe of Crete and Egypt. Some remains of it were ſtill viſible in the age of Pliny. The iſland of Lemnos was reduced under the power of Athens by Miltiades.

LEMON, in botany. See Citrus.

Lemon-Iſland, one of the Skelig-iſlands ſo called; ſituated off the coaſt of the county of Kerry, in the province of Munſter in Ireland. It is rather a round rock, always above water, and therefore no way dangerous to ſhips. An incredible number of gannets and other birds breed here; and it is remarkable that the gannet neſtles no where on the ſouthern coaſts of Ireland but on this rock, though many of them are ſeen on all parts of the coaſts on the wing. There is another rock on the northern coaſt of Ireland remarkable for the ſame circumſtance.

LEMONADE, a liquor prepared of water, ſugar, and lemon or citron juice; it is very cooling and grateful.

LEMOVICES, a people of Aquitania, ſituated between the Bituriges Cubi to the north, the Averni to the eaſt, the Cadurci to the ſouth, and the Pictones to the weſt. Now the *Limoſin* and *Ma Marche*.

LEMUR, the Maucauco, in zoology, a genus of quadrupeds belonging to the order of primatus, the characters of which are theſe: There are four foreteeth in the upper jaw, the intermediate ones being remote; and ſix long, compreſſed, parallel teeth in the under jaw; the dog-teeth are ſolitary, and the grinders are ſomewhat lobated.

1. The tardigradus, or tail-leſs maucauco, a ſmall animal found in Bengal and the iſland of Ceylon. It is of a very ſingular conſtruction, and perhaps longer in proportion to its thickneſs than any other quadruped. The head is roundiſh, with a ſharp-pointed noſe, and ſmall ears: the body is covered with ſhort, ſoft, and ſilky aſh-coloured and reddiſh fur: the toes are naked, and the nails flat; excepting thoſe of the inner toe on each hind foot, which are long, crooked, and ſharp. The length of the animal from the noſe to the rump is ſixteen inches.—It lives in the woods, and feeds on fruits: In a tame ſtate it appears to be fond of eggs, and it would alſo greedily devour ſmall birds. This animal has the inactivity of the ſloth, and creeps ſlowly along the ground: it is very tenacious of its hold, and makes a plaintive noiſe.

A variety of the above, or according to Mr Pennant a diſtinct ſpecies, is,

2. The *loris* of Buffon, or *tardigradus* of Seba. It has a produced dog-like viſage, with the forehead high above the noſe: the ears are large, thin, and rounded: the body is ſlender and weak: limbs are very long and ſlender; and the thumb on each foot is more diſtinct, and ſeparate from the toes: the hair on the body is univerſally ſhort, and delicately ſoft; the colour on the upper part tawny, beneath whitiſh. In length, from the tip of the noſe to the anus, the animal is only eight inches. It differs totally in form and in nature from the preceding; and notwithſtanding the epithet of *tardigradus* or *ſloth* given in Seba, it is very active, and aſcends trees moſt nimbly. It has the actions of an ape; and, if we credit Seba, the male climbs the trees, and taſtes the fruits before it preſents them to its mate.

3. The mongooz, or woolly maucauco, inhabits Madagaſcar, and the iſlands to the eaſtward as far as Celebes. It is about the ſize of a cat, and has the whole upper part of the body covered with long, ſoft, and thick fur, a little curled or waved, of a deep browniſh aſh-colour; the tail is very long, covered with the ſame ſort of hair, and of the ſame colour. It lives on fruits, turns its tail over its head to protect it from rain, and ſleeps on trees; it is very ſportive and good-natured, and very tender.

4. The catta, or ring-tailed maki, inhabits Madagaſcar and the neighbouring iſles. It is of the ſize of a cat; has the hair on the top and hind-part of the head of a deep aſh colour, the back and ſides reddiſh, the belly and inſides of the limbs white; all its hair is very ſoft, cloſe and fine, and erect like the pile of velvet; the tail is twice the length of the body. It is very good natured, and has all the life of a monkey, without its miſchievous diſpoſition: it is very cleanly, and has a weak cry. In a wild ſtate they go in troops of 30 or 40, and are eaſily tamed when taken young.

5. The caudatus-niger, or ruffed maucauco, (the *Vari* of Buffon), is alſo an inhabitant of Madagaſcar. It is ſomewhat larger than the laſt, and has long hair ſtanding out round the ſides of the head like a ruff; a long tail; the colour of the whole animal generally black, but ſometimes white ſpotted with black. In a wild ſtate, it is very fierce; and makes ſuch a violent noiſe in the woods, that the cries of two might be eaſily miſtaken for the noiſe made by a hundred.

6. The volans, or flying maucauco, reſembles a bat: being furniſhed with a ſtrong membrane like that animal, by which it is enabled to fly. It inhabits the country about Guzarat, the Molucca iſles, and the Philippines; feeds on the fruits of the trees, and is very diſtinct both from the bat and flying ſquirrel. Its hiſtory, however, is very little known.

7. The *tarſier* of Buffon (ranked by Mr Pennant under this genus) has a pointed viſage; ſlender noſe, bilobated at the end: eyes large and prominent: ears erect, broad, naked, ſemitranſparent, an inch and a half long, with a tuft of hairs between them on the top of the head, and long hairs on each ſide of the noſe and on the upper eye-brow. In each jaw are two cutting and two canine teeth; which form an exception in this genus. There are four long ſlender toes and a diſtinct thumb on each foot; the thumbs on the hind feet very broad and greatly dilated at their ends: the tail is almoſt naked; the greater part round and ſcaly like that of a rat, but growing hairy towards the end, which is tufted. The penis is pendulous; and the ſcrotum and teſticles are of a vaſt ſize in proportion to the animal. The length of the animal from noſe to tail is near ſix inches: to the hind toes eleven and a half, the hind legs, like thoſe of the jerboa, being of a great

length; the tail is nine inches and a half long. It inhabits the remoteſt iſlands of India, eſpecially Amboina; and is called by the Macaſſars *podje*.

8. The little maucauco has a rounded head, ſharp noſe, long whiſkers; two canine teeth in each jaw; four cutting teeth in the upper jaw, ſix in the lower: ſeven grinders on each ſide; the neareſt ſharp, the more diſtant lobated: the ears are large, roundiſh, naked, and membranaceous; the eyes very large and full. The toes are long, and of unequal lengths; the ends round; the nails round, and very ſhort; except that of the firſt toe, which is long and ſharp: the tail is hairy, of the length of the body, and prehenſile. The animal is rather leſs than the black rat; and, in Mr Pennants opinion, ſeems to be the ſame which Buffon calls *le rat de Madegaſcar*. It is ſuppoſed to live in the palm trees, and feed on fruits. It holds its food in its fore-feet like ſquirrels; is lively, and has a weak cry; and when it ſleeps, it rolls itſelf up.

There are three or four other ſpecies; thoſe above deſcribed are figured on Plate CCLXVIII.

LEMURES, in antiquity, ſpirits or hobgoblins; reſtleſs ghoſts of departed perſons, who return to terrify and torment the living.

Theſe are the ſame with *larvæ*, which the ancients imagined to wander round the world, to frighten good people, and plague the bad. For which reaſon at Rome they had *lemuria* or feaſts inſtituted to appeaſe the manes of the defunct. See LARES.

Apuleius explains the ancient notion of manes thus: the ſouls of men releaſed from the bands of the body, and freed from performing their bodily functions, become a kind of dæmons or genii, formerly called *lemures*. Of theſe *lemures*, thoſe that were kind to their families were called *lares familiares*; but thoſe who, for their crimes, were condemned to wander continually, without meeting with any place of reſt, and terrified good men, and hurt the bad, are vulgarly called *larvæ*.

An ancient commentator on Horace mentions, that the Romans wrote *lemures* for *remures*; which laſt word was formed from Remus, who was killed by his brother Romulus, and who returned to earth to torment him.

But Apuleius obſerves, that in the ancient Latin tongue *lemures* ſignifies the ſoul of a man ſeparated from the body by death.

LEMURIA, or LEMURALIA, a feaſt ſolemnized at Rome on the 9th of May, to pacify the manes of the dead or in the honour of the lemures.—It was inſtituted by Romulus, to appeaſe the ghoſt of his murdered brother Remus, which he thought was continually purſuing him to revenge the horrid crime.—The name lemuria is therefore ſuppoſed to be a corruption of Remuria, *i. e.* the feaſt of Remus. Sacrifices continued for three nights, the temples were ſhut up, and marriages were prohibited during the ſolemnity. A variety of whimſical ceremonies were performed, magical words made uſe of, and the ghoſts deſired to withdraw, without endeavouring to hurt or affright their friends above ground. The chief formalities were ablution, putting black beans into their mouths, and beating kettles and pans, to make the goblins keep their diſtance.

LENA, a great river of Siberia in Aſia, which takes its riſe in N. Lat. 52. 30. and E. Long. 124. 30. from Ferro. After traverſing a large tract of land, it divides itſelf into five branches about Lat. 73°. Three of theſe run weſtward, and two eaſtward, by which it diſcharges itſelf into the Icy Sea. Its three weſtern mouths lie in 143° E. Long. from Ferro, but the eaſtern ones extend to 153. The current is every where ſlow, and its bed entirely free from rocks. The bottom is ſandy, and the banks are in ſome places rocky and mountainous. Sixteen large rivers fall into the Lena during its courſe to the northern ocean.

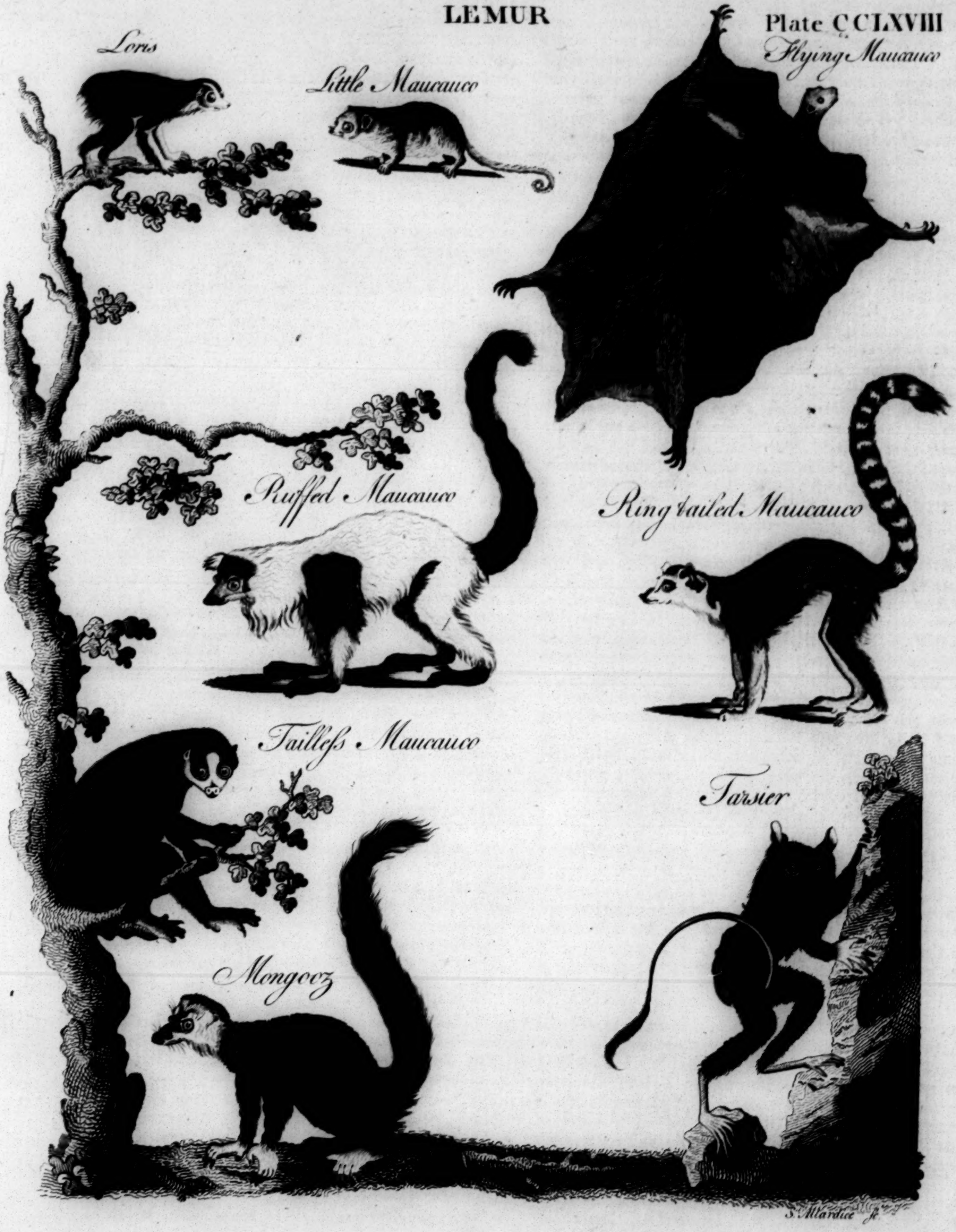
LENÆA, a feſtival kept by the Greeks in honour of Bacchus, at which there was much feaſting and Bacchanalian jollity, accompanied with poetical contentions, and the exhibition of tragedies. The poor goat was generally ſacrificed on the occaſion, and treated with various marks of cruelty and contempt, as being naturally fond of brouſing on the vine-ſhoots.

LENFANT (James), a learned French writer born in 1661. After ſtudying at Saumur, he went to Heidelberg, where he received impoſition of hands for the miniſtry in 1684. He diſcharged the functions of this character with great reputation there, as chaplain of the electreſs dowager Palatine, and paſtor in ordinary to the French church. The deſcent of the French into the Palatinate obliged our author to depart from Heidelberg in 1688. He went to Berlin, where the elector Frederic, afterward king of Pruſſia, appointed him one of the miniſters. There he continued 39 years, diſtinguiſhing himſelf by his writings. He was preacher to the queen of Pruſſia, Charlotta Sophia; and after her death, to the late king of Pruſſia. In 1707 he took a journey to England and Holland, where he had the honour to preach before Queen Anne; and might have ſettled in London, with the title of *chaplain to her majeſty*. In 1712 he went to Helmſtadt, in 1715 to Leipſic, and in 1725 to Breſlaw, to ſearch for rare books and MSS. It is not certain whether it was he that firſt formed the deſign of the *Bibliotheque Germanique*, which began in 1720: or whether it was ſuggeſted to him by one of the ſociety of learned men, which took the name of *Anonymous*, and who ordinarily met at his houſe. He died in 1728. His principal works are, 1. The Hiſtory of the Council of Conſtance, 2 vols 4to. 2. A Hiſtory of the Council of Piſa, 2 vols 4to. 3. The New Teſtament tranſlated from the Greek into the French, with Notes by Beauſobre and Lenfant, 2 vols 4to. 4. The Hiſtory of Pope Joan, from Spanheim's Latin diſſertation. 5. Several pieces in the *Bibliotheque Choiſie, La Republic des Lettres, La Bibliothque Germanique*, &c.

LENGLET (Nicholas du Freſnoy, l'abbe), born at Beauvais in France, 1674, was a moſt fertile and uſeful French author on a variety of ſubjects, hiſtorical, geographical, political, and philoſophical. The following deſerve particular notice: 1. A Method of Studying Hiſtory, with a Catalogue of the Principal Hiſtorians of every age and country, publiſhed in 1713; a work which eſtabliſhed his reputation as an hiſtorical writer: it was tranſlated into moſt of the modern languages, particularly our own, with conſiderable improvements, by Richard Rawlinſon, LL. D. and F. R. S. and publiſhed at London in 1730, in 2 vols 8vo. 2. A Copious Abridgment of Univerſal

LEMUR

Plate CCLXVIII


Loris
Little Maucauco
Flying Maucauco
Ruffed Maucauco
Ring tailed Maucauco
Tailleſs Maucauco
Tarsier
Mongooz
S. Mardie ſc.

BRITISH MUSEUM

Hiſtory and Biography, in chronological order, under the title of *Tablettes Chronologiques*; which made its firſt appearance at Paris in 1744, in 2 vols ſmall 8vo, and was univerſally admired by the literati in all parts of Europe. The author attended with great candour, as every writer ought, to well founded judicious criticiſms. In future editions he made ſeveral alterations and improvements, and from one of theſe, we believe that of 1759, an Engliſh tranſlation was made, and publiſhed at London in 1762, in 2 vols large 8vo. Du Freſnoy died in 1755; the Paris edition of 1759 was printed from the author's corrected copy; and the impreſſion being ſold off, another edition appeared in 1763, with conſiderable improvements by an unknown editor; to the biographical part, a great number of names of reſpectable perſons are added, not to be found in the former edition; and it has this ſuperior advantage in the hiſtorical parts, that the general hiſtory is brought down to the year 1762. Du Freſnoy, however, has loaded his work with catalogues of ſaints, martyrs, councils, ſynods, hereſies, ſchiſms, and other eccleſiaſtical matters, fit only for the libraries of Popiſh convents and ſeminaries.

LENGTH, the extent of any thing material from end to end. In duration, it is applied to any ſpace of time, whether long or ſhort.

LENGTHENING, in ſhip carpentry, the operation of cutting a ſhip-down-acroſs the middle, and adding a certain portion to her length. It is performed by ſawing he planks aſunder in different places of her length, on each ſide of the midſhip frame, to prevent her from being too much weakened in one place. The two ends are then drawn apart to a limited diſtance; which muſt be equal to the propoſed addition of length. An intermediate piece of timber is next added to the keel, upon which a ſufficient number of timbers are erected, to fill up the vacancy produced by the ſeparation. The two parts of the keleſon are afterwards united by an additional piece which is ſcored down upon the floor-timbers, and as many beams as may be neceſſary are fixed acroſs the ſhip in the new interval. Finally, the planks of the ſide are prolonged ſo as to unite with each other; and thoſe of the ceiling refitted in the ſame manner; by which the whole proceſs is completed.

LENEICIA, a ſtrong town of Poland, and capital of a palatinate of the ſame name, with a fort ſeated on a rock. The nobility of the province hold their diet here. It ſtands in a moraſs on the banks of the river Bſura, in E. Long. 19. 25. N. Lat. 52. 12.

LENOX or DUNBARTON *Shire*, a county of Scotland, ſtretching 14 miles in length and 20 in breath, is bounded on the ſouth by the river and frith of Clyde, on the weſt by Lochlong and Argyleſhire, on the north by the Grampian hills, and on the eaſt by Monteith and Stirlingſhires. Great part of this county conſiſts of hills and heaths, fit for nothing but paſturage and ſport; even in the lower lands, the ſoil is not extremely fertile; yet the face of the country is agreeably diverſified with hill, dale, mountain, heath, ſtreams, lakes, woods, and fields of corn; the ſhire is likewiſe beautified with a great number of agreeable ſeats and plantations, belonging to gentlemen of fortune. Part of this county is waſhed by the river Clyde in its courſe to the ſea: even at the caſtle of Dunbarton, the breadth of it amounts to two miles at high-water, and it continues extending in width and depth until it joins the ocean. From the mouth of the Clyde, the two bays of Lochlong and Lochfyn make large indentations in the ſhire of Dunbarton. The only river of any conſideration that runs through this county, is the Leven, the Lelanonius of Ptolemy, otherwiſe called *Levinia*, the Latin name for Lenox. The river Leven is a pure tranſparent paſtoral ſtream, that warbles over a bed of pebbles, through a delightful vale adorned with farms, ſeats, woods, and plantations. It derives its origin from the great lake called *Lochlomond*, of which indeed it is the overflowing, and, after a delightful meandring courſe of five or ſix miles, diſembogues itſelf into the Clyde at the caſtle of Dunbarton. But the greateſt curioſity of this county is Lochlomond itſelf, a vaſt body of freſh water, ſupplied by ſubterraneous ſprings and rivulets, ſurrounded with huge mountains, extending 25 miles in length, and in ſome places five miles in breadth, incredibly deep in every part, interſperſed with 24 verdant iſles, ſome of which are ſtocked with red deer, and inhabited. Nothing can be more wildly romantic than this part of the country during the ſummer-ſeaſon, on the ſouth ſide of the lake: the high road runs in ſome places through natural woods; overhung, on one hand, by ſteep mountains, covered with flowery heath; and on the other opening in long viſtas upon the lake, terminated by green iſlands that ſeem to float upon the water. Among the rivers of this ſhire we ſhall likewiſe mention the water of Blane, which though itſelf an inconſiderable ſtream, hath been rendered famous by the birth of George Buchanan, the celebrated Latin poet and hiſtorian. He was born on the north ſide of the lake, not far from the place called *Buchanan*, where we may behold an elegant ſeat belonging to the duke of Montroſe, head of the noble family of Graham, ſo often diſtinguiſhed by its loyalty, integrity, and valour. The ſame part of the country gave birth to the great mathematician and naturaliſt, Napier, Lord Merchiſton, inventor of the logarithms. The title of *Lenox*, with the property of great part of the ſhire, was heretofore veſted in a branch of the royal family of Stuart, with which it was reunited in the perſon of King James VI. whoſe father, Henry Lord Darnly, was ſon to the duke of Lenox. This prince conferred the title upon his kinſman Eſme Stuart, ſon of John Lord d'Aubigney in France: but, his race failing at the death of Charles duke of Lenox and Richmond, and the eſtate devolving to the crown, King Charles II. conferred both titles on his own natural ſon by the ducheſs of Portſmouth; and they are ſtill enjoyed by his poſterity. The people of Lenoxſhire are chiefly Lowlanders, though in ſome parts of it divine ſervice is performed in the Erſe language. The moſt numerous clans in this diſtrict, are the Macfarlane, the Colquhouns, and the Buchanans. They generally profeſs the proteſtant faith, according to the Preſbyterian diſcipline; yet ſome of the gentlemen follow the Engliſh ritual. The commonalty are for the moſt part ſober, honeſt, and induſtrious; and though they live poorly, are tall, vigorous, and healthy.

LENS, a piece of glaſs, or any other tranſparent ſubſtance, the ſurfaces of which are ſo formed, that the rays of the light, by paſſing through it, are made to change their direction, either tending to meet in a point beyond the lens, or made to become parallel after converging or diverging; or laſtly, proceeding as if they had iſſued from a point before they fell upon the lens. Some lenſes are convex, or thicker in the middle; ſome concave, or thinner in the middle: ſome plano-convex, or plano-concave; that is with one ſide flat and the other convex or concave; and ſome are called *meniſcuſes*, or convex on one ſide and concave on the other. See DIOPTRICS, p. 32.

LENT, a ſolemn time of faſting in the Chriſtian church, obſerved as a time of humiliation before Eaſter, the great feſtival of our Saviour's reſurrection.

Thoſe of the Romiſh church, and ſome of the Proteſtant communion, maintain, that it was always a faſt of 40 days, and, as ſuch, of apoſtolical inſtitution. Others think it was only of eccleſiaſtical inſtitution, and that it was variouſly obſerved in different churches, and grew by degrees from a faſt of 40 hours to a faſt of 40 days. This is the ſentiment of Morton, Biſhop Taylor, Du Moulin, Daillé, and others.

Anciently the manner of obſerving lent among thoſe who were piouſly diſpoſed, was to abſtain from food till evening: their only refreſhment was a ſupper; and then it was indifferent whether it was fleſh or any other food, provided it was uſed with ſobriety and moderation.

Lent was thought the proper time for exerciſing, more abundantly, every ſpecies of charity. Thus what they ſpared from their own bodies by abridging them of a meal, was uſually given to the poor; they employed their vacant hours in viſiting the ſick and thoſe that were in priſon, in entertaining ſtrangers, and reconciling differences. The imperial laws forbad all proſecution of men in criminal actions, that might bring them to corporal puniſhment and torture, during the whole ſeaſon. This was a time of more than ordinary ſtrictneſs and devotion, and therefore in many of the great churches they had religious aſſemblies for prayer and preaching every day. All public games and ſtage-plays were prohibited at this ſeaſon; as alſo the celebration of all feſtivals, birth-days, and marriages, as unſuitable to the preſent occaſion.

The Chriſtians of the Greek chruch obſerve four lents; the firſt commences on the 15th of November; the ſecond is the ſame with our lent; the third begins the week after Whitſuntide, and continues till the feſtival of St Peter and St Paul: and the fourth commences on the firſt of Auguſt, and laſts no longer than till the 15th. Theſe lents are obſerved with great ſtrictneſs and auſterity; but on Saturdays and Sundays they indulge themſelves in drinking wine and uſing oil, which are prohibited on other days.

LENTIL, in botany. See ERVUM.

LENTINI. See. LEONTINI.

LENTISCUS, in botany. See PISTACIA.

LEO, in zoology. See FELIS.

LEO, in aſtronomy, the fifth of the 12 ſigns of the zodiac. The ſtars in the conſtellation *Leo* in Ptolemy's catalogue are 17, beſides the informes, which are 8; in Tycho's 30; in the Britannic catalogue 25.

LOE X. whoſe proper name was John de Medicis, is a pope ever to be remembered by Proteſtants, as having proved the cauſe of the reformation begun by Martin Luther. He had been honoured with a cardinal's had at 14 years of age, and ſome years after with the dignity of legate by Julius II. He was in that quality in the army which was defeated by the French near Ravenna in 1512, where he was taken priſoner. The ſoldiers, who had overcome him, ſhowed him ſuch great veneration, that they humbly aſked his pardon for gaining the victory, beſought him to give them abſolution for it, and promiſed never to bear arms againſt the pope. When pope Julius died, Leo was very ill of the venereal diſeaſe at Florence, and was carried to Rome in a litter. His hurrying about every night to the cardinals of his faction, occaſioned the breaking of his ulcer; and the matter which ran from it exhaled ſuch a ſtench, that all the cells in the conclave, which were ſeparated only by thin partitions, were poiſoned by it. Upon this the cardinals conſulted the phyſicians of the conclave, to know what the matter was. They, being bribed, ſaid the cardinal de Medicis could not live a month; which ſentence occaſioned his being choſen pope. Thus cardinal de Medicis, then not 30 years of age, was elected pope upon a falſe information; and as joy is the moſt ſovereign of all remedies, he ſoon after recovered his health, ſo that the old cardinals had reaſon to repent their credulity.—He was better calculated for a temporal prince, being ambitious, politic, luxurious, a connnoiſſeur in the fine arts, and an accompliſhed fine gentleman: thus qualified, it is no wonder that ſo young a pontiff, neglecting the true intereſt of his church, ſhould avail himſelf of the folly of religious dupes, and publicly ſell indulgences to ſupport his prodigality, eſpecially as he was known to diſbelieve Chriſtianity itſelf, which he called *A very profitable fable for him and his predeceſſors*. In 1517, he publiſhed general indulgences throughout Europe (and ordered the prieſts to recommend them) in favour of thoſe who would contribute any ſum towards completing the church of St Peter; and this was the baſis of the reformation. See LUTHER and INDULGENCE.) Leo died in 1521.

It is but juſtice to add, that to this pope was principally owing the revival of polite literature in Italy. He ſpared neither pains nor expence in recovering ancient manuſcripts, and procuring good editions of them: he favoured the arts and ſciences; and gloried in being the patron of learned and ingenious men, who in return have been very laviſh in his praiſe. Mr Pope, in his eſſay on Criticiſm, beſtows on him theſe harmonious lines.

> But ſee! each muſe in Leo's golden days,
> Starts from her trance; and trims her wither'd bays;
> Rome's ancient Genius, o'er its ruins ſpread,
> Shakes off the duſt, and rears its rev'rend head.
> Then Sculpture and her ſiſter Arts revive:
> Stones leap to form, and rocks begin to live;
> With ſweeter notes each riſing temple rung;
> A Raphael painted, and a Vida ſung.

LEO (St), a ſmall but ſtrong town of Italy, in the territory of the church, and dutchy of Urbino, with a biſhop's ſee. It is ſeated on a mountain, near the river Marrechia, in E. Long. 12. 25. N. Lat. 43. 57.

LEOMINSTER, a town of Herefordſhire, in

England, ſeated on the river Lug, which waters the north and eaſt ſides of the town, and over which there are ſeveral bridges. It is a large, handſome, populous borough; and is a great thoroughfare betwixt South-Wales and London, from which laſt it is diſtant 113 meaſured miles. In King John's reign it was burnt, but ſoon after rebuilt. It was incorporated by Queen Mary, and is governed by a high ſteward, bailiff, recorder, 12 capital burgeſſes (out of whom the bailiff is choſen), and a town-clerk. Its market is on Friday, and its fairs, which are all noted for horſes and black cattle, on February 13th, Tueſday after Midlent-Sunday, May 13th, July 10th, September 4th, and November 1ſt. The market was on Thurſday till it was changed, on a petition from the cities of Hereford and Worceſter, complaining of their loſs of trade; ſince which, the vaſt trade it had in wool and wheat is much leſſened. The beſt flax is ſaid to grow here, and it has been equally noted for the beſt wheat, barley, and the fineſt bread. The inhabitants drive a conſiderable trade not only in the wool, but in gloves, leather, hat-making, &c. and there are ſeveral rivers in and about the town on which they have mills and other machines. Near its church are ſome remains of its priory; and on a neighbouring hill are the ruins of a palace, called to this day Comfort-Caſtle. It has ſeveral good inns, and ſends two members to parliament. W. Long. 2. 45. N. Lat. 52. 20.

LEON, an ancient town of France, in Lower Bretagne, and capital of the Lyonnois, with a biſhop's ſee. It is ſeated near the ſea, in W. Long. 3. 55. N. Lat. 48. 41.

Leon, a province of Spain, with the title of a kingdom; bounded on the north by Aſturias; on the weſt by Galicia and Portugal; and on the ſouth by Eſtremadura and Caſtile, which alſo bounds it on the eaſt. It is about 125 miles in length, and 100 in breadth; and is divided into two almoſt equal parts by the river Duero, or Douro. It produces all the neceſſaries of life, and Leon is the capital town.

Leon, an ancient and large epiſcopal town of Spain, and capital of the kingdom of that name, built by the Romans in the time of Galba. It has the fineſt cathedral church in all Spain. It was formerly more rich and populous than at preſent, and had the honour of being the capital of the firſt Chriſtian kingdom in Spain. It is ſeated between two ſources of the river Eſra, in W. Long. 5. 13. N. Lat. 42. 55.

Leon (Peter Cieca de), author of the hiſtory of Peru. He left Spain his native country at 13 years of age, in order to go into America, where he reſided 17 years; and obſerved ſo many remarkable things, that he reſolved to commit them to writing. The firſt part of this hiſtory was printed at Seville in 1553. He began it in 1541, and ended it in 1550. He was at Lima, the capital of the kingdom of Peru, when he gave the finiſhing ſtroke to it, and was then 32 years of age.

Leon *de Nicaragua*, a town of North America, in New Spain, and in the province of Nicaragua; the reſidence of the governor, and a biſhop's ſee. It conſiſts of about 1000 houſes, and has ſeveral monaſteries and nunneries belonging to it. At one end of the town is a lake which ebbs and flows like the ſea. The town is ſeated at the foot of a volcano, which renders it ſubject to earthquakes. It was taken by the buccaneers in 1685, in ſight of a Spaniſh army who were ſix to one. W. Long. 86. 10. N. Lat. 12. 25.

LEONARD DE NOBLET (St) an ancient town of France, in the province of Guienne and territory of Limoſin, with a conſiderable manufactory of cloth and paper. It is ſeated on the river Vienne, in E. Long. 1. 35. N. Lat. 45. 50.

LEONARDO DA VINCI. See Vinci.

LEONCLAVIUS (John), one of the moſt learned men of the 16th century, was a native of Weſtphalia. He travelled into Turkey, and collected excellent materials for compoſing *The Ottoman Hiſtory*; and it is to him that the public are indebted for the beſt account we have of that empire. To his knowledge in the learned languages, he had added that of the civil law; whereby he was well qualified to tranſlate the *Baſilica*. His other verſions were eſteemed, though critics pretend to have found many faults in them. He died in 1593, aged 60.

LEONIDAS I. king of Sparta, a renowned warrior, ſlain in defending the ſtraits of Thermopylæ againſt Xerxes, 480 B. C. See Sparta.

LEONINE, in poetry, is applied to a kind of verſes which rhime at every hemiſtic, the middle always chiming to the end. Of which kind we find ſeveral ancient hymns, epigrams, prophecies, &c.—For inſtance, Muretus ſpeaking of the poetry of Lorenzo Gambara of Breſſe, ſays,

> *Brixia, veſt*ratis *merdoſa volumina* vatis,
> *Non ſunt noſt*rates *tergere digna* nates.

The following one is from the ſchool of Salernum:

> *Ut vites* pœnam *de potibus incipe* cœnam.

The origin of the word is ſomewhat obſcure: Paſquier derives it from one Leoninus or Leonius, who excelled in this way; and dedicated ſeveral pieces to Pope Alexander III.; others derive it from Pope Leo; and others from the beaſt called *lion*, by reaſon it is the loftieſt of all verſes.

LEONTICA, feaſts or ſacrifices, celebrated among the ancients in honour of the ſun.—They were called *Leontica*, and the prieſts who officiated at them *Leones*, becauſe they repreſented the ſun under the figure of a lion radiant, bearing a tiara, and griping in his two fore-paws the horns of a bull, who ſtruggled with him to diſengage himſelf.

The critics are extremely divided about this feaſt. Some will have it anniverſary, and to have made its return not in a ſolar but in a lunar year; but others hold its return more frequent, and give inſtances where the period was not above two hundred and twenty days.

The ceremony was ſometimes alſo called *Mithriaca*; Mithras being the name of the ſun among the ancient Perſians. There was alſo a man ſacrificed at theſe feaſts, till the time of Hadrian, who prohibited it by a law. Commodus introduced the cuſtom afreſh, after whoſe time it was again exploded.

LEONTICE, LION'S LEAF: A genus of the monogynia order, belonging to the hexandria claſs of plants; and in the natural method ranking under the 24th order, *Corydales*. The corolla is hexapetalous; the nectarium hexaphyllous, ſtanding on the heels of the corolla, with its limb patent; the calyx hexaphyllous,

lous and deciduous. There are four ſpecies, natives of the ſouthern parts of Europe, two of which are ſometimes cultivated in this country. Theſe are, 1. The chryſogonum with winged leaves; and, 2. The leontopetalum with decompounded leaves. Both thoſe plants are natives of the Archipelago iſlands, and alſo grow in corn-fields about Aleppo in Syria, where they flower ſoon after Chriſtmas. They have large tuberous roots like thoſe of the cyclamen, covered with a dark-brown bark. The flowers ſit upon naked footſtalks: thoſe of the firſt ſort ſuſtain many yellow flowers, but the flowers of the ſecond are of a paler colour. Both ſpecies are propagated by ſeeds, which muſt be ſown ſoon after they are ripe, otherwiſe they ſeldom ſucceed. When ſent to diſtant countries, they muſt be preſerved in ſand. The plants are, however, very difficult to be preſerved in Britain: for they will not thrive in pots; and when they are planted in the full ground, froſt frequently deſtroys them. The beſt way is to ſow the ſeed as ſoon as it comes from abroad, covering it with glaſſes in the winter to protect it from froſt; and, in the ſpring, when the plants begin to appear, they muſt have free air admitted to them at all times when the weather is mild, otherwiſe they will be weak.

LEONTINI, or **LEONTIUM** (anc. geog.), a town of Sicily on the ſouth ſide of the river Terais, 20 miles north-weſt of Syracuſe. The territory called *Campi Leontini*, was extremely fertile (Cicero): theſe were the *Campi Læſtrigonii*, anciently ſo called; the ſeat of the Læſtrigons; according to the commentators on the poets. The name *Leontini* is from *Leo*, the impreſſion on their coins being a lion. Now called *Lentini*, a town ſituated in the Val di Noto, in the ſouth-eaſt of Sicily.

LEONTIUM, one of the twelve towns of Achaia, whether on, or more diſtant from, the bay of Corinth, is uncertain. *Leontium* of Sicily. See LEONTINI.

LEONTODON, DANDELION: a genus of the polygamia æqualis order, belonging to the ſyngeneſia claſs of plants; and in the natural method ranking under the 49th order, *Compoſitæ*. The receptacle is naked; the calyx imbricated, with the ſcales ſomewhat looſe; the pappus feathery. There are nine ſpecies, of which the only remarkable one is the Taraxacum, or common dandelion, found on the road ſides, in paſtures, and on the banks of ditches. Early in the ſpring, the leaves whilſt yet white and hardly unfolded are an excellent ingredient in ſalads. The French eat the roots and tender leaves with bread and butter. Children that eat it in the evening experience its diuretic effects in the night, which is the reaſon that other European nations as well as the Britiſh vulgarly call it *piſs-a-bed*. When a ſwarm of locuſts had deſtroyed the harveſt in the iſland of Minorca, many of the inhabitants ſubſiſted upon this plant. The expreſſed juice has been given to the quantity of four ounces three or four times a day; and Boerhaave had a great opinion of the utility of this and other lacteſcent plants in viſceral obſtructions. Goats eat it; ſwine devour it greedily; ſheep and cows are not fond of it, and horſes refuſe it. Small birds are fond of the ſeeds.

LEONURUS, LION'S-TAIL: a genus of the gymnoſpermia order, belonging to the didynamia claſs of plants; and in the natural method ranking under the 42d order, *Verticillatæ*. The antheræ are powdered with ſhining points, or ſmall elevated globular particles.

Species. 1. The Africana, with ſpear-ſhaped leaves, is a native of Ethiopia. It riſes with a ſhrubby ſtalk ſeven or eight feet high, ſending out ſeveral four cornered branches, garniſhed with oblong narrow leaves, acutely indented on their edges, hairy on their upper ſide, and veined on the under ſide, ſtanding oppoſite. The flowers are produced in whorls, each of the branches having two or three of theſe whorls towards their ends. They are of the lip kind, ſhaped ſomewhat like thoſe of the dead nettle; but are much longer, and covered with ſhort hairs. They are of a golden ſcarlet colour, ſo make a fine appearance. The flowers commonly appear in October and November, and ſometimes continue till the middle of December, but are not ſucceeded by ſeeds in Britain. There is a variety with variegated leaves which is admired by ſome, but the whorls of flowers are ſmaller than thoſe of the plain ſort. 2. The nepetæfolia, with oval leaves, is a native of the Cape of Good Hope. This riſes with a ſquare ſhrubby ſtalk about three feet high, ſending out ſeveral four-cornered branches, garniſhed with oval crenated leaves, rough on their under ſide like the dead-nettle, but veined on the upper ſide, and placed oppoſite. The flowers come out in whorls like thoſe of the former ſort, but are not ſo long nor ſo deep coloured. They appear at the ſame ſeaſon with the firſt, and continue as long in beauty. There are three other ſpecies, but the above are the moſt remarkable.

Culture. Both ſorts are propagated by cuttings, which ſhould be expoſed to the air long enough to harden the ſhoots, and planted in the beginning of July, after which they will take root very freely. They ſhould be planted in a loamy border to an eaſtern aſpect; and if they are covered cloſely with a bell or hand-glaſs to exclude the air, and ſhaded from the ſun, it will forward their putting forth roots. As ſoon as they have taken good root, they ſhould be taken up and planted each in a ſeparate pot filled with ſoft loamy earth, and placed in the ſhade till they have taken new root. In October they muſt be removed into the green-houſe.

LEOPARD. See FELIS.

LEOPARD's Bane, in botany. See DORONICUM.

LEPANTO, a ſtrong and very conſiderable town of Turkey in Europe, and in Livadia, with an archbiſhop's ſee and a ſtrong fort. It is built on the top of a mountain, in form of a ſugar-loaf; and is divided into four towns, each ſurrounded by walls, and commanded by a caſtle on the top of the mountain. The harbour is very ſmall, and may be ſhut up by a chain, the entrance being but 50 feet wide. It was taken from the Turks by the Venetians in 1687; but was afterwards evacuated, and the caſtle demoliſhed in 1699, in conſequence of the treaty of Carlowitz. It was near this town that Don John of Auſtria obtained the famous victory over the Turkiſh fleet in 1571. The produce of the adjacent country is wine, oil, corn, and rice. Turkey leather is alſo manufactured here. The wine would be exceedingly good if they did not pitch their veſſels on the inſide, but this renders the taſte very diſagreeable to thoſe who are not accuſtomed to it. The Turks have ſix or ſeven moſques here, and the Greeks two churches. It is ſeated on a gulph of the ſame name, in E. Lon. 22. 13. N. Lat. 38. 34.

LEPAS, the ACORN, in zoology; a genus belonging to the order of vermes teſtacea. The animal is the triton; the ſhell is multivalve, unequal, fixed by a ſtem or ſeſſile. There are ſeveral ſpecies, of which the moſt remarkable is the anatifera, conſiſting of five ſhells depreſſed, affixed to a pedicle and in cluſters. It adheres to the bottom of ſhips by its pedicles. The tentacula from this animal are feathered; and have given the old Engliſh hiſtorians and naturaliſts the idea of a bird. They aſcribed the origin of the barnacle gooſe to thoſe ſhells. See Plate CCLXIII.

LEPIDIUM, DITTANDER, or *Pepperwort*: A genus of the ſiliculoſæ order, belonging to the tetradynamia claſs of plants; and in the natural method ranking under the 39th order, *Siliquoſæ*. The ſilicula is emarginated, cordated, and polyſpermous, with the valves carinated, contrary or broader than the partition. There are 19 ſpecies, of which the only remarkable one is the latifolium or common dittander. This is a native of many parts both of Scotland and England. It hath ſmall, white, creeping roots, by which it multiplies very faſt, and is difficult to be eradicated after it has long grown in any place. The ſtalks are ſmooth, riſe two feet high, and ſend many ſide-branches. The flowers grow in cloſe bunches towards the top of the branches, coming out from the ſide; they are ſmall, and compoſed of four ſmall white petals. The ſeeds ripen in autumn. The whole plant has a hot biting taſte like pepper; and the leaves have been often uſed by the country-people to give a reliſh to their viands inſtead of that ſpice, whence the plant has got the appellation of *poor man's pepper*. It is reckoned an antiſcorbutic, and was formerly uſed inſtead of the *horſe radiſh ſcurvy-graſs*.

LEPIDOPTERA, in zoology, an order of inſects, with four wings, which are covered with imbricated ſquamulæ. See ZOOLOGY.

LEPISMA, in zoology; a genus of apterous inſects, the characters of which are: They have ſix feet formed for running; the mouth is furniſhed with four palpi, two of which are cetaceous and two capitated; the tail is terminated by extended briſtles, and the body imbricated with ſcales. There are 7 ſpecies. The *ſaccharina* (Plate CCLXXIV.) is an American ſpecies, ſo called becauſe moſtly found among ſugar; but now common in Europe. It is of a leaden colour, but rather inclining to that of ſilver, by reaſon of the ſmall ſilvery ſcales with which it is covered; by which ſame circumſtance it reſembles, eſpecially in its under part, the ſilver fiſh. It is found in gardens, under boxes, and in the crevices of window ſaſhes in houſes, where it is very common. It runs with great ſwiftneſs, and is difficult to catch. When touched, it loſes part of its ſcales. and its ſoftneſs makes it eaſy to cruſh.

LEPIUM, in natural hiſtory, a genus of foſſils of the harder gypſum, compoſed of very ſmall particles, and of a leſs glittering hue.

There is only one ſpecies of this genus, being one of the leaſt valuable and moſt impure of the claſs of gypſums. It is of an extremely rude, irregular, coarſe, and unequal ſtructure; a little ſoft to the touch, of a very dull appearance, and of different degrees of a greyiſh white. It is burnt in plaſter for the coarſer works; it calcines very ſlowly and unequally, and makes but a very coarſe and ordinary plaſter.

LEPROSY, a foul cutaneous diſeaſe, appearing in dry, white, thin, ſcurfy ſcabs, either on the whole body, or only ſome part of it, and uſually attended with a violent itching and other pains. See (the *Index* ſubjoined to) MEDICINE.

The leproſy is of various kinds, but the Jews were particulary ſubject to that called *Elephantiaſis*. Hence the Jewiſh law excluded lepers from communion with mankind, baniſhing them into the country or uninhabited places, without excepting even kings. When a leper was cleanſed, he came to the city gate, and was there examined by the prieſts; after this he took two live birds to the temple, and faſtened one of them to a wiſp of cedar and hyſſop tied together with a ſcarlet ribbon; the ſecond bird was killed by the leper, and the blood of it received into a veſſel of water; with this water the prieſt ſprinkled the leper, dipping the wiſp and the live bird into it: this done, the live bird was let go; and the leper, having undergone this ceremony, was again admitted into ſociety and to the uſe of things ſacred. See Levit. xiii. 46. 47. and Levit. xiv. 1. 2. &c.

LEPTODECORHOMBES, in natural hiſtory, a genus of foſſils of the order of the ſelenitæ; conſiſting of 10 planes, each ſo nearly equal to that oppoſite to it as very much to approach to a decahedral parallelopiped, though never truly or regularly ſo.

Of this genus there are only five known ſpecies, 1. A thin, fine, pellucid, and ſlender ſtreaked one, with tranſverſe ſtriæ, found in conſiderable quantities in the ſtrata of clay in moſt parts of England, particularly near Heddington in Oxfordſhire. 2. A thin dull-loaking, opaque, and ſlender-ſtreaked one, more ſcarce than the former, and found principally in Leiceſterſhire and Staffordſhire. 3. A thin fine-ſtreaked one, with longitudinal ſtriæ, found in the clay pits at Richmond, and generally lying at great depths. This has often on its top and bottom a very elegant ſmaller rhomboide, deſcribed by four regular lines. 4. A rough kind, with thick tranſverſe ſtriæ, and a ſcabrous ſurface, very common in Leiceſterſhire and Yorkſhire. And, 5. A very ſhort kind, with thick plates, common in the clay-pits of Northamptonſhire and Yorkſhire.

LEPTOPOLYGINGLIMI, in natural hiſtory, a genus of foſſils ſhells, diſtinguiſhed by a number of minute teeth at the cardo; whereof we find great numbers at Harwich-cliff, and in the marle-pits of Suſſex.

LEPTUM, in antiquity, a ſmall piece of money, which, according to ſome, was only the eighth part of an obolus; but others will have it to be a ſilver or braſs drachm.

LEPTURA, in zoology, a genus of inſects belonging to the order of coleoptera, the characters of which are theſe:—The feelers are briſtly; the elytra are attenuated towards the apex: and the thorax is ſomewhat cylindrical. There are 25 ſpecies, principally diſtinguiſhed by their colour.

LEPUS, in zoology, a genus of quadrupeds belonging to the order of glires. The characters are theſe ;—They have two fore-teeth in each jaw ; thoſe in the upper-jaw are double, the interior ones being ſmalleſt.

1. The timidus, or common hare, has a ſhort tail ; the points of the ears are black ; the upper lip is divided up to the noſtrils ; the length of the body is generally about a foot and a half; and the colour of the hair is reddiſh, interſperſed with white. The hare is naturally a timid animal. He ſleeps in his form or ſeat during the day ; and feeds, copulates, &c. in the night. In a moon-light evening, a number of them are ſometimes ſeen ſporting together; leaping and purſuing each other : But the leaſt motion, the falling of a leaf, alarms them; and then they all run off ſeparately, each taking a different route. They are extremely ſwift in their motion, which is a kind of gallop, or a ſucceſſion of quick leaps. When purſued, they always take to the higher grounds : as their fore-feet are much ſhorter than the hind ones, they run with more eaſe up-hill than down-hill. The hare is endowed with all thoſe inſtincts which are neceſſary for his own preſervation. In winter he chooſes a form expoſed to the ſouth, and in ſummer to the north. He conceals himſelf among vegetables of the ſame colour with himſelf. Mr Fouilloux ſays, that he obſerved a hare, as ſoon as he heard the ſound of the horn, or the noiſe of the dogs, although at a mile's diſtance, riſe from her ſeat, ſwim acroſs a rivulet, then lie down among the buſhes, and by this means evade the ſcent of the dogs. After being chaſed for a couple of hours, a hare will ſometimes puſh another from his form, and lie down in it himſelf. When hard preſſed, the hare will mingle with a flock of ſheep, run up an old wall and conceal himſelf among the graſs on the top of it, or croſs a river ſeveral times at ſmall diſtances. He never runs againſt the wind, or ſtraight forward : but conſtantly doubles about, in order to make the dogs loſe their ſcent.

It is remarkable that the hare, although ever ſo frequently purſued by the dogs, ſeldom leaves the place where ſhe was brought forth, or even the form in which ſhe uſually ſits. It is common to find them in the ſame place next day, after being long and keenly chaſed the day before. The females are more groſs than the male, and have leſs ſtrength and agility ; they are likewiſe more timid, and never allow the dogs to appoach ſo near their form before riſing as the males. They likewiſe practiſe more arts, and double more frequently than the males.

The hare is diffuſed almoſt over every climate : and notwithſtanding they are every where hunted, their ſpecies never diminiſhes. They are in a condition of propagating the firſt year of their lives; the females go with young about 30 days, and produce four or five at a time ; and as ſoon as they have brought forth, they again admit the embraces of the male ; ſo that they may be ſaid to be always pregnant. The eyes of the young are open at birth ; the mother ſuckles them about 20 days, after which they ſeparate from her, and procure their own food. The young never go far from the place where they were brought forth; but ſtill they live ſolitary, and make forms about 30 paces diſtant from each other : Thus, if a young hare be found any-where, you may almoſt be certain of finding ſeveral others within a very ſmall diſtance. The hare is not ſo ſavage as his manners would indicate. He is gentle and is ſuſceptible of a kind of education. He is pretty eaſily tamed, and will even ſhow a kind of attachment to the people of the houſe : But ſtill this attachment is not ſo ſtrong or laſting as to engage him to become altogether domeſtic ; for although taken when very young, and brought up in the houſe, he no ſooner arrives at a certain age, than he takes the firſt opportunity of recovering his liberty, and flying to the fields. The hare lives about ſeven or eight years. He feeds upon graſs and other vegetables. His fleſh is excellent food.

Hares are very ſubject to fleas. Linnæus tells us, that the Dalecarlians make a ſort of cloth, called *felt*, of the fur; which by attracting theſe inſects, preſerves the wearer from their troubleſome attacks. The hair of this creature makes a great article in the hat manufacture ; and, as Britain cannot ſupply a ſufficient quantity, a great deal is annually imported from Ruſſia and Siberia. The hare was reckoned a great delicacy among the Romans ; the Britons, on the contrary, thought it impious even to taſte it : yet this animal was cultivated by them, either for the pleaſure of the chace, or for the purpoſes of ſuperſtition ; as we are informed, that Boadicea, immediately before her laſt conflict with the Romans, let looſe a hare ſhe had concealed in her boſom, which taking what was deemed a fortunate courſe, animated her ſoldiers by the omen of an eaſy victory over a timid enemy.

2. The variabilis, or varying hare of Pallas, has ſoft hair, which in ſummer is grey, with a ſlight mixture of black and tawny : the ears are ſhorter, and the legs more ſlender than thoſe of the common hare : the tail is entirely white, even in ſummer ; and the feet are moſt cloſely and warmly furred. In winter, the whole animal changes to a ſnowy whiteneſs, except the tips and edges of the ears, which remain black, as are the ſoles of the feet, on which, in Siberia, the fur is doubly thick, and of a yellow colour. It is leſs than the common ſpecies.—Theſe animals inhabit the higheſt Scottiſh Alps, Norway, Lapland, Ruſſia, Siberia, Kamtſchatka, and the banks of the Wolga, and Hudſon's-Bay. In Scotland, they keep on the tops of the higheſt hills, and never deſcend into the vales ; nor do they ever mix with the common hare, though theſe abound in this neighbourhood. They do not run faſt ; and are apt to take ſhelter in clefts of rocks. They are eaſily tamed and are full of frolic. They are fond of honey and carraway comfits ; and they are obſerved to eat their own dung before a ſtorm. This ſpecies changes its colour in September ; reſumes its grey coat in April; and in the extreme cold of Greenland only is always white. Both kinds of hares are common in Siberia, on the banks of the Wolga, and in the Orenburg government. The one never changes colour : the other, native of the ſame place, conſtantly aſſumes the whiteneſs of the ſnow during winter. This it does, not only in the open air and in a ſtate of liberty, but, as experiment has proved, even when kept tame, and preſerved in houſes in the ſtove-warmed apartments, in which it experiences the ſame changes of colour as if it had dwelt on the ſnowy plains.—They collect together, and are ſeen in troops of five or ſix hundred, migrating in ſpring, and returning in autumn. They are compelled to this by the want of ſubſiſtence,

quitting in the winter the lofty hills, the ſouthern boundaries of Siberia, and ſeek the plains and northern wooded parts, where vegetables abound; and towards ſpring ſeek again the mountainous quarters.

Mr Muller ſays, he once ſaw two black hares, in Siberia, of a wonderful fine gloſs, and of as full a black as jet. Near Caſan was taken another, in the middle of the winter 1768. Theſe ſpecimens were much larger than the common kind.

In the ſouthern and weſtern provinces of Ruſſia is a mixed breed of hares, between this and the common ſpecies. It ſuſtains, during winter only, a partial loſs of colour: the ſides, and more expoſed parts of the ears and legs, in that ſeaſon becoming white; the other parts retaining their colours. This variety is unknown beyond the Urallian chain. It is called by the Ruſſians *ruſſak;* they take them in great numbers in ſnares, and export their ſkins to England and other places for the manufacture of hats. The Ruſſians and Tartars, like the Britons of old, hold the fleſh of hares in deteſtation, eſteeming it impure: that of the variable, in its white ſtate, is exceſſively inſipid.

There have been ſeveral inſtances of what may be called monſters in this ſpecies, horned hares, having excreſcences growing out of their heads, like to the horns of the roe-buck. Such are thoſe figured in Geſner's hiſtory of quadrupeds, p. 634; in the *Muſeum Regium Hafniæ*, nº 48. tab. iv; and in Klein's hiſtory of quadrupeds, 32. tab. iii.; and again deſcribed in Wormius's muſeum, p. 321, and in Grew's muſeum of the Royal Society. Theſe inſtances have occurred in Saxony, in Denmark, and near Aſtracan.

3. The Americanus, American hare, or hedge-coney, has the ears tipt with grey; the upper part of the tail is black, the lower white: the neck and body are mixed with cinerous, ruſt-colour, and black; the legs are of a pale ferruginous colour; and the belly is white: the forelegs are ſhorter, and the hind legs longer, in proportion, than theſe of the common hare. In length it is 18 inches; and weighs from 3 to 4½ pounds.—This ſpecies inhabits all parts of North America. In New Jerſey, and the States ſouth of that State, it retains its colour the whole year. In New England, Canada, and about Hudſon's-Bay, at the approach of winter, it changes its ſhort ſummer's fur for one very long, ſilky, and ſilvery, even to the roots of the hairs; the edges of the ears only preſerving their colour. At that time theſe hares are in the higheſt ſeaſon for the table; and are of vaſt uſe to thoſe who winter in Hudſon's-Bay, where they are taken in great abundance in ſprings made of braſs-wire, to which they are led by a hedge made for that purpoſe, with holes left before the ſnares for the animals to paſs through.—They breed once or twice a-year, and have from five to ſeven at a time. They do not migrate, like the preceding; but always haunt the ſame places: neither do they burrow; but lodge under fallen timber, and in hollow trees. They breed in the graſs; but in ſpring ſhelter their young in the trees, to which they alſo run when purſued; from which, in the ſouthern States, the hunters force them by means of a hooked ſtick, or by making a fire, and driving them out by the ſmoke.

4. The tolai, or a Baikal hare, has a tail longer than that of a rabbit; and the ears are longer in the male in proportion than thoſe of the varying hare; the fur is of the colour of the common hare; and the ſize between that and the common and the varying hare. It inhabits the country beyond lake Baikal, and extends through the great Gobee even to Thibet. The Tanguts call it *Rangwo*, and conſecrate it among the ſpots of moon. The Mongols call it *Tolai*. It agrees with the common rabbit in colour of the fleſh; but does not burrow, running inſtantly (without taking a ring as the common hare does) for ſhelter, when purſued, into holes of rocks. The fur is bad and of no uſe in commerce.

5. The Capenſis, or Cape-hare, has long ears dilated in the middle: the outſides naked, and of a roſe colour, the inſide and edges covered with ſhort grey hairs: the crown and back are of a duſky colour mixed with tawny: the cheeks and ſides cinereous; the breaſt, belly, and legs, ruſt-coloured; the tail is buſhy carried upwards; and of a pale ferruginous colour. The animal is about the ſize of a rabbit. It inhabits the country three days north or the Cape of good Hope; where it is called the *mountain hare*, for it lives only in the rocky mountains, and does not burrow. It is difficult to ſhoot it; as it inſtantly, on the ſight of any one, runs into the fiſſures of the rocks.

Allied to this, in Mr Pennant's opinion, ſeems the viſcachos, or viſcachas, mentioned by Acoſta and Fruillee, in their accounts of Peru: they compare them to hares or rabbits. The laſt ſays, they inhabit the colder parts of the country. Their hair is very ſoft, and of a mouſe-colour; the tail is pretty long, and turns up; and the ears and whiſkers are like thoſe of the common rabbit. In the time of the Incas, the hair was ſpun, and wove into cloth, which was ſo fine as to be uſed only by the nobility.

6. The cuniculus, or rabbit, has a very ſhort tail, and naked ears. The colour of the fur, in a wild ſtate, is brown; the tail black above, white beneath: in a tame ſtate the general colour varies to black, pied, and quite white; and the eyes are of a fine red. The native country of this ſpecies is Spain, where they were formerly taken with ferrets, as is practiſed in this country at preſent. They love a temperate and warm climate, and are incapable of bearing great cold; ſo that in Sweden they are obliged to be kept in houſes. They abound in Britain. Their furs make a conſiderable article in the hat manufactories; and of late ſuch part of the fur as is unfit for that purpoſe, has been found as good as feathers for ſtuffing beds and bolſters. Numbers of the ſkins are annually exported into China. The Engliſh counties moſt noted for rabbits are Lincolnſhire, Norfolk, and Cambridgeſhire. Methold, in this laſt county, is famous for the beſt kind for the table; the ſoil there is ſandy, and full of moſſes and the *carex* graſs. Rabbits ſwarm in the iſles of Orkney, where their ſkins form a conſiderable article of commerce. The rabbits of thoſe iſles are in general grey; thoſe which inhabit the hills grow hoary in winter.

The variety called the *ſilver haired* rabbit was formerly in great eſteem for lining of clothes, and their ſkins were ſold for 3s. a piece; but ſince the introduction of more elegant furs, their price has fallen to 6d. The Sunk Iſland in the Humber was once famous for a mouſe-coloured ſort, which has ſince been extirpated by reaſon of the injury they did to the banks by burrowing.—Other varieties are, The *Angora* rabit, with hair long, waved, and of a ſilky fineneſs, like that of the goat Angora;—and the *Hooded Rabbit* deſcribed by Edwards as having a double ſkin over the back into which it can withdraw its head, and another under the throat in which it can place its forefeet; it has ſmall holes in the looſe ſkin on the back, to admit light to the eyes. The colour of the body is cinereous, of the head and ears, brown.

The fecundity of the rabbit is ſtill greater than that of the hare. They will breed ſeven times in the year, and the female ſometimes brings eight young ones at a time. Suppoſing this to happen regularly for four years, the number of rabbits from a ſingle pair will amount to 1,274,840. By this account we might juſtly apprehend being overſtocked with theſe animals; but a great number of enemies prevents their increaſe; not only men, but hawks and beaſts of prey making dreadful havoc among them. Notwithſtanding all theſe different enemies, however, we are told by Pliny and Strabo, that they once proved ſuch a nuiſance to the inhabitants of the Balearic iſlands, that they were obliged to implore the aſſiſtance of a military force from Auguſtus in order to exterminate them. They devour herbage of all kinds, roots, grain, fruits, &c. They are in a condition for generating at the end of ſix months; and, like the hare, the female is almoſt conſtantly in ſeaſon; ſhe goes with young about 30 days, and brings forth from four to eight at a litter. A few days before littering, ſhe digs a hole in the earth, not in a ſtraight line, but in a zig-zag form; the bottom of this hole ſhe enlarges every way, and then pulls off a great quantity of hair from her belly, of which ſhe makes a kind of bed for her young. During the two firſt days after birth, ſhe never leaves them, but when preſſed with hunger, and then ſhe eats quickly and returns; and in this manner ſhe ſuckles and attends her young for ſix weeks. All this time both the hole and the young are concealed from the male; ſome times when the female goes out ſhe, in order to deceive the male, fills up the mouth of the hole with earth mixed with her own urine. But when the young ones begin to come to the mouth of the hole, and to eat ſuch herbs as the mother brings to them, the father ſeems to know them; he takes them betwixt his paws, ſmooths their hair, and careſſes them with great fondneſs.

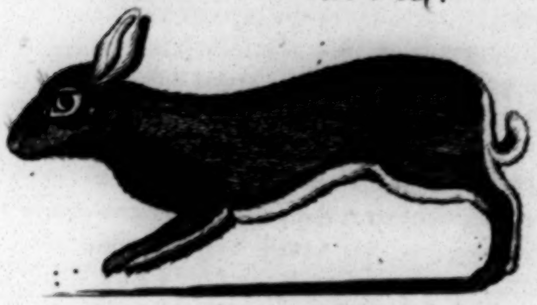
The following ſpecies are without tails.

7. The Alpinus, or Alpine rabbit, has ſhort, broad, rounded ears; a long head, and very long whiſkers with two very long hairs above each eye; the colour of the fur at the bottom is duſky: towards the ends of a bright ferruginous colour; the tips white, and intermixed are ſeveral long duſky hairs, though on firſt inſpection the whole ſeems of a bright bay. The length of the animal is nine inches. This ſpecies is firſt ſeen on the Altaic chain; extends to lake Baikal; from thence to Kamtſchatka; and, as is ſaid, found in the new diſcovered Fox or Aleutian iſlands. They inhabit always the middle region of the ſnowy mountains, in the rudeſt places; wooded and abounding with herbs and moiſture. They ſometimes form burrows between the rocks, and oftener lodge in the crevices. They are generally found in pairs; but in cloudy weather they collect together, and lie on the rocks, and give a keen whiſtle, ſo like that of a ſparrow, as to deceive the hearer. On the report of a gun, they run into their holes; but ſoon come out again, ſuppoſing it to be a clap of thunder, to which they are ſo much uſed in their lofty habitations. By wonderful inſtinct they make a proviſion againſt the rigorous ſeaſon in their inclement ſeats. A company of them, towards autumn, collect together vaſt heaps of choice herbs and graſſes, nicely dried, which they place either beneath the over-hanging rocks, or between the chaſms, or round the trunk of ſome tree. The way to theſe heaps is marked by a worn path. In many places the herbs appear ſcattered, as if to be dried in the ſun and harveſted properly. The heaps are formed like round or conoid ricks; and are of various ſizes, according to the number of the ſociety employed in forming them. They are ſometimes of a man's height, and many feet in diameter, but uſually about three feet. Without this proviſion of winter's ſtock they muſt periſh, being prevented by the depth of ſnow from quitting their retreats in queſt of food. They ſelect the beſt of vegetables, and crop them when in the fulleſt vigour, which they make into the beſt and greeneſt hay by the judicious manner in which they dry it. Theſe ricks are the origin of fertility amidſt the rocks; for the reliques, mixed with the dung of the animals, rot in the barren chaſms, and create a ſoil productive of vegetables. Theſe ricks are alſo of great ſervice to thoſe people who devote themſelves to the laborious employment of ſable-hunting: for being obliged to go ſo far from home, their horſes would often periſh for want if they had not the proviſion of theſe little induſtrious animals to ſupport them; which is eaſily to be diſcovered by their height and form, even when covered with ſnow. It is for this reaſon that this little creature has a name among every Siberian and Tartarian nation, which otherwiſe would have been overlooked and deſpiſed. The people of Jakutz are ſaid to feed both their horſes and cattle with the reliques of the winter ſtock of theſe hares. Theſe animals are neglected as a food by mankind; but are the prey of ſables and the Siberian weeſel, which are joint inhabitants of the mountains. They are likewiſe greatly infeſted by a ſort of gadfly, which lodges its egg in their ſkin in Auguſt and September, which often proves deſtructive to them.

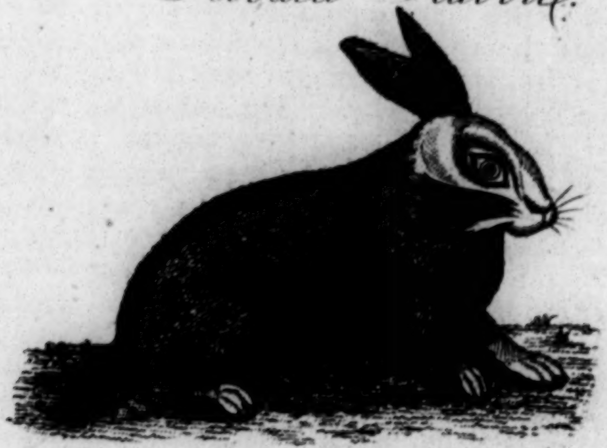
8. The ogotona has oblong oval ears, a little pointed; with ſhorter whiſkers than the former, and hairs long and ſmooth: the colour of thoſe on the body is brown at the roots, light grey in the middle, and white at the ends intermixed with a very few duſky hairs: there is a yellowiſh ſpot on the noſe, and ſpace about the rump of the ſame colour: the outſide of the limbs are yellowiſh; the belly is white. The length is about ſix inches: weight of the male, from 6¼ to 7¼ ounces; of the female, from 4 to 4½. This ſpecies inhabits only the country beyond lake Baikal, and from thence is common in all parts of the Mongolian deſert, and the vaſt deſert of Gobêe, which extends on the back of China and Thibet, even to India. It frequents the open valleys and gravelly or rocky naked mountains. Theſe little creatures are called by the Mongols, *Ogotona*; and are found in vaſt abundance. They live under heaps of ſtones; or burrow in the ſandy ſoil, leaving two or three entrances, which all run obliquely. They make a neſt of ſoft graſs; and the old females make for ſecurity a number of burrows near each other, that they may if diſturbed retreat from one to the other. They wander out chiefly in the night. Their voice is exceſſively

LEPUS. Plate CCLXIX.

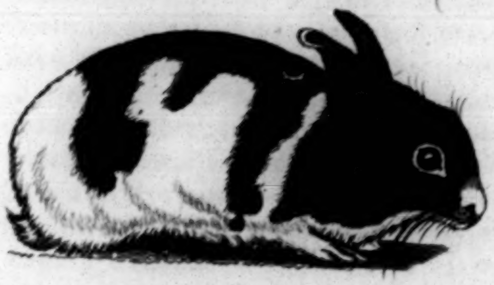
Wild Rabbit.



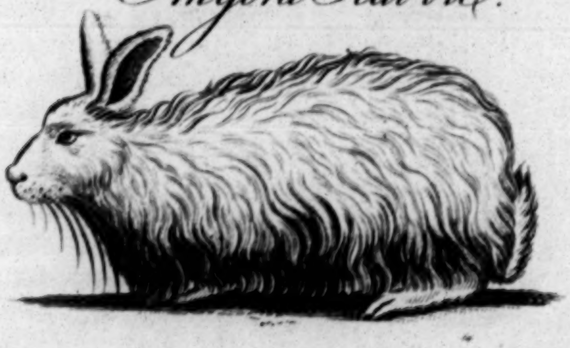
Hooded Rabbit.



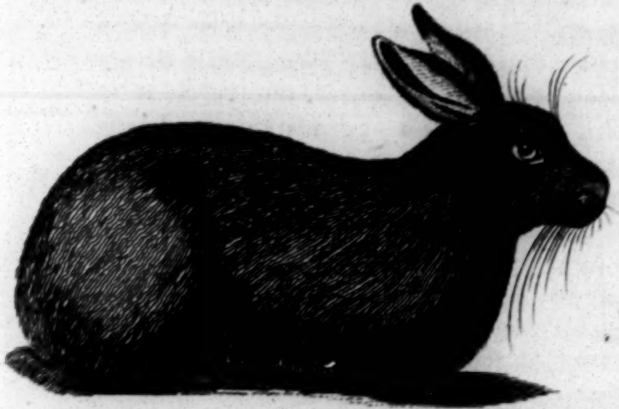
Domestic Rabbit.



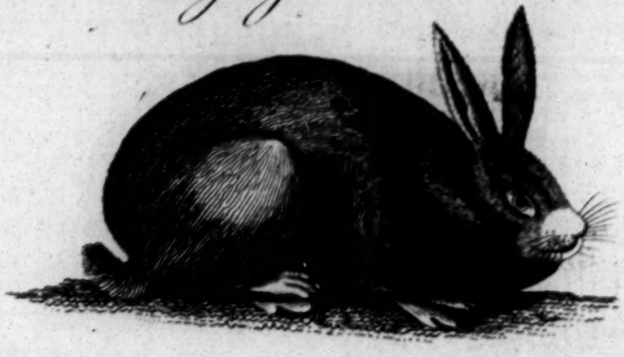
Angora Rabbit.



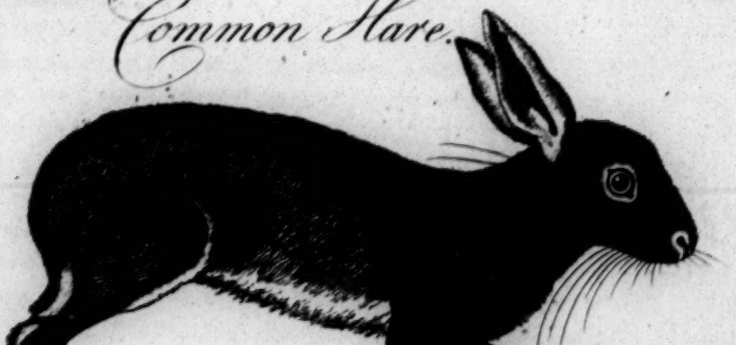
Silver Haired Rabbit.



Varying Hare.



Common Hare.



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ceſſively ſhrill, and emits a note like that of a ſparrow, twice or thrice repeated, but very eaſily to be diſtinguiſhed from that of the Alpine rabbit. They live principally on the tender bark of a ſort of ſervice and the dwarf-elm; in the ſpring, on different herbs. Before the approach of ſevere cold, in the early ſpring, they collect great quantities of herbs, and fill their holes with them, which the inhabitants of the country conſider as a ſure ſign of change of weather. Directed by the ſame inſtinct with the former ſpecies, they form in autumn their ricks of hay of a hemiſpherical ſhape, about a foot high and wide: in the ſpring theſe elegant heaps diſappear, and nothing but the relicts are ſeen. They copulate in the ſpring and about the latter end of June their young are obſerved to be full grown. They are the prey of hawks, magpies, and owls: but the cat Manul † makes the greateſt havock among them: and the ermine and fitchet are equally their enemy.

† See *Felis*.

9. The puſillus, or calling rabbit, with a long head thickly covered with fur even to the tip of the noſe; numerous hairs in the whiſkers; ears large and rounded legs very ſhort, and the ſoles furred beneath: its whole coat is very ſoft, long, and ſmooth, with a thick, long, fine down beneath, of a browniſh lead colour; the hairs are of the ſame colour, towards the ends of a light grey and tipt with black; the lower part of the body is hoary: the ſides and ends of the fur are yellowiſh. The length of the animal is about ſix inches: weight from $3\frac{1}{4}$ to $4\frac{1}{4}$ oz. but in winter ſcarcely $2\frac{1}{4}$. This ſpecies inhabits the ſouth-eaſt parts of Ruſſia, and about all the ridge of hills ſpreading ſouthward from the Urallian chain; alſo about the Irtiſh, and in the weſt part of the Altaic chain; but no where in the eaſt beyond the Oby. They delight in the moſt ſunny valleys and herby hills, eſpecially near the edges of woods, to which they turn on any alarm. They live in ſo concealed a manner as very rarely to be ſeen: but are often taken in winter in the ſnares laid for the ermines; ſo are well known to the hunters. About the Volga they are called *ſemlanoi Saetſhik*, or *groundhare*: the Tartars, from their voice, ſtyle them *tſchotſchot* or *ittſitſkan*, or the *barking mouſe*: the Kalmucs call them *ruſla*. They chooſe for their habitations a dry ſpot, amidſt buſhes covered with a firm ſod, preferring the weſtern ſides of the hills. In theſe they burrow, leaving a very ſmall hole for the entrance; and forming long galleries, in which they make their neſts. Thoſe of the old ones and females are numerous and intricate: ſo that their place would be ſcarcely known but for their excrements: and even thoſe they drop, by a wiſe inſtinct, under ſome buſh, leſt their dwelling ſhould be diſcovered by their enemies among the animal creation. Their voice alone betrays their abode; it is like the piping of a quail, but deeper, and ſo loud as to be heard at the diſtance of half a German mile. It is repeated by juſt intervals, thrice, four times, and often ſix. The voice is emitted at night and morning; in the day, except in rainy and cloudy weather. It is common to both ſexes; but the female is ſilent for ſome time after parturition, which is about the beginning of May N. S. She brings forth ſix at a time, blind and naked; which ſhe ſuckles often, and covers carefully with the materials of her neſt. Theſe moſt harmleſs and inoffenſive animals never go from their holes. They feed and make their little excurſions by night: they are eaſily made tame; and will ſcarcely bite when handled. The males in confinement are obſerved to attack one another, and expreſs their anger by a grunting noiſe.

There are three or four other ſpecies of lepus. Several are figured on Plate CCLXIX.

Lepus, the hare, in aſtronomy, a conſtellation of the ſouthern hemiſphere: whoſe ſtars in Ptolemy's catalogue are 12; in that of Tycho 13; and in the Britannic 19.

LERCHEA, in botany; a genus of the pentandria order, belonging to the monodelphia claſs of plants. The calyx is five-toothed; the corolla funnel-ſhaped and quinquefid; there are five antheræ ſitting on the tube of the germ; there is one ſtyle; the capſule trilocular and polyſpermous.

LERI (John de), a Proteſtant miniſter of the province of Burgundy. He was ſtudying at Geneva when it was reported there that Villegagnon deſired they would ſend him ſome paſtors into Brazil. He made that voyage with two miniſters, whom the church of Geneva ſent thither in 1556; and wrote an account of that voyage, which has been much commended by Thuanus and others.

LERIA, or Leiria, a ſtrong town of Eſtremadura in Portugal, with a caſtle and biſhop's ſee. It contains about 3500 inhabitants, and was formerly the reſidence of the kings of Portugal. W. Long. 7. 50. N. Lat. 39. 40.

LERIDA, on ancient, ſtrong, and large town of Spain, in Catalonia, with a biſhop's ſee, an univerſity, and a ſtrong caſtle. This place declared for king Charles after the reduction of Barcelona in 1705: but it was retaken by the duke of Orleans in 1707, after the battle of Almanza. It is ſeated on a hill near the river Segra, and in a fertile ſoil, in E. Long. 0. 35. N. L. 41. 31.

LERINA, or Planasia, (anc. geog.), one of the two ſmall iſlands over againſt Antipolis, called alſo *Lerinas* and *Lerinus*. Now St Honorat, on the coaſt of Provence, ſcarce two leagues to the ſouth of Antibes.

LERINS, the name of two iſlands in the Mediterranean ſea, lying on the coaſt of Provence in France, five miles from Antibes; that near the coaſt, called *St Margaret*, is guarded by invalids, ſtate-priſoners being ſent here. It was taken by the Engliſh in 1746, but marſhal Belleiſle retook it in 1747. The other is called *St Honorat*; and is leſs than the former, but has a Benedictine abbey.

LERMA, a town of Spain, in old Caſtile, ſeated on the river Arlanza, with the title of a *duchy*. W. Lon. 3. 5. N. Lat. 42. 2.

LERNA, (anc. geog.), not far from Argos, on the confines of Laconica; ſuppoſed to be a town of Laconica, but on the borders of Argolis; the poſition which Pauſanias allots to it, near Temenium, on the ſea; without adding whether it is town, river, or lake. According to Strabo, it is a lake, ſituated between the territories of Argos and Mycene, in contradiction to Pauſanias. If there was a town of this name, it ſeems to have ſtood towards the ſea, but the lake to have been more inland. Mela calls it a well known town on the Sinus Argolicus; and Statius by Lerna ſeems to mean ſomething more than a lake. This, however, is the lake in which, as Strabo ſays, was the fabled Hydra of Hercules: therefore called *Lerna Anguifera*

guifera (Statius). The lake runs in a river or ſtream to the ſea, and perhaps ariſes from a river, (Virgil.) From the lake the proverb, *Lerna Malorum*, took its to riſe; becauſe, according to Strabo, religious purgations were performed in it; or, according to Heſychius, becauſe the Argives threw all their filth into it.

LERNEA, in zoology; a genus of inſects of the order of Vermes molluſca, the characters of which are: The body fixes itſelf by its tentacula, is oblong, and rather tapering; there are two ovaries like tails, and the tentacula are ſhaped like arms. (See three ſpecimens figured on Plate CCLXXIV.)—1. The cyprinacea has four tentacula, two of which are lunulated at the top. It is a ſmall ſpecies; about half an inch long, and of the thickneſs of a ſmall ſtraw: the body is rounded, of a pale greyiſh white, gloſſy on the ſurface, and ſomewhat pellucid: it is thruſt out of a kind of coat or ſheath, as it were at the baſe, which is of a white colour and a thick ſkin: towards the other extremity of the body, there are three obtuſe tubercles, one of which is much larger than the reſt: the mouth is ſituated in the anterior part, and near it there are two ſoft and and fleſhy proceſſes; and near theſe there is alſo on each ſide another ſoft proceſs, which is lunated at the extremity. It is found on the ſides of the bream, carp, and roach, in many ponds and rivers, in great abundance. 2. The ſalmonea, or ſalmon-louſe, has an ovated body, cordated thorax, and two linear arms approaching nearly to each other. 3. The aſellina, has a lunated body and cordated thorax; and inhabits the gills of the cod-fiſh and ling of the northern ocean.

LERNICA, formerly a large city in the iſland of Cyprus, as appears from its ruins; but is now no more than a large village ſeated on the ſouthern coaſt of that iſland, where there is a good road and a ſmall fort for its defence.

LERO (anc. geog.); one of the two ſmall iſlands in the Mediterranean, oppoſite to Antipolis, and half a mile diſtant from it to the ſouth. Now *St Margarita*, over againſt Antibes, on the coaſt of Provence.

LERO, or *Leros*, an iſland of the Archipelago, and one of the Sporades; remarkable, according to ſome authors, for the birth of Patroclus. E. Long. 26. 15. N. Lat. 37. 0.

LE ROY LE VEUT, the king's aſſent to public bills. See the articles BILL, STATUTE, and PARLIAMENT.

LERWICK, the capital town of Shetland, ſituated in the iſland called the *Mainland*, in W. Long. 1. 30. N. Lat. 61. 20. It contains about 300 families, with abundance of good houſes, and as faſhionable people as are to be ſeen in any town in Scotland of its bulk. At the north end of the town there is a regular fort, which was built at the charge of the government in the reign of King Charles II.; who, in the time of his firſt war with the Dutch ſent over a garriſon conſiſting of 300 men under the command of one colonel William Sinclair a native of Zetland, and one Mr Milne architect, for building the ſaid fort, with 20 or 30 cannons to plant upon it for protection of the country. There was a houſe built within the fort ſufficient to lodge 100 men. The garriſon ſtaid here three years; the charge of which, with the building the fort, is ſaid to have ſtood the king 28,000 pounds ſterling. When the garriſon removed, they carried off the cannon from the fort; and in the next war with the Dutch, two or three years after the garriſon removed, a Dutch frigate came into Braſay Sound, and burnt the houſe in the fort and ſeveral others the beſt in the town. Lerwick has no freedom nor privileges, but is governed by a bailie upon the ſame footing with the other bailies in the country. There is a church in it, and one miniſter of the preſbyterian eſtabliſhment. He has for ſtipend 500 marks paid him out of the biſhop's rents of Orkney, 300 marks by the town of Lerwick, and the tythes of Gulberwick about 200 marks: making in all 1000 marks Scots yearly, with a free houſe and garden. Lerwick chiefly ſubſiſts by the reſort of foreigners to it; ſo when that fails it muſt decline, as indeed it has done for ſeveral years paſt, having been very little frequented by foreigners, and thereby is become poor. Several projects have been talked of, and written upon, which might have been very beneficial to Lerwick and Zetland had they taken place; as that of the Britiſh merchants carrying goods from Muſcovy and Sweden, deſigned for the plantations in America, that muſt be entered in Britain, having them entered at Lerwick, which would ſave a great deal of time and charges to theſe merchants; alſo the Greenland and Herring Fiſhery companies of Britain propoſed Lerwick as a moſt commodious port for lodging their ſtores in, and for repacking their herrings, melting their oil, and thence exporting the ſame to foreign markets. The grand objection to theſe ſettlements is, that Lerwick is an open unfortified place; and in caſe of a war, the merchants ſhips and goods would be expoſed to the enemy; for removing of which difficulty it has been obſerved, that would goverment beſtow a ſmall garriſon upon it of only 100 men and about 20 pieces of cannon, and be at a ſmall charge in repairing the old fort, and erecting a ſmall battery or two more, theſe meaſures might be ſufficient to ſecure the place againſt any ordinary effort the enemy might make againſt it: and Lerwick being thus fortified, all Britiſh ſhips coming from the Eaſt or Weſt Indies, could come ſafely there in time of war, and lie ſecure until carried thence by convoy, or otherwiſe as the proprietors ſhould direct; and thus Lerwick might become more advantageous to the trade of Great Britain than Gibraltar or port Mahon, and that for one tenth part of the charge of either of thoſe places.

Gifford's Deſcript. of Zetland, p. 7.

LESBOS, a large iſland in the Ægean ſea, on the coaſt of Æolia, of about 168 miles in circumference. It has been ſeverally called *Pelaſgia*, from the Pelaſgi by whom it was firſt peopled; *Macaria*, from Macareus who ſettled in it; and *Leſbos* from the ſon-in-law and ſucceſſor of Macareus who bore the ſame name. The chief towns of Leſbos were Methymna and Mitylene. It was originally governed by kings, but they were afterwards ſubjected to the neighbouring powers. The wine which it produced was greatly eſteemed by the ancients, and ſtill is in the ſame repute among the moderns. The Leſbians were ſo debauched and diſſipated, that the epithet of *Leſbian* was often uſed to ſignify debauchery and extravagance. Leſbos has given birth to many illuſtrious perſons, ſuch as Arion, Terpander, Sappho, &c. See MITYLENE.

LESCAILLE (James), a celebrated Dutch poet and printer, was born at Geneva. He and his daughter Catharine Leſcaille have excelled all the Dutch poets. That lady, who was ſurnamed the *Sappho of*

Holland, and the *tenth Muſe*, died in 1711. A collection of her poems have been printed in which are the Tragedies of Genſeric, Winceſlaus, Herod and Mariamne, Hercules and Dejaneira, Nicomedes, Ariadne, Caſſandra, &c. James Leſcaille her father deſerved the poet's crown, with which the emperor Leopold honoured him in the year 1603: he died about the year 1677, aged 67.

LESCAR, a town of Gaſcony, in France, and in the territory of Bearn, with a biſhop's ſee; ſeated on a hill, in W. Long. 0. 30. N. Lat. 43. 23.

LESGUIS, a people of Aſia, whoſe country is indifferently called by the Georgians *Leſguiſtan* and *Dagheſtan*. It is bounded to the ſouth and eaſt by Perſia and the Caſpian, to the ſouth-weſt and weſt by Georgia, the Oſſi, and Kiſti, and to the north by the Kiſti and Tartar tribes. It is divided into a variety of diſtricts generally independant, and governed by chiefs elected by the people. Guldenſtaedt has remarked, in the Leſguis language, eight different dialects, and has claſſes their tribes in conformity to this obſervation.

The firſt dialect comprehends 15 tribes, which are as follow: : 1. Avar, in Georgian Chunſagh. The chief of this diſtrict, commonly called *Avar Khan*, is the moſt powerful prince of Leſguiſtan, and reſides at Kabuda, on the river Kaſeruk. The village of Avar is, in the dialect of Andi, called *Harbul*. 2. Kaſeruk, in the high mountains, extending along a branch of the Koiſu, called *Karak*. This diſtrict is dependant on the Khan of the Kaſi Kumychs. 3. Idatle on the Koiſu, joining on the Andi; ſubject to the Avar Khan. 4. Mukratle, ſituated ou the Karak, and ſubject to the Avar Khan. 5. Onſecul, ſubject to the ſame, and ſituated on the Koiſu. 6. Karakhle, upon the Karak, below Kaſeruk, ſubject to the ſame. 7. Ghumbet, on the river Ghumbet, that joins the Koiſu, ſubject to the chief of the Coumyks. 8. Arakan; and, 9. Burtuma, on the Koiſu. 10. Antſugh, on the Samura, ſubject to Georgia. 11. Tebel, on the ſame river, independent. 12. Tamurgi, or Tumural, on the ſame river. 13. Akhti; and, 14. Rutal, on the ſame. 15 Dſkar, in a valley that runs from the Alazan to the Samura. It was formerly ſubject to Georgia, but is now independent. In this diſtrict are ſeen remains of the old wall that begins at Derbent, and probably terminates at the Alazan.—The inhabitants of Derbent believe that their town was built by Alexander, and that this wall formerly extended as far as the Black Sea. It is, however, probable, from many inſcriptions in old Turkiſh, Perſian, Arabic, and Ruſiſh characters, that the wall and the aqueducts with their various ſubterraneous paſſages, many of which are now filled up, are of high antiquity. This town ſuffered greatly during its ſiege by Sultan Amurath, who entirely deſtroyed the lower quarter, then inhabited by Greeks. It was again taken by Schach Abbas. (Gaerber). This town is the old Pylæ Caſpiæ.

The ſecond dialect is ſpoken in the two following diſtricts: 1. Dido, or Didonli, about the ſource of the Samura. This diſtrict is rich in mines; a ridge of uninhabited mountains divides it from Caket. 2. Unſo, on the ſmall rivulets that join the Samura. Theſe two diſtricts, containing together about 1000 families, were formerly ſubject to Georgia, but are now independent.

The third dialect is that of Kabutſh, which lies on the Samura rivulets, eaſt of Dido, and north of Caket.

The fourth dialect is that of Andi, ſituated on a rivulet that runs into the Koiſu. Some of its villages are ſubject to the Avar-Khan, but the greater part to the khan of Axai. The whole conſiſts of about 800 families.

The fifth dialect is common to four diſtricts, namely. 1. Akuſha, on the Koiſu, ſubject to the Uſmei, or khan of the Caitaks, and Kara-Caitaks, containing about 1000 families. The following cuſtom is attributed by Colonel Gaerber to the ſubjects of this prince: "Whenever the Uſmei has a ſon, he is carried round from village to village, and alternately ſuckled by every woman who has a child at her breaſt until he is weaned. This cuſtom, by eſtabliſhing a kind of brotherhood between the prince and his ſubjects, ſingularly endears them to each other." 2. Balkar. 3. Zudakara, or Zudakh, down the Koiſu, ſubject to the Uſmei. 4. Kubeſha, near the Koiſu. Colonel Gaerber, who wrote an account of theſe countries in 1728, gives the following deſcription of this very curious place: "Kubeſha is a large ſtrong town, ſituated on a hill between high mountains. Its inhabitants call themſelves Franki (Franks, a name common in the eaſt to all Europeans), and relate, that their anceſtors were brought hither by ſome accident, the particulars of which are now forgotten. The common conjecture is, that they were mariners caſt away upon the coaſt; but thoſe who pretend to be better verſed in their hiſtory, tell the ſtory this way:—The Greeks and Genoeſe, ſay they, carried on, during ſeveral centuries, a conſiderable trade, not only on the Black ſea, but likewiſe on the Caſpian, and were certainly acquainted with the mines contained in theſe mountains, from which they drew by their trade with the inhabitants great quantities of ſilver, copper, and other metals. In order to work theſe upon the ſpot, they ſent hither a number of workmen to eſtabliſh manufactures, and inſtruct the inhabitants. The ſubſequent invaſions of the Arabs, Turks, and Monguls, during which the mines were filled up, and the manufactures abandoned, prevented the ſtrangers from effecting their return, ſo that they continued here, and erected themſelves into a republic. What renders this account the more probable is, that they are ſtill excellent artiſts, and make very good fire-arms, as well rifled as plain; ſabres, coats of mail, and ſeveral articles in gold and ſilver, for exportation. They have likewiſe, for their own defence, ſmall copper canons, of three pounds calibre, caſt by themſelves. They coin Turkiſh and Perſian ſilver money, and even rubles, which readily paſs current, becauſe they are of the full weight and value. In their valleys they have paſture and arable lands, as well as gardens; but they purchaſe the greater part of their corn, truſting chiefly for ſupport to the ſale of their manufactures, which are much admired in Perſia, Turkey, and the Crimea. They are generally in good circumſtances, are a quiet, inoffenſive people, but high ſpirited, and independent. Their town is conſidered as a neutral ſpot, where the neighbouring princes can depoſit their treaſures with ſafety.

They elect yearly twelve magiſtrates, to whom they pay the moſt unlimited obedience; and as all the inhabitants are on a footing of perfect equality, each individual is ſure to have in his turn a ſhare in the government. In the year 1725, their magiſtrates, as well as the Uſmei, acknowledged the ſovereignty of Ruſſia, but without paying any tribute." 5. Zudakara, or Zadakh, down the Koiſu, ſubject to the Uſmei. It contains about 2000 families.

The ſixth dialect belongs to the diſtricts on the eaſtern ſlope of Caucaſus, between Tarku and Derbent, which are, 1. Caitak; and 2. Tabaſſeran, or Kara-Caitak, both ſubject to the Uſmei.

The ſeventh dialect is that of Kaſi-Coumyk, on a branch of the Koniſu, near Zudakara. This tribe has a khan, whoſe authority is recogniſed by ſome neighbouring diſtricts.

The eighth dialect is that of Kuracle, belonging to the khan of Cuba.

Beſides theſe, there are ſome other Leſguis tribes, whoſe dialects Mr Guldenſtaedt was unable to procure. From a compariſon of thoſe which he has obtained, it appears that the language of the Leſguis has no kind of affinity with any other known language, excepting only the Samoyede, to which it has a remote reſemblance.

This people is probably deſcended from the tribes of mountaineers, known to ancient geographers under the name of *Leſgæ*, or *Ligyes*. The ſtrength of their country, which is a region of mountains, whoſe paſſes are known only to themſelves, has probably at all times ſecured them from foreign invaſion; but as the ſame cauſe muſt have divided them into a number of tribes, independent of each other, and perhaps always diſtinguiſhed by different dialects, it is not eaſy to imagine any common cauſe of union which can ever have aſſembled the whole nation, and have led them to undertake very remote conqueſts. Their hiſtory, therefore, were it known, would probably be very unintereſting to us. They ſubſiſt by raiſing cattle, and by predatory expeditions into the countries of their more wealthy neighbours. During the troubles in Perſia, towards the beginning of this century, they repeatedly ſacked the towns of Shamachie and Ardebil, and ravaged the neighbouring diſtricts; and the preſent wretched ſtate of Georgia and of part of Armenia, is owing to the frequency of their incurſions. In their perſons and dreſs, and in their general habits of life, as far as theſe are known to us, they greatly reſemble the Circaſſian.

LESKARD, a town in Cornwall, ſeated in a level, is a corporation, and ſends two members to parliament. It had formerly a caſtle, now in ruins. It is one of the largeſt and beſt built towns in Cornwall, with the greateſt market. It was firſt incorporated by Edward earl of Cornwall, afterwards by King John's ſon, Richard king of the Romans, and had privileges from Edward the Black Prince. Queen Elizabeth granted it a charter; by which it was to have a mayor and burgeſſes, who ſhould have a perpetual ſucceſſion, purchaſe lands, &c. Here is a handſome town-hall built on ſtone pillars, with a turret on it, and a noble clock with four dials that coſt near 200 l. Here are a large church, a meeting-houſe, an eminent free-ſchool, and a curious conduit; and on the adjacent commons, which feed multitudes of ſheep, there have been frequent horſe races. It has a market on Saturday, and ſeven fairs in the year. The liſt of its parliament men begins the 23d of Edward I. Here is a very great trade in all manufactures of leather; and ſome ſpinning is ſet up here lately, encouraged by the clothiers of Devonſhire. On the hills of North Leſkard, and in the way from hence to Lounceſton, are many mines of tin, which is caſt at the blowing houſes into blocks, that are ſent hither to be coined.

LESLIE (John), biſhop of Roſs in Scotland, the ſon of Gavin Leſlie an eminent lawyer, was born in the year 1526, and educated at the univerſity of Aberdeen; of which dioceſe he was made official, when but a youth. He was ſoon after created doctor of civil and canon law; but being peculiarly addicted to the ſtudy of divinity, he took orders, and became parſon of Une. When the reformation began to ſpread in Scotland, and diſputes about religion ran high, Dr Leſlie, in 1560, diſtinguiſhed himſelf at Edinburgh as a principal advocate for the Romiſh church, and was afterwards deputed by the chief nobility of that religion to condole with queen Mary on the death of her huſband the king of France, and to invite her to return to her native dominions. Accordingly, after a ſhort reſidence with her majeſty, they embarked together at Calais in 1561, and landed at Leith. She immediately made him one of her privy-council, and a ſenator of the college of juſtice. In 1564, he was made abbot of Lundores; and on the death of Sinclair was promoted to the biſhopric of Roſs. Theſe accumulated honours he wiſhed not to enjoy in luxurious indolence. The influence derived from them, he exerted to the proſperity of his country. It is to him that Scotland is indebted for the publication of its laws, commonly called "the *black* acts of parliament," from the Saxon character in which they were printed. At his moſt earneſt deſire, the reviſion and collection of them were committed to the great officers of the crown. In 1568, queen Mary having fled to England for refuge, and being there detained a priſoner, queen Elizabeth appointed certain commiſſioners at York to examine into the cauſe of the diſpute between Mary and her ſubjects. Theſe commiſſioners were met by others from the queen of Scots. The biſhop of Roſs was of the number, and pleaded the cauſe of his royal miſtreſs with great energy, though without ſucceſs; Elizabeth had no intention to releaſe her. Mary, diſappointed in her expectations from the conference at York, ſent the biſhop of Roſs ambaſſador to Elizabeth, who paid little attention to his complaints. He then began to negociate a marriage between his royal miſtreſs and the duke of Norfolk; which negociation, it is well known, proved fatal to the duke, and was the cauſe of Leſlie's being ſent to the Tower. In 1573 he was baniſhed the kingdom, and retired to Holland. The two following years he ſpent in fruitleſs endeavours to engage the powers of Europe to eſpouſe the cauſe of his queen. His laſt application was to the pope; but the power of the heretic Elizabeth had no leſs weight with his holineſs than with the other Roman Catholic princes of Europe. Finding all his perſonal applications ineffectual, he had recourſe to his pen in Queen Mary's vindication; but Elizabeth's *ultima ratio regum* was too potent for all his arguments. Biſhop Leſlie, during his exile, was made coadjutor to the archbiſhop of Rouen. He was at Bruſſels when he received the account of Queen Mary's execution; and immediately retired to the convent of Guirtenberg near that city, where he died in the year 1596. It was during the long and unfortunate captivity of Mary, that he amuſed himſelf in writing the Hiſtory of Scotland, and his other works. The elegance and charms of literary occupations ſerved to aſſuage the violence of his woes. His knowledge and judgment as an hiſtorian are equally to be commended. Where he acts as the tranſciber of Bocce, there may be diſtinguiſhed, indeed ſome of the inaccuracies of that writer. But, when he ſpeaks in his own perſon, he has a manlineſs, a candour and a moderation, which appear not always even in authors of the Proteſtant perſuation. His works are, 1. *Afflicti animi conſolationes*, &c. compoſed for the conſolation of the captive queen. 2. *De origine, moribus, et geſtis Scotorum.* 3. *De titulo et jure ſereniſſimæ Mariæ Scotorum reginæ, quo regni Angliæ ſucceſſionam ſibi juſte vindicat.* 4. *Paræneſis ad Anglos et Scotos.* 5. *De illuſt. fæminarum in republ. adminiſtranda*, &c. 6. *Oratio ad reginam Elizabetham pro libertate impetranda.* 7. *Paræneſis ad nobilitatem populumque Scoticum.* 8. An account of his proceedings during his embaſſy in England from 1568 to 1572, manuſcript, Oxon. 9. Apology for the biſhop of Roſs, concerning the Duke of Norfolk: manuſcript, Oxon. 10. Several letters, manuſcript.

Leslie (Charles, an Iriſh divine, and a zealous Proteſtant: but being attached to the houſe of Stuart, he left Ireland, and went to the pretender at Bar le Duc, and reſided with him till near the time of his death; conſtantly endeavouring to make him a Proteſtant, but without effect. He died in 1722. His principal works are, 1. A ſhort and eaſy method with the Deiſts. 2. A ſhort and eaſy method with the Jews. 3. The ſnake in the graſs. 4. Hereditary right to the Crown of England aſſerted. 5. The Socinian controverſy diſcuſſed. 6. The charge of Socinianiſm againſt Dr Tillotſon conſidered; and many others. All his theological pieces, except that againſt Archbiſhop Tillotſon, were collected and publiſhed by himſelf, in 2 vols folio.

LESSER tone, in muſic. See Tone.

LESSINES, a town of the Auſtrian Netherlands, in Hainault, ſeated on the river Dender, and famous for its linen manufacture. W. Long. 3 53. N. Lat. 51. 41.

LESSONS, among eccleſiaſtical writers, portions of the Holy Scripture, read in Chriſtian churches, at the time of divine ſervice.

In the ancient church, reading the Scriptures was one part of the ſervice of the catechumens; at which all perſons were allowed to be preſent, in order to obtain inſtruction.

The church of England, in the choice of leſſons, proceeds as follows: for the firſt leſſon on ordinary days, ſhe directs, to begin at the beginning of the year with Geneſis, and ſo continue on till the books of the Old Teſtament are read over; only omitting the Chronicles, which are for the moſt part the ſame with the books of Samuel and Kings, and other particular chapters in other books, either becauſe they contain names of perſons, places, or other matters leſs profitable to ordinary readers.

The courſe of the firſt leſſons for Sundays is regulated after a different manner. From advent to Septuageſima-Sunday, ſome particular chapters of Iſaiah are appointed to be read, becauſe that book contains the cleareſt prophecies concerning Chriſt. Upon Septuageſima Sunday Geneſis is begun, becauſe that book which treats of the fall of man, and the ſevere judgement of God inflicted on the world for ſin, beſt ſuits with a time of repentance and mortification. After Geneſis, follow chapters out of the books of the Old Teſtament, as they lie in order; only on feſtival Sundays, ſuch as Eaſter, Whitſunday. &c. the particular hiſtory relating to that day is appointed to be read; and on the ſaints-days, the church appoints leſſons out of the moral books, ſuch as Proverbs, Eccleſiaſtes, Eccleſiaſticus, &c, as containing excellent inſtructions for the conduct of life.

As to the ſecond leſſons, the church obſerves the ſame courſe both on ſundays and week-days: reading the goſpels and Acts of the Apoſtles in the morning, and the epiſtles in the evening, in the order they ſtand in the new Teſtament: excepting on ſaints days and holy days, when ſuch leſſons are appointed as either explain the myſtery, relate the hiſtory, or apply the example to us.

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In all, 31 Plates.

LANCASTER in Pennſylvania: A wealthy, populous, and highly cultivated county; containing, according to an enumeration taken in purſuance of the act of congreſs of March 1790, at leaſt 36,000 ſouls. The county of Lancaſter was erected by an act of aſſembly of the (late) province, paſſed May 10, 1729, at which time it was a frontier, and only four counties, viz. Philadelphia, Bucks, Cheſter, and Lancaſter, in the province, according to its preſent limits. Lancaſter is at preſent bounded eaſtwardly by the county of Cheſter; weſtwardly, for 37 miles, by the great river Suſquehanna, which divides it from the county of York: north and north-weſt, by the counties of Berks and Dauphin; and ſouth, by the Maryland ſtate line: being in its greateſt extent, north and ſouth, about forty miles, and eaſt and weſt about forty five miles. The country in general is well watered; in exuberance of ſoil is exceeded by no part of the united ſtates, and may not improperly be called *The Garden of Pennſylvania.* The inhabitants are an induſtrious and thriving people, (a great proportion of them being Germans, or of German extraction) and annually ſupply the different markets of Philadelphia, Wilmington, and Newport, with great quantities of flour, wheat, rye, barley, hops, and hemp. Beſides the borough of Lancaſter, the county contains the thriving villages of Elizabeth, May Town, Rheims-Town, Ephrata, Leditz, (Lititz or Lydyards, being ſettled by Moravians) Manheim, Church Town, New Holland, and Straſburg (or Peddle-hauſen). It ſends at preſent ſix members to the ſtate houſe of repreſentatives.

Lancaster, (the borough of) the ſeat of juſtice for the county of Lancaſter, lies ſixty ſix miles weſtward of Philadelphia. It was laid out about the year 1730 or 1732, and was incorporated on the firſt day of May 1742. By virtue of its charter there are two market days, viz. Wedneſday and Saturday in each week; and two fairs, one in the ſummer, and one in the fall of each year. Lancaſter is ſuppoſed to be the largeſt inland town in the United States, and contained in the year 1792 ſix hundred and ninety ſix houſes, public buildings included, and about 4000 ſouls. The ſtreets interſect each other at right angles, but from the ſituation of the town on irregular and declining ground, it preſents a very ſingular appearance to ſtrangers on the firſt view. This ſituation, however, contributes greatly to the health of the inhabitants, as the water is thereby immediately carried off into the common ſewers, formed by the hand of nature, with very little aſſiſtance, and waſhed by conſiderable ſprings which riſe in the north-weſt and ſouth-eaſt corners of the town. The collection of ſprings which riſe in the north-weſt corner, and are very valuable, may be conducted into every part of the town by means of pipes or trunks. It has been frequently in view to accompliſh this deſirable object, and an act of aſſembly was paſſed on the 22d of January 1774, reciting ſome attempts that had already been made, and that it was propoſed by the burgeſſes, aſſiſtants and inhabitants of the ſaid borough to ſink and ſix ciſterns at different places for the reception and collection of water in large quantities for immediate uſe, in caſes of fire, &c. and impoſing a penalty upon perſons removing or damaging the pipes or trunks which might be fixed for conveying the water from thoſe ſprings. But this beneficial deſign was not at that time purſued, owing partly perhaps to the want of power in the corporation to raiſe money for the purpoſe, and partly to the war breaking out and the general calamities which enſued. But as theſe reaſons no longer operate, it is expected the public ſpirit of the inhabitants of Lancaſter will ſpeedily be exerted to improve the natural advantages, as well as to protect, to regulate, and adorn the town. To promote theſe deſirable ends they applied for and obtained an act of aſſembly, which was paſſed April 4, 1792, for eſtabliſhing a nightly watch, providing lamps, and ſupporting pumps for public uſe in the borough. This act alſo contemplates the former uſeful deſigns, and empowers the corporation to levy and collect money to erect and maintain dams and ſluices for the collection of water for the beneficial purpoſes abovementioned.

Lancaſter is well built, chiefly brick, and ſome of the public buildings conſiderably ornamented. The court-houſe, which is erected in a ſquare in the centre of the town is a ſuperb and ſpacious building. There are ſeven churches, appropriated to different Chriſtian ſocieties. To the Lutheran church a ſteeple was added in the year 1792 by the ingenious architect, Colliday of Philadelphia, and is, within a few feet, as high as the ſteeple of Chriſt Church in Philadelphia, and is allowed to be the neateſt, beſt proportioned and moſt elegant piece of work of the kind in the United States. It is intended to be furniſhed ſhortly with a complete ring of bells.

There are a variety of excellent tradeſmen in Lancaſter, but no particular manufacture of any kind is carried on at preſent to any extent except the manufacture of guns and rifles: though from the natural advantages it affords it will in all probability become a manufacturing town of conſiderable importance, at a period not far diſtant. An act of aſſembly was paſſed on the 10th day of March, 1787, to incorporate and endow the German college and charity ſchool in this borough, by the name of Franklin College; though for obvious reaſons, it has not yet riſen into any conſequence, but it is to be hoped it may one day become an uſeful nurſery of ſcience and virtue.

During the time the Britiſh troops were in poſſeſſion of Philadelphia, under the command of General Sir William Howe, the legiſlature held one ſeſſion at this place, viz. in December 1778, but before their next meeting the city was evacuated.

The environs of the borough of Lancaſter are extremely fertile, populous, and well cultivated, and within ſix miles, in different directions, are enumerated about 35 mills.

In conſequence of an act of aſſembly paſſed April 10, 1792, a company has been incorporated for making an artificial or turnpike road from Philadelphia to Lancaſter, in which work they are rapidly proceeding.*

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* This article, which ſhould have come in at the 521ſt page, was not received till too late for its place; it judged proper to introduce it here.

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